June 1926

Better Eyesight

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

June, 1926

Demonstrate

1. Demonstrate that when the eyes are stationary, they are under a tremendous strain. Stand before the Snellen test card at a distance of fifteen or twenty feet. Look directly at one small area of a large letter, which can be seen clearly. Stare at that part of the letter without closing the eyes and without shifting the eyes to some other point. The vision becomes worse and the letter blurs. Stare continuously, and note that the longer you stare, the more difficult it is to keep the eyes focused on that one point or part of the letter. Not only does the stare become more difficult, but the eyes become tired; and by making a greater effort, the eyes pain, or a headache is produced. The stare can cause fatigue of the whole body when the effort is sufficiently strong and prolonged.
2. Demonstrate that when the eyes are moving from one point to another, frequently, easily and continuously, the stare, the strain, or the effort to see is prevented and the eyes feel rested. In fact, the eyes are not at rest except when they are moving. Note that when you look at a letter on the Snellen test card and alternately shift from the top to the bottom of it, the vision remains good or is improved. When the letter is seen perfectly, the eyes are shifting; and when seen imperfectly, the shifting stops.
3. Close your eyes and remember your signature. This can usually be done quite perfectly. Try to remember the first and the last letter of your name simultaneously. This is an impossible thing to do and requires a strain. If you shift from one letter to another, you can remember your signature, one letter at a time; but if you make an effort to remember it, the memory and the imagination of your signature disappears.

Cataract
By W. H. Bates, M.D.
Defined

CATARACT is an opacity of the lens of the eye. The lens of the eye is located in the pupil just behind the colored part of the eye, the iris. The lens is about the size of an ordinary pea. It is curved more on the front part than on the back. It is suspended in the eye by a hag-shaped structure, called the capsule. The capsule is a thin membrane. Covering the inside of the front part of the capsule is a layer of cells resembling in form and structure some of the layers of the skin of the body. The cells of the front part of the capsule are believed by some authorities to cause a secondary cata-ract after the lens has been extracted. Some years ago, I demonstrated by a long series of experiments that secondary cataract is not caused by these epithelial cells, but by scar tissue. The lens, itself, is composed of a number of layers of transparent tissue, which lie parallel to each other. When one places a number of sheets of plane window glass in a pile, with each pane of glass parallel to all the others, the pile of glass is transparent, but if one sheet or more is at an angle, that is, not parallel, the pile of sheet glass is clouded. This is a simple description of what takes place in the lens of the eye when it becomes opaque. When the lens is clear, its layers are parallel to each other. When the lens is opaque, one or more of the layers is at an angle to the rest. Some patients with normal eyes are able by means of an effort to consciously produce a cataract. When the cataract is beginning to show, it can be increased consciously by the memory of imperfect sight, which requires an effort with a resultant contraction of the muscles on the outside of the eyeball. When one group of eye muscles contract, the eyeball is lengthened and myopia is produced. When another group of muscles contract, the eyeball is short-ened with a production of hypermetropia. When all the muscles of the eye contract sufficiently, the eyeball is squeezed in such a way as to change the parallelism of the layers of the lens with a consequent loss of its transparency.

Occurrence

SENILE CATARACT. There are various kinds of cataracts. The most common form is called senile cataract, because is usually occurs in elderly people after the age of fifty. Exceptions, however, are found in which the cataract may occur at a much earlier period. In the senile cataract at the beginning of the cloudiness of the lens, one sees opacities extending in nearly straight lines from the periphery, or the outside margin of the lens, to the centre. Later on, the parts of the lens between these lines of opacities become clouded until the whole lens becomes totally opaque. A lens is said to be ripe when its whole structure becomes opaque, when the patient's vision becomes so poor that he is unable to count his fingers held about a foot from the eyes.
CONGENITAL CATARACT. When a child is born with an opacity of the lens, such a cataract is called congenital.
TRAUMATIC CATARACT. A traumatic cataract is caused by some mechanical injury like a blow or the puncturing of the lens by a sharp object. Being struck by a baseball or having a sharp object, such as a stick or a toy, thrust in the eye, is a common cause of traumatic cataract.
COMPLICATED CATARACT. When in addition to cataract, the patient has some disease of the eye, glaucoma, atrophy of the optic nerve, or serious inflammation of the interior of the eyeball, he has what is called complicated cataract. In these cases, the patient is usually unable to distinguish light in some parts of the field.
There are other kinds of cataract which occur less frequently.

