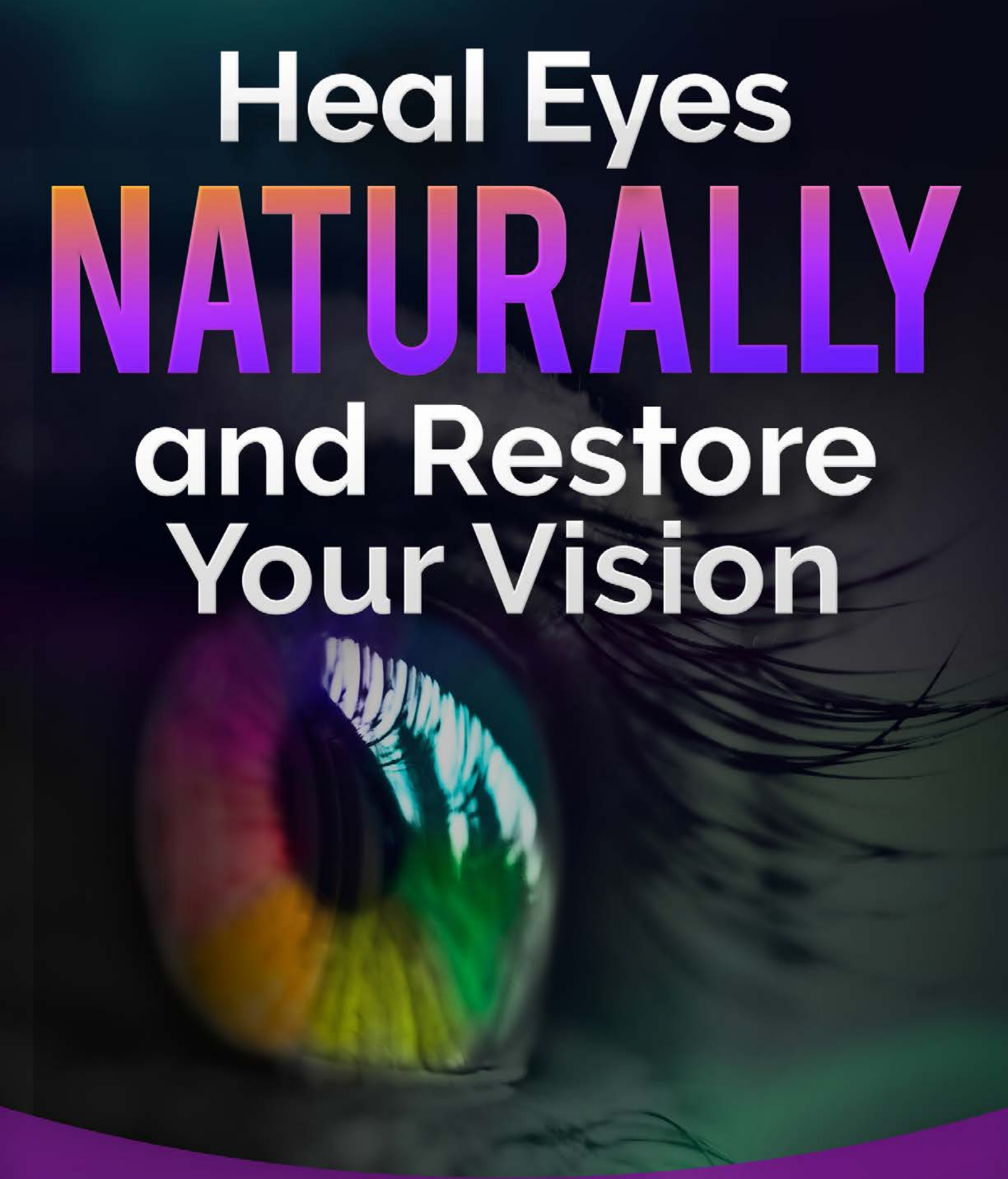
Heal Eyes NATURALLY and Restore Your Vision



By Carolyn Hansen

About Carolyn Hansen

Carolyn Hansen is a noted Holistic Health and Wellness Coach who hails from Whangarei, New Zealand where she owns an Anytime Fitness Gym. She has gained a reputation online as an authority on health, exercise and weight loss matters and is the author of several thousand health and fitness articles along with eBooks and programs that can be found **here.**

She has devoted more than three decades to the fitness industry, both offline and online, teaching people the simple secrets to getting into better shape, losing weight, and improving health.

Her main goal is to change the paradigm of health care from sickness care to wellness care and will be showing people how to live longer, healthier lives while avoiding the many mistaken beliefs and practices that diminish health and longevity.

She will encourage you to become stronger and stay that way through each decade of your life, maintain your health, wellness and vitality and to ensure your “health span” matches your “life span”.

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Table of Contents

Chapter One

An Introduction To The Problem – Fuzzy Vision!

Few people enjoy wearing glasses.

Yet most of those same people believe they have no choice in the matter. Without the assistance of prescribed optics they would be unable to perform the tasks needed to either complete their schooling or make a living.

Unassisted poor vision is a huge impediment to making your way in life!

But what if one of the commonly-held tenets about poor vision – that its progression throughout life is largely beyond one's control – was actually incorrect?

What if your vision, through a course of appropriate action, could be restored?

In this guide I am first going to outline for you the theory for what is causing the epidemic of fuzzy vision in modern society. Then I will explain a practical method for alleviating the burden of impaired vision due to this same cause.

In other words, if you are near-sighted (myopic) or you are far-sighted (hyperopic) the material found in this guide may offer you a way to restore most if not all of your natural vision.

However, it is important to understand from the outset that the kind of vision restoration we will be talking about pertains to vision deficiency caused by maladjustments in the refractive mechanics of the eye (i.e. affecting how light travels through the eye).

There is no implied suggestion that if a vision defect is the result of disease or injury - such as age-related macular degeneration, cataract, diabetic retinopathy, glaucoma, or retinal detachment – that any of the application outlined in this guide might be useful in restoring vision. For eye conditions unrelated to pure refractive mechanics be sure to consult with your physician. Such conditions may be relieved to some extent with a course of diet, better lifestyle practices, or medication, but they should not be considered addressed by anything found in this guide.

