

The Science behind the Read Without Glasses Method

The Read Without Glasses Method

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"Middle age is when Father Time starts catching up with Mother Nature."

It's also when near vision starts to blur and the need for reading glasses or bifocals emerges. This loss of near focus (known medically as presbyopia) is accepted as fact, a natural result of aging, unavoidable after age 40+.

In my opinion this is a belief, not a fact, and may not be true for you.

Instead, the groundbreaking *Read Without Glasses Method* (RWG) could help you reduce or even get rid of reading glasses. This may seem like magic but is actually based on science.

How does *The Read Without Glasses Method* work? What are the optical and physiological processes behind it?

Will it work for you?

The Presbyopic Eye

Presbyopic eyes lack sufficient focusing power (accommodation) to see clearly at near. Initially new presbyopes may strain for a while but eventually they seek reading glasses or bifocals that magically "solve" the problem. Many people adjust happily, their daily life quality only slightly diminished by the inconvenience of uncomfortable, smudged or lost glasses and a creeping sense of impending senility. After two or three years – or less - these glasses seem too weak so they get a stronger prescription. And some people who never needed distance glasses now notice that their vision is blurred for driving, and that their reading glasses work better in the distance than for reading, so they get bifocals.

The need for stronger and stronger prescriptions continues and then usually levels off at about age 58. From then on, in the absence of more serious eye deterioration such as cataract or diabetes, the prescription doesn't change significantly.

Can older people avoid reading glasses?

Can older people avoid reading glasses? A typical eye doctor's response would be: *"No they can't. Everyone loses focusing power to see clearly close up. It's a natural part of the aging process and affects us all from about age 40. That's why it's called presbyopia. Presby-opia literally means: old eyes. Reading glasses or bifocals are the only way to correct the problem."*

This answer is based, however, not on fact, but on an unchallenged assumption. Does going to school cause facial hair to grow on boys and breasts on girls? This appears so obvious it's got to be true but we all know that it's not. A few centuries ago it seemed obvious that the Earth was flat and the sun moved over us. One just had to look at the sun as it rose in the east and crossed the sky to set in the west. Facts are facts after all. But after Columbus, Galileo and others examined the actual evidence to reveal different facts, a new vision of the earth and its solar system became obvious.

In general, eye professionals focus on prescribing glasses for the clearest vision, and finding and treating eye pathology. Rarely, if ever, do they examine or think about eye exercises for better sight. They weren't taught about it in medical school, and with the exception of Orthoptics, eye exercises are rarely mentioned at medical conferences. And despite their lack of knowledge, most believe it's their moral duty to discourage patients about alternative options.