Symptoms

Occasionally, a cataract may be sufficiently prominent to be recognized with the naked eye. In most cases, however, one cannot discover the cataract without the aid of the ophthalmoscope. When cataract is far ad-vanced or the lens becomes totally opaque, the red reflex of the normal eye is not seen in the area of the pupil. If the cataract is only partially developed, one sees a red reflex shining through a clear part of the lens while other parts of the lens are more or less opaque.

Demonstrations

Some years ago, when I was attending lectures at a medical college, an experiment was performed which was so convincing that I have always remembered the details. A professor was talking about the eye. He showed on an enucleated eyeball of a cow, and called our attention to the fact that when he held the eyeball loosely in his fingers, the pupil was perfectly black. Then, when he squeezed the eyeball, almost immediately the pupil of the cow's eye became distinctly white from the pressure exerted upon the lens. Then, when the lecturer relaxed the pressure of his fingers, the pupil at once became perfectly black as it was before, and the cataract disappeared. The experiment was repeated a number of times. The pressure on the eyeball always produced cataract; relaxation of the pressure was always followed by the disappearance of the cataract.
Some years ago, I performed an experiment on a rabbit which had just been killed by chloroform. By dragging upon the muscles on the outside of the eyeball, it was possible to obtain pressure on the lens and produce a temporary cataract. When pressure on the eyeball was released, the cataract disappeared. By advancing the muscles and fastening them permanently to the back part of the eyeball with the aid of sutures, the cataract which appeared in the pupil was permanent so long on the pres-sure was maintained by the advancement of the muscles. The facts demonstrated very conclusively that cataract in the rabbit's eye can be produced by pressure on the eyeball with the aid of the muscles on the outside of the globe.