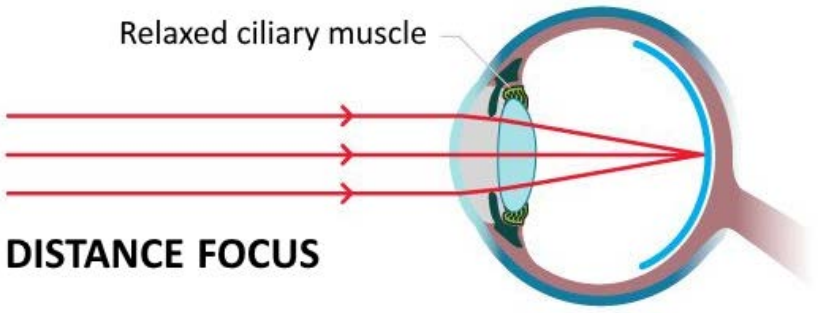
Chapter Two

How Your Eyes Work

Before you can attempt to restore natural vision caused by bad ocular practices, which is the thesis of this guide, you first have to understand the basic mechanics of the eye as it relates to the passage of light through it.

In the images below are shown two extreme scenarios. One involves looking at objects in the far distance. The other involves looking at something positioned relatively close to the eye.

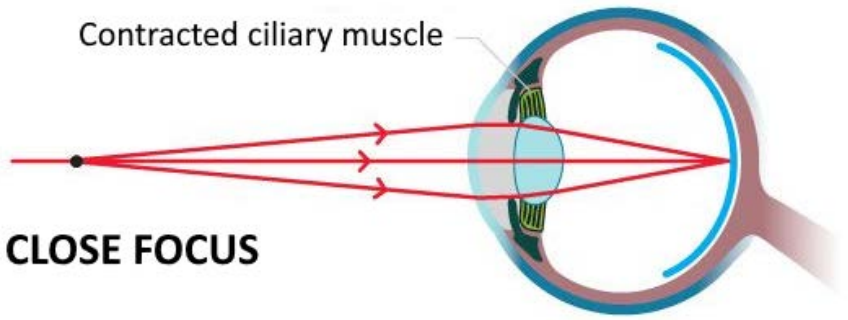
For far away objects the light from any part of them follows an almost identical path from the object to the eye. In other words the light rays (drawn in the direction of propagation) are essentially parallel to one another.



The eye has evolved to focus these parallel light rays on the light-sensitive back wall (the retina) of your eyeball.

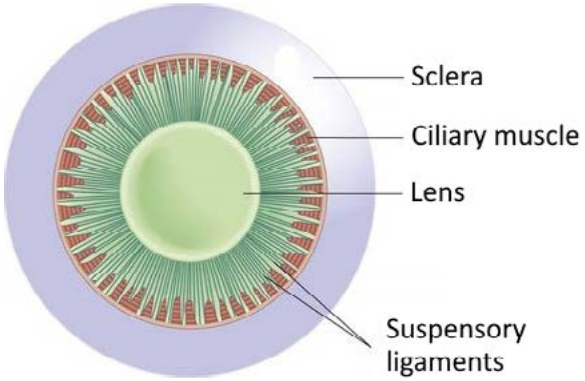
The eye performs this focusing with the use of a lens which sits close to the front of the eye. In its relaxed state the shape of the lens works to focus an image about one inch beyond it, where the retina is found.

On the other hand, all of the objects we interact with are positioned fairly close to the eye and the light rays which enter different parts of the eye are not parallel to one another.



Because of this the lens of the eye in its relaxed state would (for these nearby objects) tend to form a focused image on a plane that falls beyond the position of the retina. This would cause the image on the retina to be blurry if not for the ability of the eye to adjust the shape of the lens to reposition the focal plane back onto the retina.

Surrounding the lens of the eyeball and connected to it by a series of suspensory ligaments is a ring of muscle called the ciliary. Like all muscles, the ciliary is able to contract. When it does so it causes the lens to "fatten" and bend (refract) light more as it passes through on its way to the back of the eye.



Thus in an ideally-structured healthy eye the ciliary muscle is able to accommodate the focusing of objects both near and far by making adjustments in the amount by which it is contracting.

These adjustments are near instant. As you move your hand towards and from your face you are able to "change your focus" in less than a second. This is a FAST ocular response.

The other possibility for repositioning the focal plane relative to the retina is that you change the length of your eyeball so that the retina moves to the new plane of focus according to how far or near the object is you are looking at.

There is more than one way to do this “eyeball lengthening” but compared to the response times of the ciliary muscle the response rate for a change in the length of the eyeball is SLOW.

It turns out that temporary eyeball length changes can be achieved in times of the order of an hour. But long-term changes in length, which require the eyeball to actually grow or shrink in size, might require several weeks of responding to a suitable signal for length change.

What those signals might be we look at in the next section where we dive into the causes of near-sightedness and far-sightedness.

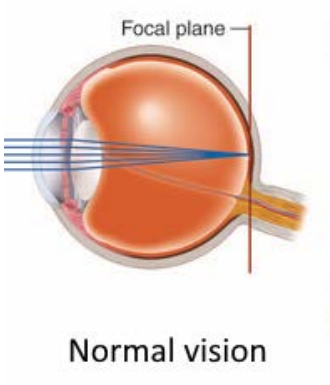
This possibility of permanent eyeball length adjustment is in fact the basis of the method which will be suggested for improving your eyesight by restoring your natural vision.

Chapter Three

Myopia (Near-Sightedness), Hyperopia (Far-Sightedness) And Their Cause

To be able to understand how to restore your natural vision you are first going to need to understand what the actual problem is that you will attempt to reverse.

Now, you will remember (because we just discussed it) that good distance vision relies on the lens of your eye being able to focus an image on a focal plane which coincides with the position of your retina at the back of the eye:



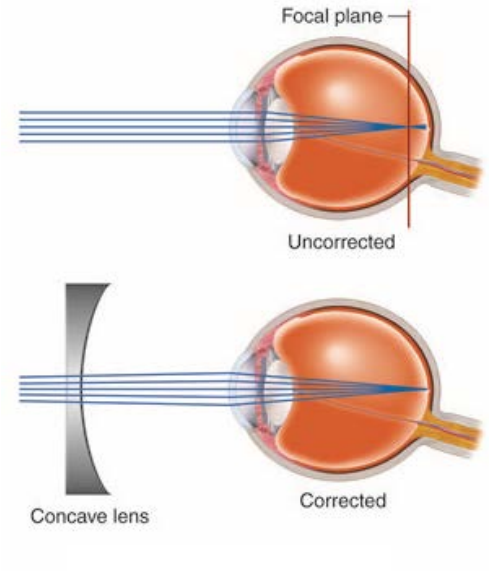
Normal vision

This is what we typically refer to as normal vision. Abnormal vision, the kind that requires prescription corrective lenses, results when that focal plane sits either in front of the retina, or sits behind it. In either case the result of light hitting the retina (away from the focal plane) is that the image formed is blurry.