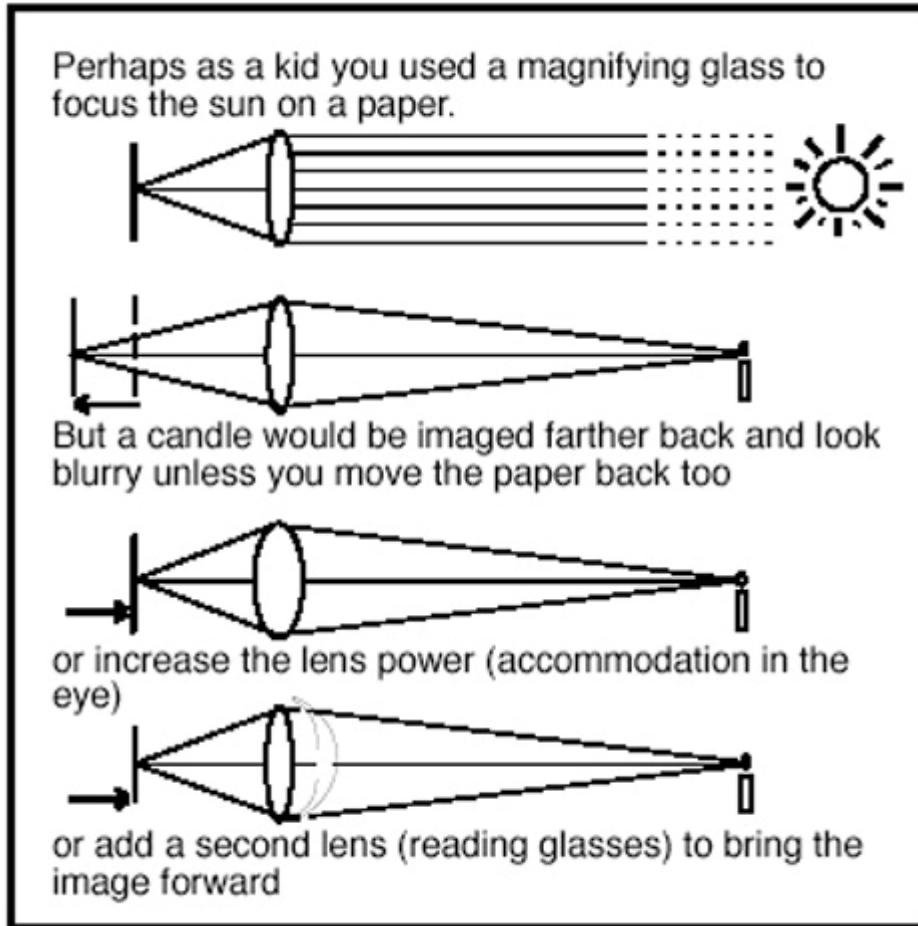


Figure 1: Showing that as a target is placed nearer to a lens its image is focused farther from the lens and appears blurred unless lens power increases.

Can older people avoid needing reading glasses? In my experience presbyopia can be reversed, prevented, or at least delayed. How? By using a using a simple exercise that takes advantage of a natural connection between the brain and eyes. The exercise is called *The Read Without Glasses Method (RWG)*. Will it work for you?

Try This Quick Test

Try this quick screening. First look at the big red donuts below. Of course, you see two of them. Right?



Now, try to look at the donuts in a different way. The goal is to see three donuts. I know there are only two, but it is possible to make them into three by crossing your eyes. If you already know how to converge your eyes, do so and you'll probably see four donuts. If you relax slightly to cross less, you should see three.

If you can't cross your eyes voluntarily, try the following:

Sit about 16 inches away from the donuts. Hold a pencil point on the page (or computer screen if you're reading online) between the donuts. Look at the point and then pull the pencil in slowly to the bridge of your nose. If you focus on the pencil point, the two donuts will appear to split and overlap, and as your pencil approaches half way, as if by magic, you see three donuts.

Some people see three easily and others don't.

Can't see three? Maybe you stopped looking at the pencil point. Try again. Still can't do it? It may take more practice or you may have an underlying problem coordinating your two eyes. (Consider visiting a behavioral optometrist, an eye doctor specialized in the detection and treatment of eye teaming issues as well as other underlying vision problems, in addition to acuity testing.)

If you can see three you should be able to use *The Read Without Glasses Method* to improve your presbyopia.