Treatment

If cataract can be produced in a rabbit's eye expect-mentally, one would expect the same thing to occur in the human eye. Treatment which relieves pressure on the eyeball is always beneficial. It is very interesting to discover that all cases of uncomplicated senile cataract have been benefited by relaxation or rest, at first non-poratly, later more continuously or permanently.
There are a great many methods of treatment which bring about relaxation in the cure of cataract. The measures employed are not injurious. In fact, there is no possibility of making the condition of the eye worse. It is well to emphasize the fact that the same method of treatment to obtain relaxation is not a benefit in all cases. Patients need to be treated as individuals.
1. REST. Closing the eyes and resting them, or covering the closed-eyelids with the palm of one or both hands, without exerting any pressure on the eyeblls, has improved the majority of my patients. In my book, I report a case of cataract which was cured permanently by palming for a long period of time, twenty hours con-tinuously. Palming for five minutes boarly is usually beneficial. With the eyes closed and covered, it is well that the patient allow his thoughts to drift from one thing to another without trying to remember one thing in particular all the time. By thinking of pleasant things, it is ofres possible for the patient to forget that he has eyes and in this way a larger amount of relaxation is attained.
2. SWINGING. Swinging is very helpful in the cure of cataract. This swinging of the body can be done with the patient standing or sitting. Some patients have proc-ticed the swing while sitting in a chair for many hours during the day. When tired, they would alternate with palming. When the swinging is done correctly, it is restful and a benefit not only to cataract, but to other conditions of the eye. In swinging, one moves the body, head and eyes from side to side. When the body sways to the right, the head and eyes move in the same direction. When the body moves to the left, the head and eyes also move to the left. When the eyes move to the right, all objects not regarded are to the left of where the eyes are looking. When the eye moves to the left, all objects not regarded are to the right. By practicing the swinging exercise, many patients soon become able to imagine stationary. objects to be moving in the opposite direction to the movement of the head and eyes. The great benefit derived from the sway is that the stare, the strain, and concentration are prevented. One cannot sway, move the eyes, and at the same time hold the eyes stationary in order to stare or concentrate.
The normal eye with normal sight never sees anything with perfect sight continuously, unless it can because able to imagine it to be moving. This movement is usually about one-quarter of an inch from side to side. Things imagined to be stationary soon become imperfect.
3. MEMORY, IMAGINATION. It is not possible to remember a letter of the Snellen test card perfectly unless it is seen perfectly. It is not possible to imagine a mental picture of the letter perfectly unless it is remembered perfectly. Furthermore, it is not possible to see the letter perfectly unless one has a perfect imagination of a known letter or other object as well with the eyes open as with the eyes closed. One of my patients had normal sight with the right eye, but only perception of light with the left eye which had a ripe cataract, or a cataract in which the whole lens was opaque. With the right eye, she could remember or imagine perfectly the letters that she was able to see perfectly. When she covered the good eye with a screen, she told me that she could imagine the small letter on the Snellen test card as perfectly with her left eye as she, could with her right. She was told that because of her poor sight in the left eye, she was unable to imagine perfectly at the same time with her left eye open. She remonstrated. with me and was very positive that she could imagine as well with her left eye open as with her right. Finally, I asked her how much she could see on the strange card, and much to my surprise she read it with normal vision. When the eye was examined with the ophthalmoscope at the same-time that she said her vision was normal, the cataract had disappeared. She was right and had demonstrated the truth that when her imagination was perfect, her sight was also perfect and in order to have perfect sight, it was necessary for the cataract to disappear, which it did. This case was one of the strongest evidences that imagination treatment is one of the best methods that can be employed to cure :cataract. It interested me so much and emphasized the value of the imagination so greatly that it has become a routine treatment for my other cases. While it is beneficial in most cases, it is seldom curative because very few patients have so perfect an imagination.
I treated a woman, aged fifty-six for the first time on November 7, 1923. The right eye had incipient cataract with a vision of 15/70. The left-eye had a ripe cataract with a vision of only perception of light. The numerous eye doctors, whom she consulted all advised an operation for the removal of the cataract of the left eye, and told her that no other treatment would be of any help. The patient was benefitted by palming, by gwinging, and more of all by the use of her imagination. When her imagination, with the right eye open, improved, her vision improved to the normal. With her left eye open, her imag-ination was not so good, but even with an imperfect imagination her vision at once improved to 15/200. After two weeks of treatment, there were days in which her imagination became, with the left eye-open, as good as with her right eye open, with normal vision in each eye. After some months of treatment without my supervision, the vision of the right eye became permanently normal and the cataract disappeared. By continuing the treatment at home, the left eye obtained normal vision for short periods of time only. Since she obtained normal vision with the left eye, although temporarily, it is pos-ible for the temporary improvement to become permanent.
The memory of perfect sight is a rest to the eye, with a coincident relaxation of all tension or strain of the muscles of the eye.
4. FINE PRINT. Cataract patients become able to read fine print at six inches or nearer to their eyes more quickly than do patients with imperfect sight from other causes. By reading fine print frequently, or for long periods of time, the cataract becomes less.
5. SUN TREATMENT. The eyes need sunlight. People who work in mines, where there is no sun, sooner or later develop inflammations of the interior of the eyes. The cloudiness of the lens from cataract is lessened by exposing the eye to the direct rays of the sun. When using the sun treatment, it is best to let the eyes become accustomed to the sun by mild treatment at first. Have the patient sit in a chair with his eyes closed and his face turned toward the sun. He should slowly move his head a short distance from side to side. The movement of the head prevents concentration of the sun's rays on one part of the eye. After some days of treatment, or when the patient becomes more accustomed to the light, one may use the sun-glass with added benefit. Direct the patient to look for down and while he does this, lift the upper ful. gently, exposing to view the sclera or white part of the eye. Now, with the aid of the sun-glass focus the sun-light on the forehead or on the cheek, and then rapidly pass the concentrated light over various parts of the sclera. This requires less than a minute of time. It is not well to be in a hurry. One should wait until the patient becomes sufficiently accustomed to the sun to permit the upper eyelid to be raised while he looks far down, exposing the scleru only. It is important that the patient be cautioned not to look directly at the sun.