When the focal plane sits in front of the retina the problem is that the eye is essentially too long. We call this near-sightedness, or myopia.

To restore focused vision in the myopic eye we could do one of three things:

- We could move the viewed object closer to the eye (as this will move the focal plane closer to the retina)
- We could shorten the eye (which would bring the retina closer to the focal plane)
- Or we could place a concave lens (a "minus" lens as it is often called) in front of the eye to spread out the incoming light rays and move the focal plane onto the retina

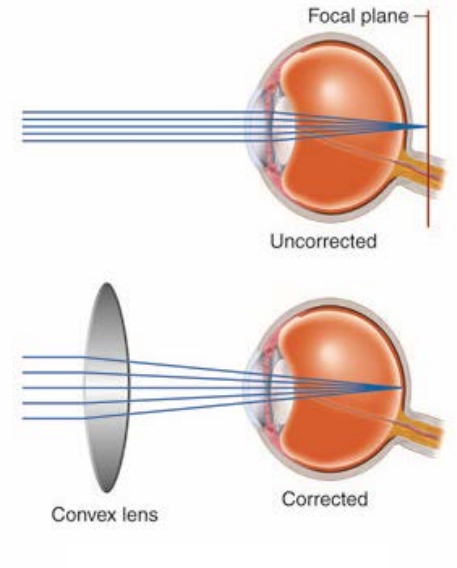


Myopia (near-sightedness)

Myopia is the more common of the two "misplaced focal plane" problems and is the one we will be discussing most in this guide.

But all of the theory and the application for vision correction also applies to the case of blurry vision caused by a focal plane which sits beyond the back of the eye. We refer to this as hyperopia. To bring an image into focus in the hyperopic eye we could do one of two things:

- We could lengthen the eye (which would bring the retina closer to the focal plane)
- Or we could place a convex lens (a "plus" lens as it is often called) in front of the eye to concentrate the incoming light rays and move the focal plane onto the retina



Hyperopia (far-sightedness)

When we are born our eyes tend to be too short for our lenses and assume the hyperopic state. But as we age and our eyeballs grow the degree of hyperopia lessens.

A study of eyesight in school children carried out in 2001 in Poland looked at the rates of myopia and hyperopia in 4422 male and female students aged between 6 years and 18 years [Ref. Czepita-2007].

A table from the study appears below. It shows the percentage of students with either myopia (green column) or hyperopia (blue column) as a function of age.

Note that the column in the table labeled emmetropia refers to normal vision, where the student has been diagnosed as neither near-sighted nor far-sighted.

While approximately the same percentage of myopia and hyperopia cases were measured in the student body as a whole, 13.3 percent versus 13.05 percent respectively, the percentages at different ages are strikingly different.

In the case of hyperopia the incidence rate starts out at around 36 percent in the youngest students and falls to approximately 3 percent by the time they are graduating high school.

In contrast, the rate of myopia displays the opposite trend. Near-sightedness in the youngest students was measured at close to 2 percent and eventually reached about 33 percent around the time of graduation.

Table 2. Prevalence of refractive status for each age (right eye only)

Age (years)	Total, *n* (%)	Myopia, *n* (%)	Emmetropia, *n* (%)	Hyperopia, *n* (%)
6	397 (8.98)	8 (2.02)	244 (61.46)	145 (36.52)
7	428 (9.68)	17 (3.97)	329 (76.87)	82 (19.16)
8	419 (9.48)	35 (8.35)	311 (74.22)	73 (17.42)
9	415 (9.38)	37 (8.92)	331 (79.76)	47 (11.33)
10	417 (9.43)	46 (11.03)	325 (77.94)	46 (11.03)
11	419 (9.48)	51 (12.17)	322 (76.85)	46 (10.98)
12	411 (9.29)	59 (14.36)	318 (77.37)	34 (8.27)
13	288 (6.51)	32 (11.11)	222 (77.08)	34 (11.81)
14	340 (7.69)	53 (15.59)	259 (76.18)	28 (8.24)
15	290 (6.56)	53 (18.28)	212 (73.10)	25 (8.62)
16	211 (4.77)	65 (30.81)	140 (66.35)	6 (2.84)
17	200 (4.52)	71 (35.50)	124 (62.00)	5 (2.50)
18	187 (4.23)	61 (32.62)	120 (64.17)	6 (3.21)
Total	4422 (100)	588 (13.30)	3257 (73.65)	577 (13.05)

These results, the authors of the study suggest, were in line with the results of similar studies carried out in other parts of Europe, and in the United States, where around 30-40 percent of the adult population will have been diagnosed with myopia and need an eye wear prescription to compensate for their inability to focus on all but the closest objects.

As the authors of the study point out, the situation is reported to be even more dire in Asian countries like Hong Kong, Singapore, and Taiwan, and in the urban areas of China such as Shanghai. Near-sightedness in high school students in these places ranges from 62 percent (Hong Kong) to 83 percent (Taiwan).