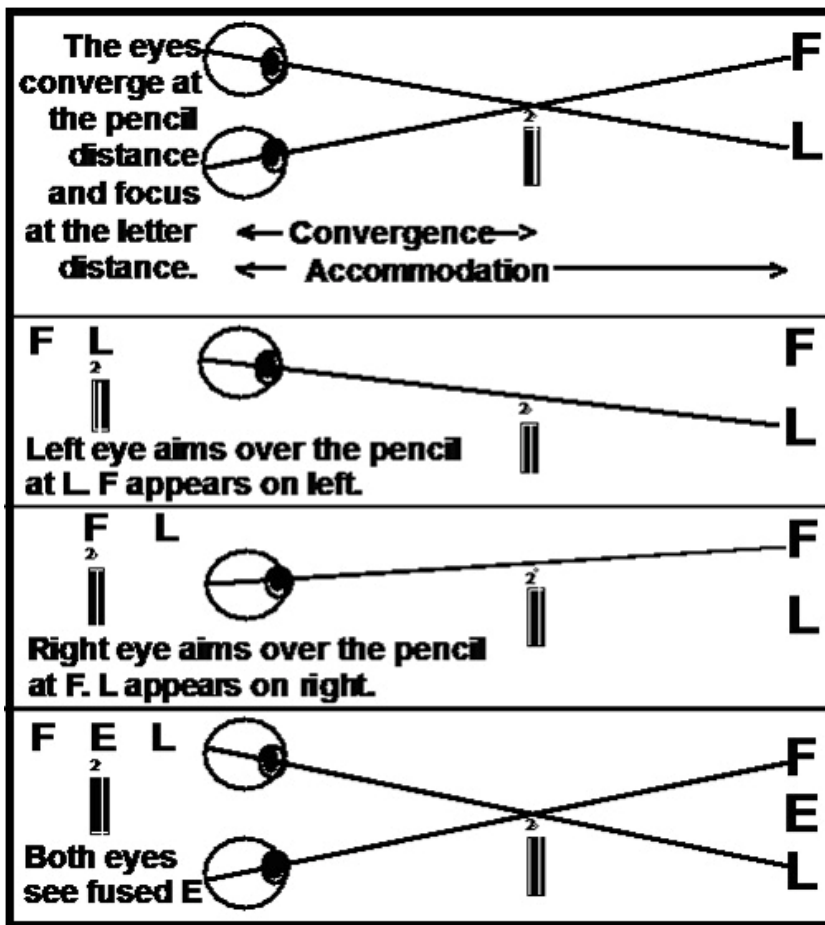


Figure 2. The eyes converge nearer than the target. Using two similar targets eliminates double vision. The left eye looks over the pencil at the L and the right at the F. The brain perceives three letters: the F and L fused into an E and the L and F on the sides.

How It All Began

I first conceived of this approach in 1976 while working with a 52 year-old man who wanted me to help him reverse his presbyopia. He had worn reading glasses or bifocals since age 40. His eyes measured 20/200 at 16 inches and 20/40 at 20 feet. As we worked, it occurred to me that since converging stimulates accommodation in younger subjects without presbyopia, might it do the same for this 52 year-old presbyope?

So, I taught him to cross his eyes using a pair of targets like the donuts above. The idea was based on scientific knowledge of how the eyes work but I wasn't sure if crossing his eyes would actually clear his near vision and even less certain that this would allow him to see clearly without crossing his eyes.

I found out two weeks later when he announced that he no longer needed glasses. Sure enough, when I tested him, he read 20/40 at 16 inches and 20/20 at 20 feet without his glasses. I was amazed. Not only did it work, it took only two weeks.

How did he do it?

He said that he loved the converging exercise because it made his eyes feel really good so he practiced whenever he had a chance. He did it at the breakfast table, in the bathroom, at bedtime, and at work he would spin around in his executive swivel chair as he converged and diverged the targets. Did it last? I examined his eyes three years later when he was 55 and his eyes were even stronger.

I started to become presbyopic myself several years later, in my mid-forties. My near vision started to blur so I made a similar target and practiced the converging exercise. A few weeks later my near vision was clear with no strain. Two decades later I can still read small print easily under normal illumination and see 20/20 at distance. I don't use glasses. Occasionally I use a magnifier to see the tiny black on black printing in the darkness when trying to plug wires into the back of my computer or stereo.

Is there an upper age limit? I don't know, but for me, so far so good, I've had 25 glasses-free years. An optometrist friend of mine, wanted to see if the exercises would work on him. He was 75 years old at the time and had worn strong trifocals for 20 years. After four months of practice he could read small print without his bifocals in normal light looking normally without converging. Other optometrists report similar results, but he is the oldest.

My sister-in-law told me a cute story.

Thirteen years ago she called to say that her optometrist told her that she needed bifocals. She wanted to know if there was a way to prevent this. I taught her the Read Without Glasses Method and it worked for her. Last time I asked, she told me that just the night before she couldn't see to read a map in the dim overhead car lamp. (Maps are especially hard to see because they are printed in low contrast ink.) So she practiced the Method for five minutes and then easily read the map. She told me that she does the method for about six minutes every night just before she goes to bed and then added: "There's another time that I do the exercise a lot."

"When's that?" I asked.

"When I'm at my optometrist waiting for my annual eye test. I love to see the look on his face when he tells me I still don't need bifocals!"

The Theory Behind

The Read Without Glasses Method

My clinical experience shows that the age-old, old-age problem of presbyopia can be reversed. What follows is a very brief review of the theoretical basis.

There is more to near seeing than focus. Both eyes also have to aim precisely at the same point to prevent double vision. Most people have natural co-ordination between aiming and focusing. Others are not so fortunate. When accommodation and convergence don't work well

together, squints, double vision, short sight, reading problems, fatigue or eye pain can result. Accommodation and this co-ordination between accommodation and convergence has been known about and studied for 150 years.

Two factors simulate accommodation. The first, *defocus accommodation*, responds to blur caused when targets are brought nearer to the eyes (see figure 1). The other, less obvious, stimulant to accommodation is called *(con)vergence accommodation*. Crossing the eyes stimulates stronger accommodation even in complete darkness. Within limits, the more the eyes cross (converge) the greater the accommodation. This is the basis of *The Read Without Glasses Method*. This method provides a way for the eyes to converge closer than the page without seeing double. Converging stimulates increased accommodation to allow previously blurred print to clear, even for presbyopes. Like Nautilus equipment that targets specific muscle groups (e.g., leg, arm etc.) to exercise them, the RWG isolates specific eye muscles to strengthen accommodation.