Prognosis

The cure of cataract is usually accomplished more quickly than the cure of some other diseases of the eye. My assistant, Emily C. Lierman, has had unusual success in treating cataract cases, as she adopts my methods to each individual case. In her book, "Stories from then Clinic," the treatment is described in detail.

Stories from the Clinic
NO. 76: CATARACT
By Emily C. Lierman

MANY patients, after being cured of imperfect sight, go their way and we never see them again. However, many come back, even after a period of five years or more, to report, or to show their gratitude. If a patient is cured quickly, he is very apt to forget that he ever had eyestrain. Normal vision helps him to forget, and he is able to go on with things that interest him without tension or strain. There is nothing that affects the whole nervous system more than eye strain.
I have deep sympathy for patients suffering from cataract. Some of these have told me that, when they first discovered, or were told that they had acquired cataract, the shock was so great it sometimes made them very ill. I have often wished that I could broadcast to every human being troubled with cataract, that they need not worry about an operation, nor fear blindness.
While treating patients at the Harlem Hospital Clinic, Dr. Bates placed under my care many patients with cataract. Some of them were children who were born with it; while others acquired it from an injury of some sort. If they faithfully practiced the daily treatment for their particular case, they always improved. There were no exceptions, although in all cases where the patient did not practice enough, it took much longer for a cure. Adults were also cured quickly when the directions for home treatment were faithfully carried out. Age made no difference.
A colored mammy, who was a faithful servant of one of our private patients, came regularly, three days a week for many months, and was treated for cataract. I have described her case in my book, "Stories from the Clinic." In the beginning of her treatment, she could not see the letters of the test card at five feet. As she explained it to her dialect: "Do you know, ma'am, ah can see nothin', no ma'am, nothin' at all at dis distance!"
Long periods of palming, early in the morning and late in the afternoon, when her work was done, helped her sight. In the clinic she was taught to sway her body slightly from side to side and to blink all the time. The swaying helped her to see things about the room moving opposite to the movement of her body. The blinking prevented the stare, which is usually the cause of cataract. The quickest way to obtain a cure is by palming, and I advise my private patients to practice it for several hours or many times each day. It would be impractical, however, to advise a clinic patient to use the same method, because they cannot spare the time from their work, nor can the employer spare them. If such advice were given them, their answer would surely be: "This treatment is only for those who can afford the time." Dr. Bates often tells them that it takes less time to use their eyes correctly than it does to use them incorrectly.
Clinic patients, as well as private ones, are advised to relax all day long. Mammy was to see things moving all day by watching her broom as she swept the floors; the washboard as she washed the clothes; the clothes-wringer as she turned the handle; and the dishes as she dried them and put them in the cupboard. We treated her many times, but occasionally she had a relapse. These were sad times for mammy, when she had tears in her eyes and a heavy heart. Frequently she would say: "Ma'am ah knows dee is no hope for me. Ah has displeased de good Lord." A kind word or two always helped her, and I made sure that she received many of them.
As time went on, she obtained normal vision with the use of the test card, and became able to read very fine print and to thread a needle. We left the Harlem Hospital Clinic, never thinking that we would hear from her again. Six years had passed, and new patients were coming and going from our own clinic, when one day about three months ago, we received a letter from mammy. All through the letter were words of gratitude and praise for what we had done for her. She is now seventy-eight years old, and can still read her newspaper and thread a needle. She asked for permission to come to see us. She wanted the Doctor to look at her eyes to prove that her cataract had entirely disappeared. We, of course, were anxious to see her. When she came both of her eyes were examined and no sign of cataract was found in either eye. Her vision with various test cards was 10/10, and she read fine print without any difficulty, because she did as she was told. She was cured. It was not always easy for her as her work at times required good eyes. Her madam had patience with her for she, also, was under treatment. During mammy's last visit, she said: "Ah jest knowed dat ah was cured 'cause ah could see de crumbs on de carpet to brush up, an' ah could see de dust all over de furniture an' ah cleans better. De sun is clear now an' not in de mist no mo'."
About a month ago, another patient came with a report of good vision. She is over eighty years old, and has a disposition just as cheery as she had when I first knew Ellet, about eight or nine years ago. Perhaps our readers Will remember an article I wrote about her. She is the patient who was employed in an orphanage. Her duties there were to see that all the buttons were sewed on the clothes of little-ones at the Home. She said she was the only dinky in the country while she was there. From the very beginning she had infinite faith that Dr. Bates could cure her without an operation. During one of her early treatments, when she noticed a decided improvement in her sight while palming, she could not resist the temptation to peep through her fingers at me and say: "I'll fool them yet." I asked her what she meant and she answered: "Oh! The other doctors who want to operate on my eyes." Well, she kept her word. She fooled them and was entirely cured. She has never worn glasses since her first treatment and the only reason for her being cured is, that she practiced faithfully the methods of treatment that helped her most. When she looks at you, her young, blue eyes twinkle and she wears a smile that won't come off.