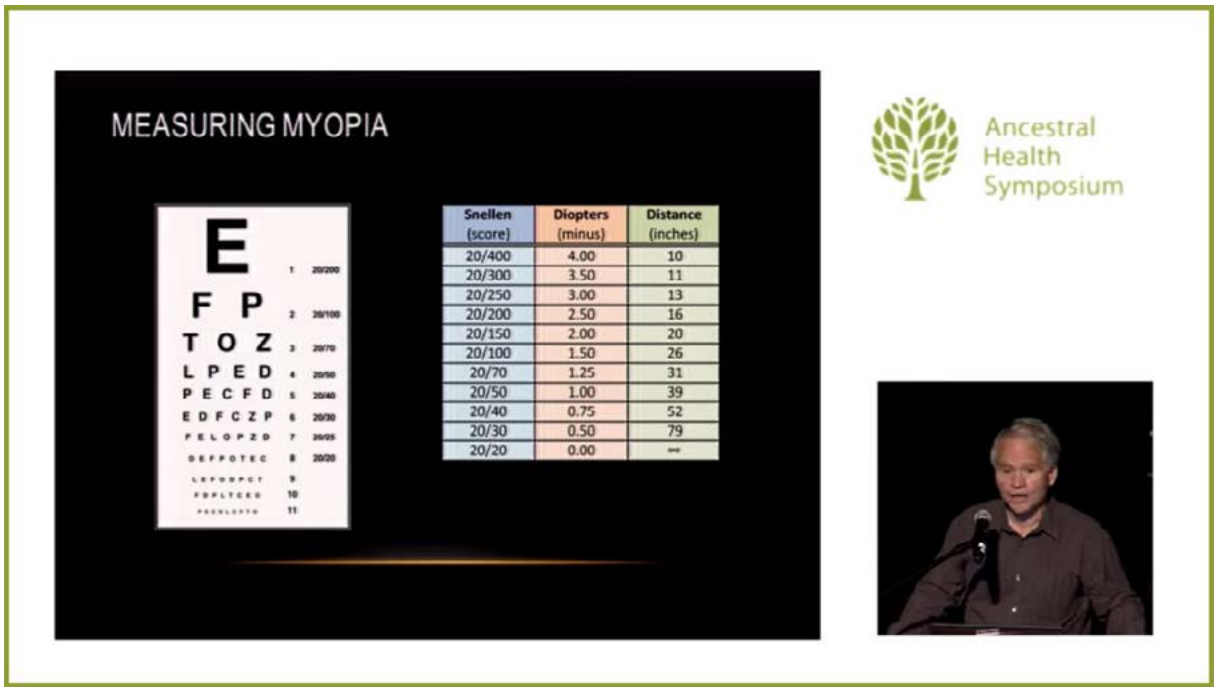
On the other hand, in populations where children are not put through an intensive education system which involves a great deal of close up reading myopia is much less prevalent. In Africa, where schooling resources are fewer and the degree of education less intense, the incidence of myopia is reported to be around 10-20 percent [Ref. Fredrick-2002].

In more extreme instances, where modern schooling is entirely absent, the incidence of myopia is rarer still. In Australian aboriginal populations and in the early Maori population of New Zealand [Ref. Price-1939], and in the Siberian Yakuts [Ref. Hutorowicz-1911], far-sightedness has been reported to be so good that stars which cannot normally be seen without the aid of a telescope by “the white man’s eye” can be seen by tribe’s people.

So if all the “near work” associated with schooling is somehow the cause of myopia, how does the process get started, and what keeps it going throughout the entire period of schooling and potentially the rest of your life?

A lot of debate has arisen on this question, but in this guide we are going to follow the ideas of Todd Becker, a biochemical engineer who looks at the question of myopia and hyperopia from a scientific point of view. Todd has used what he has learned to develop his own technique for naturally restoring his own vision and the vision of many others who have followed his protocol (which we will outline later).

Todd has presented his approach to vision restoration in a video which can be found on YouTube entitled Myopia: A Modern Yet Reversible Disease. Much of the information in the guide you are reading now is inspired by Todd's talk.



Todd's goal, which also coincides with the goal of this guide, is to help people regain the natural focusing ability of their eyes by helping them to adapt to ocular stress, rather than to avoid it, which is the approach of the ophthalmologist who prescribes glasses to instantly relieve the eye of blurred vision.

The way Todd sees it, stress is not always a bad thing, and in fact the way you decide to deal with it can result in an improvement to the initially stressed system. For example, your arms are weak so you decide to lift weights (which represents the application of weight-bearing stress). In response your stressed muscles are forced to grow a little larger so that they are able to handle the increased weight load.

Another example involves a reduction in the amount of food you are consuming. If you drop your calorie intake sufficiently (induce a dietary-based energy stress in your body) your body responds by lowering your metabolism so that your energy requirement goes down and you burn fat more efficiently.

In the same way Todd looks at the blurred vision created by the myopic or hyperopic eye and sees a form of visionary stress which might be manipulated into improving eye sight.

How the problem gets started

At the beginning of this guide, I showed you an image of an eye focused on a nearby object. To focus the light from this object onto the back of the eye the ciliary muscle contracts and the shape of the lens changes – it fattens a little.

Suppose as a student, you spend a significant amount of your day staring at close up objects like a book or an iPad device. The result is your ciliary muscle gets used to being in this contracted state and does not simply go back to its relaxed state when you stop performing your near work and attempt to focus on distant objects.

Now when you steer off at the horizon your still-fattened lens focuses the image at a point in front of the retina and the image you see is blurry. Your eye has become myopic and you can no longer clearly see what is written on the blackboard at the front of the room.

Eventually someone notices this and you are sent for a pair of corrective glasses to improve your long-distance vision. You are given minus lenses of some diopter power. Maybe -1.0 diopter. The strength of the correction for both eyes might be the same, or it might differ. But your distance vision problem is fixed. Now the mountains in the distance are sharp again, as are the lessons written on the blackboard.

Only, this is not quite true...

Because the blackboard is a lot closer than infinity (or those mountains) the image of the blackboard is focused just a tiny bit behind your retina, so it is just marginally not-sharp. If you wear your distance glasses inside your home, where objects in general are closer still, that offset between your retina and the focal plane is greater still. Your eyes, while wearing the minus glasses, have become hyperopic.

At this point you are remembering to take off your glasses whenever you are staring at nearby objects. But even so, during the times that you are wearing your glasses inside your home your brain is receiving slightly fuzzy images from the hyperopia.

Now, if you remember back to the beginning of the guide, I mentioned that hyperopia is a stimulus for eye growth. The eyeball will eventually get longer. It does this so as to match up the position of the retina with the position of the focal plane.

Thus, over a period of weeks or months, your eyeball elongates so as to remove the optical strain on your brain of having to process those slightly fuzzy images.

What is the result of this?

Well, now when you take off your glasses the position of your focal plane due to your myopia has moved even further in front of your retina. Your field of crisp vision has shrunk even more. So whereas you used to be able to easily read a book positioned 50 centimeters on front of your face, now you have to move it to 45 centimeters before the lettering once again becomes sharp.

And when you put your glasses back on and look at the blackboard again? Not so sharp anymore.

Then, before you know it, off to the optometrist again for a new prescription with slightly stronger minus lenses. As the cycle repeats itself eventually your field of vision narrows until the point where you are looking to use an old prescription set of glasses to assist your vision with the near work. You have become completely dependent on glasses for everything you do!

This is why, when you look inside a high school classroom in Taiwan you notice that almost every student is wearing glasses whether they are staring into their iPads or training their focus on the teacher at the front of the room.