Literature Search Reveals...

I have searched the literature on accommodation and presbyopia and offer you some articles that support the idea that older eyes may have untapped accommodation. I know of no research that refutes the idea that presbyopia can be delayed or reversed.

Recent research by Baker and Gilmartin found that in early presbyopia the accommodation convergence reflex can limit accommodation, thereby accelerating the progress of presbyopia. Bernard Gilmartin is a top accommodation and presbyopia researcher. The article states:

" . . . despite being within the amplitude of accommodation, a stimulus may still appear blurred because *the vergence component determines the proportion of available accommodation utilized during near vision.*"

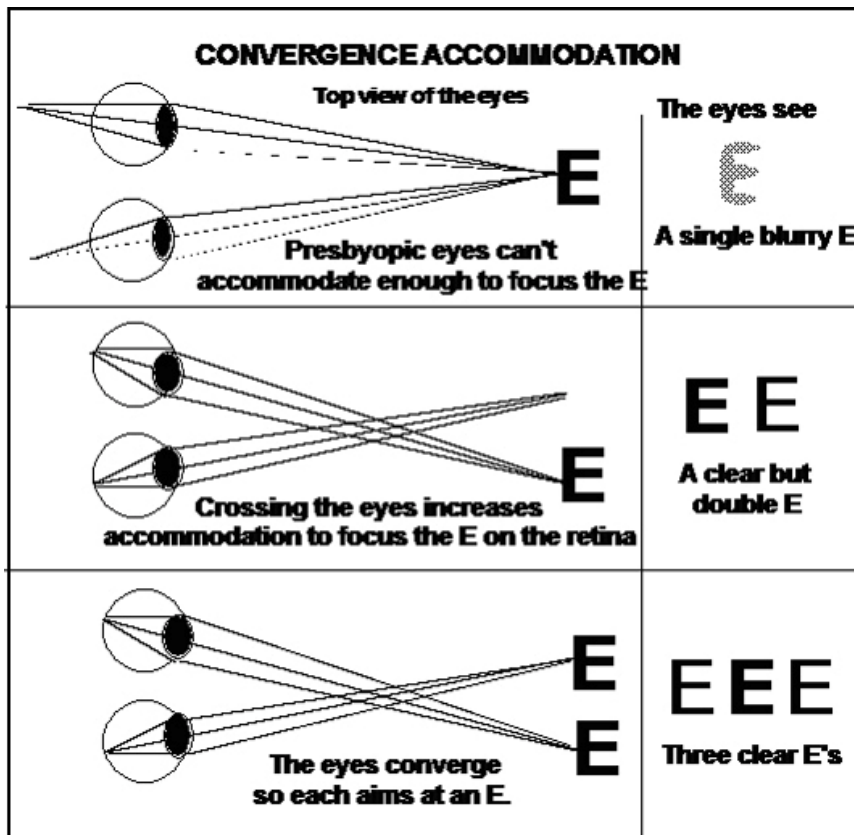


Figure 3. Showing convergence accommodation

This means that some presbyopes don't see clearly even if they have sufficient accommodation because the effort to accommodate stimulates the eyes to cross too much, causing double vision. So they limit their accommodation because they'd rather see blurry than see double. The RWG Method works because the eyes are allowed to over-converge without double vision (as in the experiment with the red donuts) thus releasing residual accommodation for sharp vision. Indeed the RWG Method uses this excessive convergence to an advanced and focused effect.

In research by Lisa Ostrin and Adrian Glasser, subjects between 51-55 years were administered a drop of 6% pilocarpine, a drug that stimulates accommodation. This released untapped accommodation sufficient to allow them to read without glasses. Their research shows that even in more advanced stages of presbyopia, significant residual accommodation exists, and suggests that other means besides drugs, such as convergence-driven accommodation as employed in the RWG Method, could do the same. The beauty of RWG is that it allows a natural access to this residual accommodation.