A Radio Talk

The following lecture was delivered at Station WMSG, Madison Square Garden, on Tuesday, May 18th, by W. H. Bates, M.D.
FOR a few minutes this evening, I wish to talk to you about your eyesight. So many people are troubled with their eyes that I feel that anything that is a benefit to them should be broadcasted. In the first place, it is an error to believe that perfect sight requires hard work or an effort. Perfect sight comes with out an effort. This is very easily tested. All you have to do is to look at a small letter in a book or a newspaper and note that when seen perfectly, it is seen easily. If you do something that is wrong, by trying to see this letter better or making an effort to improve it, your vision fails. If the efforts are continued and you cooow-tate on just one point of the letter, the vision not only fails, but your eyes begin to feel uncomfortable. Pain and headaches often occur when the eyesight is imperfect. People who have perfect sight are usually more-comfortable than people who have imperfect sight.
It is generally believed that the normal eye has perfect sight all the time. A scientific study of the facts has convinced me that this impression so generally believed and taken for granted is far from the truth. After forty years' special study of the eye under different conditions, I am convinced that the normal eye has imperfect sight most of the time. Age is no exception, young and old are equally affected.
There is but one cause of functional imperfect sight, ful that is, a strain or effort to see. The strain may be an unconscious one or it may be conscious and manifest itself by pain, fatigue, or other discomforts.
Light has a very important effect on the vision of the normal eye. The vision of all persons is imperfect when the eyes are first exposed to the strong light of the sun or the strong artificial light, but people who are super-sensitive to the light of the sun, should not dodge it, but should gradually accustom the eyes to the sunlight.
Moving pictures usually produce temporary defective vision. Some people have complained that they always suffered with pain and had poor sight whenever they regarded the screen with its flickering light. I believe that some years ago, when photography was less perfect than it is now, the pictures produced a great deal of eyestrain, much greater than at the present time. I always advise my patients under treatment for the cure of defective vision, to go to the movies frequently and gradually become accustomed to the flickering light. After this is accomplished, no other lights seem to bother them.
Noise is a frequent cause of defective vision of the normal eye. All persons see imperfectly when they hear an unexpected loud sound. Familiar noises do not lower the vision usually, but unfamiliar, new, or strange noises always do, at least temporarily.
Artists, bookkeepers, lawyers, physicians, writers, mechanics, and others found their mental ability or efficiency increased many times with the aid of eye training. Many recruits for the army and navy were found to have imperfect sight and were rejected, although their eyes were normal. Eye training improved their sight.
The cadets at West Point and the midshipmen at Annapolis have been well trained to obey orders, and any method that was employed to improve the sight of the soldiers and sailors was grasped and practiced with unusual intelligence. One great difficulty, if not the greatest difficulty in helping the sight of the soldiers and sailors, was that those who had inquiring minds wanted to know the whys and wherefores of everything. They were slow in obeying orders and were, on the whole, difficult to cure, but those who were benefited usually had no questions to ask, no arguments to offer. They were sure to be benefited; they were sure to do as they were told, and because they did as they were told without any discussion, they obtained normal vision as a general rule at the first visit. The soldiers and sailors who were treated successfully, improved at the very beginning and improved so rapidly that most of them were cured in about an hour of eye-education. Those who were cured became able to cure others.
The most important method employed was to have the patient sit with his eyes closed and rest them for half an hour or longer. Then, when he first opened his eyes, the vision was usually improved temporarily. It had a good effect when the patient was taught that a strain, a strain, or trying to see always lowered the vision, and often produced pain, headache, fatigue; or other nervous troubles. The demonstration that staring lowered the vision, helped the patient to avoid the stare. When he knew what was wrong with him, it made it possible for him to practice in such a way as to avoid the stare.