This pattern of behavior, involving a reliance on ever-higher diopter powers to clear away the fuzz of distance viewing, is in the opinion of Todd Becker (and a good many other researchers who have studied the problem) responsible for the current epidemic of myopia present in every advanced nation on the planet.

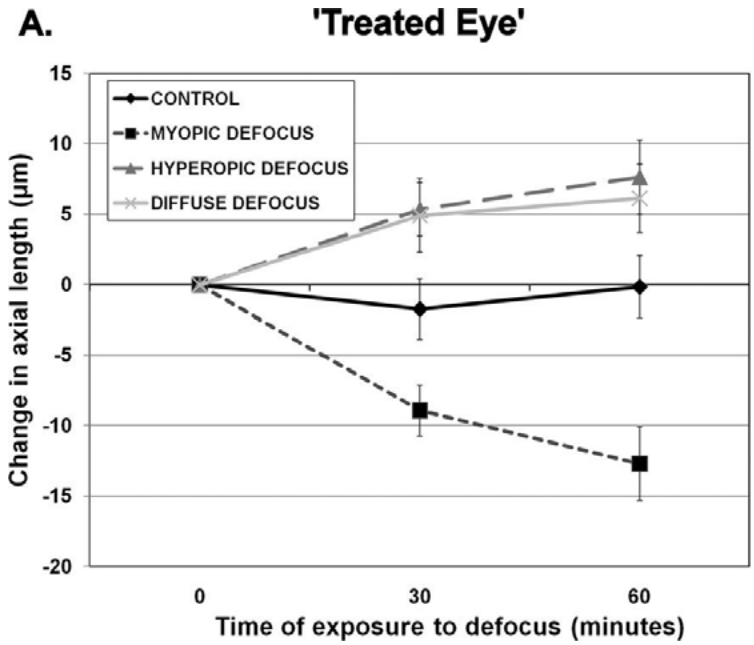
All well and good, you may be thinking. But is there actual proof that either a myopic defocusing (focal plane in front of the retina) or a hyperopic defocusing (focal plane behind the retina) causes the human eye to shorten or lengthen?

Yes. In 2010 researchers at the School of Optometry, Queensland University of Technology, in Australia set out to measure this change in axial length of the human eye in young adults in their twenties [Ref. Read-2010]. The study group consisted of 28 participants with otherwise healthy eyes but with either myopic or normal sight in their right eye.

Prior to the Australian study, earlier studies on animals (chicks, rhesus monkeys, guinea pigs) had demonstrated an eyeball resizing effect as a result of defocusing [Ref. Wallman-2004]. It was thus anticipated that this would also be seen in human eyes.

And it was. The effect was small, but measurable, as the defocusing duration was marked by measurements which took place 30 minutes and 60 minutes after the defocusing was applied with either a minus lens, a positive lens, or a light diffuser.

A graph showing the average measured change in eyeball length from the Australian study is shown below:



For context, a light diffuser (like a translucent film) will blur an otherwise sharp image and in animal studies has been found to act like a minus lens (cause hyperopic defocusing) in that it causes the eye to elongate.

As can be seen from the image above, when no optical interference was applied to the eye (the control case) the length of the eye was not measurably affected over the course of the 60 minute experiment. But when a minus lens was placed in front of the eye it caused hyperopic defocusing and eyeball lengthening.

Likewise, when a positive lens was used the opposite effect was observed. The induced myopic defocusing caused the eyes of the study participants to shorten.

So, the bad news – as strongly suggested by the Australian study – is that in response to progressively higher power minus diopter lenses being prescribed over the years to people with myopic vision, the eye continues to elongate and become even more myopic.

The good news is that because the problem derives from bad behavior which "trains" the eyes to favor near-sightedness, it ought to be possible to modify this behavior in such a way as to reverse the direction in which the length of the eye is changing.

Thus, a myopic eye, if suitably induced to shorten, will become less myopic as the back of the eye moves towards the focal plane. Likewise a hyperopic eye, if induced to become longer, will for the same reason become less hyperopic.

So how is this eyeball shortening (or lengthening) achieved?

What can you do to force your eyes to restore their naturally sharp vision?

Well, first you have to know the current state of your eyes so that you have a baseline from which to judge whether your attempts to improve your vision are working. We look at this briefly in the next section before discussing the vision improvement protocol favored by Todd Becker.

Chapter Four

How To Determine The Current State Of Your Vision By Using An Eye Chart

Everyone is familiar to some extent with the eye chart put in front of them in the ophthalmologist's office or the DMV when the quality of their vision needs to be tested. The most common is the Snellen eye chart, a printable version of which you should have access to in a separately-supplied PDF file named:

snellen-eye-chart-9-feet.pdf

What you may be less familiar with is the terminology used in conjunction with the eye chart. For example, 20/20 vision. What exactly does that mean?

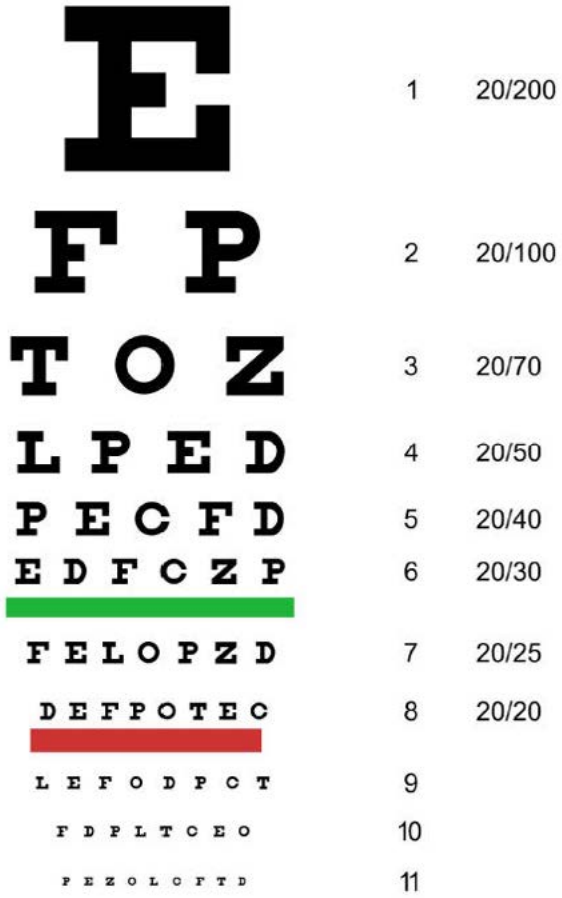
For the "regular"-sized Snellen chart the idea is you first stand 20 feet away from the chart (that distance is the first 20 in the 20/20 designation, or Snellen score). Then cover one of your eyes, and attempt to read down the chart letter-by-letter beginning with the single character (usually an E) which appears at the top.