The Portland Presbyopia Onset Delay Study is an unpublished senior thesis written by optometrist Tammie Calef, a graduate from Pacific College of Optometry. She wanted to find out if a battery of vision training exercises would preserve the near vision of subjects entering presbyopia. She found improvement in accommodation in the vision therapy group as compared to a control group who did no vision training exercises. Other support was found in a chapter on accommodation in the classic textbook series *The Eye* (1962). After a detailed discussion covering theories of accommodation and presbyopia, the author, Matthew Alpern, suggests that by practicing accommodation-convergence procedures: "the development of the atrophic process (loss of accommodation) can be suitably delayed. This accounts for the variable results obtained by different experimenters who made measurements on observers with varying amounts of training . . ."

In other words, some scientists used themselves as Guinea pigs. They spent months exploring and measuring the accommodative-convergence characteristics of their own eyes. The other scientists measured naïve subjects with no prior experience. The first group reported much greater accommodative amplitudes at a given age than the second group. The scientists in the first group exercised their eyes in ways similar to the *RWG Method*. The implication is obvious -- appropriate exercise improves accommodation even in presbyopia.

Approaches such as *The Read Without Glasses Method* do not promise instant cure. You can know the results only if you attempt the therapy. If your heart is only half committed and your foot is halfway out the door, you seal your own fate. And if your only measure of success is to be the same as when you were twenty you'll likely pronounce yourself a failure and overlook your successes. Because even if you fall short of total reversal, your eyes will be less strained, more flexible, "younger," and you'll be less reliant on stronger glasses. This is significant because requiring lower power reading or bifocal lenses (+1.25 D) to see clearly at near is much more convenient than requiring full power (+2.50 D) ones because with moderate lens powers you'll still be able to see intermediate distances such as computer screens and people across the table clearly without needing trifocals or progressive lenses.

The RWG Method works on more than just accommodation and presbyopia reduction. It increases the quality of binocular flexibility and depth, as well as focus. Many of my patients not only gain sharper vision (some even experience myopia reduction) but also report feeling much better in their eyes. This is especially true for the people who had more to overcome to learn to do the exercises, the ones who had to struggle through their frustration and discomfort but eventually came to enjoy the exercise because it felt good.

Most people brush their teeth and have regular dental check-ups. It makes sense. But the wide scale teeth brushing of today is a relatively new practice. Eighty years ago it was common for middle-aged and older people to lose all or many of their teeth. People thought this was a natural part of aging. Dental disease was high on the list of causes of early death. Teeth brushing didn't make sense until public dental health education programs induced parents to practice good habits of dental hygiene on their children. People today brush as a natural part of life. They brush and floss because it makes sense to them. They are in it for

the long run. Finding a new cavity in a tooth is fairly common but it doesn't prompt people to quit brushing. If anything, it motivates more and better brushing.

Today, more people than ever before are taking responsibility for protecting and enhancing their health. They are eliminating bad habits, eating healthier diets and are walking, doing yoga, and going to the gym.

Vision improvement exercises appeal to such self-directed people who feel motivated to improve their visual health and functioning. Does it make sense? After all, presbyopia has been around since before recorded history. You'd think that if it were possible to preserve clear near vision and keep eyes healthier by exercise almost everyone would be doing it. To me it makes perfect sense, and I predict that one day very soon it will become just as usual for everyone to practice eye exercises, and for this to be as routine as brushing your teeth.

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The Read Without Glasses Method www.withoutglasses.com

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About Dr. Ray Gottlieb

Ray Gottlieb, O.D., Ph.D., successfully cured myopia and presbyopia in his own eyes through natural vision methods. A behavioral optometrist for over 30 years, he uses vision training/therapy, natural vision exercises and syntonics phototherapy for improving learning and attention deficits, eye turns, myopia and presbyopia, brain injury and stroke recovery, and musicians' learning and performance skills. He has served on the faculty of two optometry schools (Univ. of Calif., Berkeley and Univ. of Houston), and a medical school (Univ. of Rochester) and was research editor for the *Brain/Mind Bulletin*. Currently he is the Dean of the College of Syntonic Optometry, staff optometrist at a psychiatric hospital, a low vision specialist at a clinic for the visually impaired, on the faculty at the Chautauqua Institution Piano Department, and in private practice in Rochester, NY. He has written articles and chapters on vision, a Ph.D. dissertation *The Neuropsychology of Nearsightedness*, and two books: *Attention and Memory Training* and *The Fundamentals of Flow in Learning Music* (with Rebecca Penneys). He has invented several vision therapy procedures including the *Read Without Glasses Method* for presbyopia reduction. He lectures frequently in the U.S., Europe and elsewhere.

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