Blinking was a great help. The normal eye blinks, or opens and closes, unconsciously very often. It has been demonstrated that blinking consciously gives one temporary improvement in the sight.
A young man came to me soon after war was declared, begging me to help him, if possible, so that he could enlist in the marines. He told me that he had tried to enlist a number of times, but he was always rejected because of his poor eyesight. In order to be accepted, it was necessary for him to have perfect sight in each eye without the use of glasses. He proved to be an apt pupil, and by using his eyes without effort or trying to see, his vision soon became normal. The next time he applied for enlisting, he was at once accepted, because he had perfect sight. He wrote me a letter while he was in France, in which he reported that he went on the rifle range and made a score of 251 out of a possible 300 points. He was the second highest qualified man in his company, and was awarded a sharpshooner's medal. His best ranges on record they were the 600 yard view fire and the 200 and 300 rapid. On the 600 yard range, he made six bull's eyes and four four's. The bull's eye for the 600 yard range was twenty inches in diameter. He had not been in Hoest, France very long before a call came for fifty men from each company who had high rifle range seconds to go at once for quick preparation to enter the lines as machine gunners. He was among those selected.
The aviation branch of the army requires very good sight. It is interesting to note that while aviators may have normal sight when they first enlist, in the course of a few weeks their vision will begin to fail. They complain that at irregular intervals they suffer from attacks of blindness. At first these attacks are not severe, but later on they become worse. During one of these attacks of blindness, the pilot will lose control and the machine will fall to the ground unless the aviator can recover his vision before it is too late. A number of aviators have told me that they did not know of one man whose sight as continuously normal. For this reason, the death rate ntung aviators has been so high.
During the war, an officer in this branch of the service ad a long talk with me in which he described his personal experiences. He said that if he were not feeling very well or were enoe or less nervous, he would have an attack of temporary blindness, in which he would lose control of his machine for some seconds or part of a minute. He believed that if the attacks lasted much longer, he would not survive. I told him that the cause of these attacks of blindness was due to eyestrain. By having him practice in the office staring, straining, or trying to see, his vision was very soon lowered. By making still greater efforts, his vision became so poor that he was unable to distinguish ordinary objects and everything became black. He was convinced that the stare, concentration, or an effort to see, when sufficiently strong, could cause an attack of blindness. He also readily understood that to prevent these attacks of blindness, it was necessary for him to stop staring or trying to see. I advised him to look at his compass frequently and see it perfectly without straining his eyes. By consciously remembering a mental picture of the compass, his memory improved. With the improvement in his memory, there followed an improvement in his sight which not only became better, but improved continuously. The attacks of temporary blindness became less frequent until they disappeared altogether, but it was necessary for him to keep practicing and looking at his compass in order to prevent a relapse.
These facts have led me to the following conclusions:
First: All persons with normal eyes and perfect sight do not have normal eyes and perfect sight continuously.
Second: The cause is always an effort or strain to see.
Third: That treatment by eye training is successful when distant, small, familiar letters are read a few moments at least every day, and
Fourth and last: The good results obtained, justify the use of this method in all schools, the army, navy, merchant marine, and on all railroads—in short, by everybody who desires or needs continuous perfect sight.
If any of you are interested in the preservation of your eyesight for yourself, your family, or your children, I shall consider it a privilege to answer any question sent to me at this station.

Another Radio Talk Through WMSG

On June 8th, about 8 P. M. (see exact time in Radio section of Daily Newspapers), Emily C. Lierman, Dr. Bates' assistant, will give an interesting and instructive talk on Eye Education.
Your comments will be appreciated.

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