Next to the E is printed the Snellen score 20/200 which means that for a person with 20/20 (normal) vision the E is the only letter on the chart they can make out clearly when standing 200 feet back from the chart.

On the next line of the chart are a series of smaller letters and the Snellen score 20/100, meaning that same chart reader with normal vision would need to move to within 100 feet to be able to read the characters on that line.

If someone standing at 20 feet distance from the chart can make out the series of letters on the 20/20 line but they cannot reliably do so for the letters on the next line further down then they are said to have (good or normal) 20/20 vision.

Note: the printed chart will look like this:



If the lowest line on the chart which can be read reliably is further up, then that person is likely to be referred to the ophthalmologist for corrective lenses.

You can test your state of vision by printing out the Snellen chart and hanging it on a wall in your home. In this case, printed on an A4 or letter-sized sheet, the chart is a little smaller than the one seen in an eye doctor's office and you would need to stand 2.8 meters, or about 9 feet, away from it when testing your eyes (and not the normal 20 feet).

Locate the line furthest down the chart for which you can reliably read off each of the letters. Next to that sequence of letters is your Snellen score.

If even the E on line 1 cannot reliably be made out you can halve your distance from the chart and repeat your search for the line on which the letters can reliably be read. Say this turned out to be the second line, marked 20/100. Because you reduced your distance to the chart by a factor of 2 you would multiply the second number in the score by 2 to give 20/200 as your Snellen score.

Likewise, if you moved to one quarter of the normal viewing distance from the chart before reading off your score you would multiply the second number of the score by 4 (the inverse of your distance adjustment). So your Snellen score would be 20/400.

You should record the Snellen score for each eye separately (use your hand to block the vision of the eye not being scored) and keep a log of these numbers over time to see how your sight might be improving (or getting worse). Ideally you want to get each eye back to 20/20 vision.

But you may be wondering about that Snellen score, because it is not the number used by your ophthalmologist when prescribing glasses. He/she measures the focal strength of each lens in diopters.

For your ophthalmologist, and the optometrist who supplies your glasses, the diopter is a more convenient measure of eye strength and it is defined for myopic eyes as the ratio of 100 centimeters to the maximum focusing distance of your eye. So for example, if your right eye can focus to a distance of 50 centimeters, but no further, the diopter strength is 100/50 or 2 diopters. But you will see it written as -2.00 diopters as the minus sign is used to indicate concave lenses (or minus lenses).

You can figure out the diopter strength of your eyes by taking a piece of string and stretching it from each of your eyes to the object you are looking at which is held just barely within focal range. Then measure the length of the string in centimeters and determine the equivalent diopter (by dividing the length into 100 centimeters).

The relationship between Snellen score and diopter is not entirely straight forward. But to see how they match up approximately you can scroll back to the image of Todd Becker's YouTube talk (or go watch his talk, or visit this page which conveniently summarizes the same information). In Becker's presentation you will see three columns of numbers, and on any given row is shown the matching Snellen score, diopter power, and maximum focal distance of the eye.

Whether you choose to measure changing Snellen scores or diopter powers you now have a way to monitor your progress if you decide to take action and apply the Active Focusing protocol outlined in the next section as a way of improving your eyesight by slowly modifying the length of your eyeballs.

Chapter Five

How To Reverse Myopia, Or Hyperopia, With The Active Focusing Protocol

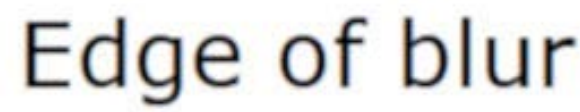
The key to reversing either myopia or hyperopia, according to Todd Becker, is to provide the eye with a signal to change its axial length – the distance between the lens and the retina. This can be done, he contends, using the principle of active focusing which we will define in a moment.

We saw how studies of the eye's response to defocusing of either type (where the focal plane sits in front of the retina or beyond it) causes the eye to grow in the direction which would tend to eliminate the defocus.

So let's assume we are dealing with eyes which are myopic.

In this case for distance vision, without the application of corrective lenses, the focal plane falls in front of the retina. If an object is moved close to the eyes, such as a book, the focal plane moves back towards the retina. The focal plane reaches the retina when the page is positioned at the maximum distance at which the text on the page appears sharp. Then as the book is moved closer to the eyes contraction of the ciliary muscle is needed to keep the focal plane at the retina.

Here is what the text on a page might look like just before the page reaches the maximum distance at which the eyes can focus. Becker refers to this distance as D2, where the text is at the edge of blurring into non-readability:



And here is text at the same font size when the page is positioned at the edge of focus, point D1:

Edge of focus

Note that at D1, where the focal plane is still slightly in front of the retina, the eye is receiving the defocusing signal which acts as a stimulus for the eyeball to shorten.

The principle of active focusing involves moving a viewed object, such as reading material to the edge of blur and then "instructing" the eye to make an internal adjustment to bring the viewed object to the edge of focus without changing the distance between the object and the eye. This is done with repetitive blinking.

Whether the blinking causes the ciliary muscle to relax a little, or the shape of the eye temporarily shortens, the effect is to reduce the strength of defocusing – not to zero, but to an amount that permits, for example, the reading of a book without significant eye strain.

When the quality of vision degrades once again to the edge of blur the blinking (active focusing) is resumed until the edge of focus is attained again.

Thus, you will be reading between D1 and D2 so that while you are at the "edge of focus" (or blur) you are also at the edge of comfort when reading. You will feel a little bit uncomfortable reading like this (after all you are forcing your eyes to do some work) but, in Becker's words, the experience is "never painful and never difficult".

Reading at the edge of focus for a couple of hours each day (with breaks every 15-30 minutes) is the method Becker used to restore his eyesight to a Snellen score of 20/20 or zero diopters in both eyes. He started out at about -1.50 to -2.00 diopters – enough to need glasses for driving – and within a year he no longer needed to use his glasses.

Becker says the process has worked for others, including many people with severe myopia of -5.00 or more diopters.

Let's say both of your eyes require -3.00 diopter glasses to see into the distance (equivalent to about 20/250 on the Snellen scale). I will discuss the case of eyes which differ in the strength of myopia shortly.

If you divide 100 centimeters by 3.00 (diopters) the number comes out to about 33 centimeters, or 13 inches. This is, by definition of your diopter power, the maximum distance at which you can read text clearly without glasses.

If you hold a page of text at this distance you only have to push it away a little to achieve D2, or the edge of blur.

By practicing active focusing and forcing your eyes to work at the edge of blur/ focus, you should over time see an improvement in your vision as your eyeball shortens. Thus, you will be holding the page further and further from your eyes.

Eventually, when you are just able to focus at about 50 centimeters, or 20 inches, you will have achieved an eye strength of about -2.00 diopters (which many people would consider a huge improvement over their current state of vision).

At this point you can challenge your eyes further by purchasing an inexpensive set of positive lens reading glasses of +1.00, +1.25, or +1.50 diopters depending on what you feel comfortable starting with.

Instead of pushing the text further away to achieve the myopic defocusing you are using a convex lens to achieve the same effect. Then as your eyes continue to improve you move up another half diopter each time so that you always remain near the edge of blur.

When you need to wear glasses for distance vision (perhaps not advisable when driving, but for other instances like watching movies, going for a long walk, or sitting in classroom environment like a lecture theater) Becker recommends you shave half a diopter off your prescription to achieve the slight myopia. So if your prescription is -3.00 diopters he recommends you find an optometrist who is willing to provide you with -2.50 diopter glasses (and lower as your vision improves).

If instead your eyes were hyperopic you would need to pull the page a little closer to you to move from the edge of focus to the edge of blur and then employ active focusing to allow readability of the text. Your goal over time here would be to shorten your minimum distance for focusing, unlike someone with myopic vision who is trying to increase the maximum distance for focusing.

But in either case the principle is the same, by maintaining a slight optical blur you are sending a signal to your eye to change its shape – to become slightly shorter in the myopic case and slightly longer in the hyperopic case.

What if the diopter correction is different for each eye?

In the case where one eye is more near-sighted than the other you can get yourself an eye patch and for half the time cover one eye while performing your active focusing exercise.

If one eye is significantly under-powered compared to the other then you might want to devote all of your active focusing time to the correction of your weaker eye. Wear the eye patch on the good eye. Then when the weaker eye improves to the same diopter power (or Snellen score) as the other eye you can dispense with the use of the eye patch altogether.

In fact, you might want to use this eye patch technique to first equalize the visual acuity of both eyes regardless of the initial difference in diopter power, assuming it is noticeably different for the two eyes.

How long before my vision improves?

As seen from Todd Becker's case, where it took about one year for him to correct his myopia using the active focusing technique, it can take a while for your eye to reshape itself fully.

You can also expect the amount of time required to see vision improvement to depend on the initial diopter power (more diopters will take longer to shave off) and the amount of time you dedicate each week to exercising your eyes with the active focusing technique.

For some people active focusing will come easily and for others it might not, in which case they may get frustrated with the approach and give up before they see any return on their investment in time.

While it is important to understand the technique is not guaranteed to work for you, it does appear to have worked for many others judging from comments lodged in Todd's forum and in comments which have appeared on other web sites dedicated to the same ideal of shortening (or lengthening) the eye over time to eliminate the need for corrective lenses.

Chapter Six

Other Non-Optical Correctives Measures You Can Make To Improve Both Eye Health And General Health

Taking action and implementing an eye exercise strategy, even if it is one that differs from the active focusing protocol outlined in this guide, may help to improve your vision. But direct exercise by itself is unlikely to be the most effective way to maintain or improve the health of your eyes.

Good all-round health, achieved with a regular physical fitness regimen and a quality nutrition plan, is going to be required if you want to attain the best possible vision.

The optical structures of your eyes, the cornea which covers the lens, the lens itself, and the intricate layers of the retina, these all have to be protected from damage caused either by external influences (such as too much UV light exposure) or internal deficiencies in the ability of your body to maintain the delicate network of blood vessels which service your eyes, and especially the retina.

By ensuring that you consume a diet high in eye tissue damage-quelling antioxidants and the healthy fats and proteins needed to reshape and repair the structures of the eye you give your eyes every opportunity to improve themselves over time.

By taking the holistic point of view and treating your body as a whole and, through the pursuit of physical fitness, exercising every part of it and not just your eyeballs (with the optical exercises), you will stimulate proper blood vessel maintenance in the eye. This practice is essential for mitigating against the emergence of several eye diseases which depend on a lack of good blood flow to get started.

Keep in mind that it is far easier to prevent disease from getting started than it is to eliminate it from the body once it has set in. It is even harder to correct the damage caused by allowing a disease to fester within you. So when you can, I strongly recommend you begin these healthy lifestyle practices long before you anticipate deriving any noticeable benefits from having implemented them!

Another worthwhile point to consider – one that we tend to take for granted – is that good vision is strongly dependent on good brain function.

Your brain takes the images (blurry or otherwise) which form on your retinas and uses what amounts to very sophisticated software to construct a three-dimensional model of the world for you to interpret. If for any reason the health of your brain should take a hit the quality of your vision can be expected to suffer as well. Therefore, if you prize the ability of your eyes to capture detailed and faithful images of the world around you then you should also be paying close attention to the long-term health of your brain.

Once again, adherence to both a regular physical fitness schedule and a quality nutrition plan are going to be essential to maintaining that lasting brain health. This is because your brain and the rest of your body are in constant communication and the health of all parts are dependent on one another. There is no such thing, for example, as a healthy brain trapped in a body otherwise plagued by the diseases of middle age. What affects one part of the body inevitably has an effect on the other parts.

In the body of a diabetic the occurrence of poor insulin response to the presence of sugar in the bloodstream does not mean that energy dysregulation will remain limited to just tissues found outside the brain.

In the body of someone suffering cardiovascular disease the presence of plaque-clogged blood vessels around the heart does not imply that blood vessels in the brain will remain squeaky clean and unaffected by a dysfunctional lipid metabolism.

When your health begins to fail in one part of your body it has consequences for every other part.

One approach to tackling the job of maintaining general whole-body health is to apply the same principles of corrective action expressed in the (quality vision restoring) active focusing protocol to other areas of personal health.

Todd Becker calls the approach Hormetism, which is the purposeful pursuit of improvement strategies based on hormesis [Ref. Mattson-2008].

Hormesis is the practice of repeated exposure to a stressor (such as blurry vision) with the aim of forcing the maladapted system (e.g. refractive mechanics of the eye) to respond by resetting itself.

The principal motivation, or guiding thought, is that repeated exposure to a low-level stress forces the physiological system to respond by getting stronger. That is, it eventually returns to a more efficient/healthier state of operation.

We have already gone into great depth with the active focusing technique which depends on forcing the eye with myopia (or hyperopia) to deal for extended periods of time with actively maintained slightly blurred vision. The result of the application of the stress is a change in the length of the eyeball (over time) to relieve the stress.

Another example of the application of hormesis to correct a health issue, as discussed by Becker in interviews, is strength training.

If your body is physically feeble and getting more feeble all the time – as is typically the case for anyone past the age of 30 years or so who is not regularly working out – the stressor to force your body to reverse the weakening trend is strength training exercise.

Typically, this involves lifting weights, but it could be any other form of exercise which requires your limbs to control the application of a larger than normal force to strengthen and tone muscles, bones, ligaments and joints.

Strengthening exercise is further defined as taking the major muscle groups through their ranges of movement under an adequate load in a slow controlled manner.

This can be done with free weights, resistance machines or bands, kettlebells or bodyweight.

Your body responds to this kind of stress by having its bones thicken and its ligaments, tendons, and muscles grow tougher and larger. The end result is you begin getting stronger. I am a huge advocate of strength training as a way of mitigating against the loss of muscle as we age.

But the benefits of strength training extend well beyond the muscles directly involved in exercise. The hormonal and other physiological/biochemical changes effected by working out intensely for short bursts of time have massive payoffs for you in terms of the maintenance of your general health, your mental well-being, and your quality of life as you head into the second half of your life.

Another example of hormesis in action is intermittent fasting.

This involves restricting the time window during which you eat over the course of a day. Perhaps now you are going 10-12 hours without food between the time of your last meal or snack at night and the time you have breakfast the next morning. Intermittent fasting involves extending that time window of fasting to perhaps 16 hours or so.

In effect you introduce the stressor of mild hunger to stimulate your body into processing (metabolizing) its fat reserves more efficiently. This causes you to burn more fat throughout the day (fat being the only long-term energy reservoir in your body). Intermittent fasting also increases the sensitivity of your insulin response to blood sugar. The end result is that you tend to lose unwanted fat reserves and you maintain your energy levels better throughout the day.

So intermittent fasting is one of those tools for tackling weight loss that I can enthusiastically get behind. It certainly has worked for me on those occasions when I have noticed I have allowed the weight to creep back onto my body, and it does not involve me having to make alterations to my menu. I just skip breakfast a few days each week until I am seeing the results on the bathroom scale or with my waist measurement I want.

Another example is the integration of meditation into one's schedule as a means of combating the accumulating mental exhaustion that comes of non-stop exposure to stress.

In this instance, the applied stressor is really an exposure to anti-stress, meditation techniques to calm the mind. This mental state is achieved by training the brain to shut out the external influences of the world by retreating inwards and concentrating only on the self. The end result is a mind better able to cope with the stresses of modern life.

Although I have never really spent any time over the years thinking about the principles of hormesis to the extent that Todd Becker has given the subject thought, I have nonetheless lived a great deal of my life behaving as though I surely had given these ideas a great deal of consideration and as a result attempted to live my life in accordance with those ideas.

The fact is, we can all benefit from practicing the principles even if we do not think much about them.

Chapter Seven

How To Implement An Automated Wellness Program In Your Life

Because it is well worth being constantly reminded of well-tested but often ignored techniques for maintaining our health, I have created a program to help keep you on your toes when it comes to looking after yourself.

You will find that it is a way to stimulate your interest in pursuing those practices, like strength training, intermittent fasting, meditation, and several others that I have taught myself over the years, so that you can experience their benefits in the same way that you can experience the benefits of improved natural vision if you follow the active focusing protocol outlined in these pages.

If you can see the value of maintaining good health, rather than one day finding yourself in the position where you have to make a mad scramble of an attempt to get it back, consider the following.

It is very easy to read through an eBook like this one and find yourself agreeing with almost everything that has been said. Then the final page comes, you go on with your day, and nothing in your life changes.

Instead of doing this I would like you to consider COMMITTING to making the changes needed to begin restoring your natural vision with the eye exercises outlined in this guide.

Nothing intense. It can be as simple as just implementing the active focusing protocol whenever you pick up a book to read.

Additionally, I highly recommend you take action to improve not just the health of your eyes, but every part of your body!

Do not wait for tomorrow. Allow my words today to be the instigating factor for change in your life and join me in my special program. The link to register and get started immediately can be found below.

It is not expensive. In fact, compared to the value you will derive from the health benefits associated with taking action today, the investment will be truly miniscule.

I'm ready. ARE YOU? Allow me to be your guide on this restorative, transformation as we reboot, renew and recharge your body and your life.

It's like wiping the slate clean - and starting over from the beginning. This is how you take back control of your health. Can you imagine a more worthwhile goal?

It all boils down to this: Your body is your number one tool for ensuring both maximum longevity and the highest quality of life. In fact, it is like a Swiss Army Pocket Knife, filled to the brim with powerful, specialized and finely-honed life-preserving components that can be applied to solve virtually any health issue that you might run up against.

But ONLY if you keep the tool in good operating condition. That's what my program, the "Wellness Wakeup Call", is all about.

Using an ongoing series of "wakeup" calls which I send directly to your email inbox, my goal is to keep you apprised of what truly matters for the preservation of your health. Because ultimately it is up to YOU to continue to make the right decisions daily when it comes to your well-being.

If this approach sounds like something you would be interested in knowing more about, come check out my "Wellness Wakeup Call" trainings:

Click here to learn how my **Wellness Wakeup Call** works.

For more tools and resources that will assist you in attaining your goals and achieving the success you desire in life, please visit:

https://CarolynHansenFitness.com

References:

[Czepita-2007] Prevalence of myopia and hyperopia in a population of Polish schoolchildren

[Fredrick-2002] Myopia

[Price-1939] Price WA. Nutrition and Physical Degeneration. New York: Paul B. Hoeber, 1939.

[Hutorowicz-1911] De Hutorowicz H, Adler BF (1911) Maps of Primitive Peoples. Bull. Amer. Geogr. Soc. 43, 669-79.

[Wallman-2004] Homeostasis of Eye Growth Review and the Question of Myopia

[Read-2010] Human Optical Axial Length and Defocus

[Mattson-2008] Hormesis Defined