

# PRESBYOPIA REDUCTION

By Ray Gottlieb, O.D., Ph.D.

Presbyopia can be reversed or delayed by learning to cross your eyes while using the presbyopia reduction chart. I first used this approach in 1976 with a 52 year-old man with 20/200 near and 20/40 distant acuity. He had typical middle age sight, was slightly farsighted and had been wearing reading glasses and bifocals since age 40. After teaching him to relax his mind and eyes using the Bates palming, sunning and central fixation drills, I taught him converging (crossing his eyes) and diverging (uncrossing his eyes) exercises. I made a chart with a pair of identical targets separated horizontally by two inches. Two weeks later his acuity had cleared to 20/40 at near and 20/20 at 20 feet. How did he do it? He loved the converging exercise and practiced whenever he had a chance. He did it when he ate, 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? Three years later, at age 56, his vision was even better.

I can read tiny print without strain. When I started to "need" reading glasses in my early forties, I practiced the same exercise and a few weeks later had clear vision at near with no strain. After many years I still see small print easily and don't use glasses for reading. I don't need to practice this daily or even weekly. After 3-4 months of neglect my vision blurs and my eyes feel strain at near. Usually I wait a few days hoping it will go away by itself but finally practice this exercise and after four or five days the problem goes away. I do fifteen minutes the first day and then on subsequent days exercise for fifteen minutes several times up to an hour's worth (four fifteen minute sessions throughout the day) on the last day. I follow the procedure described below making sure to relax to let the small print clear under dimmer light and at closer distances. Soon my focus returns and I don't exercise until I need it again few months later. I don't know if there is an upper age limit. Recently I was encouraged when a 75 year-old optometrist who has been wearing +2.50 D trifocals for 20 years practiced the exercise. After four months he could read the tiny print on the presbyopia chart with no Rx without converging. Other optometrists report similar results.

Many of my patients gain sharper vision and also feel better in their eyes. Some people learn to do this quickly and easily but others must struggle at first to overcome frustration and discomfort but eventually come to enjoy the exercise because it feels good. I recommend that they also do Bates' palming and sunning exercises to relax their eyes but not everyone does. And these exercises don't work for everyone even after dedicated practice. If they exercises are going to work, you should know within a month.

Not everyone can learn to do the exercise. Poor convergers have to first build convergence by looking at nearer and nearer targets and aiming their eyes back and forth between near and far targets. After this gets easier they can try the presbyopia exercise. Strabismics and people with more embedded binocular problems need supervised vision therapy.

If these exercises cause discomfort, limit the initial convergence workout time, do it several times a day but for very short periods sometimes just for 30-60 seconds. As convergence gets stronger and more comfortable, gradually increase practice time to fifteen minutes at a sitting. The eyes should be relaxed before starting, after finishing and any time the eyes feel strain.

## **Learning to use the presbyopia reduction chart.**

Not everyone can voluntarily cross their eyes but those who can should do so with the chart held about 16 inches away. Be aware of the two black dots near the top of the page. They should double and you'll see three or four dots. The goal is to see three dots. So move the chart closer or farther and modify how much your eyes cross until you can see and hold three. Make sure the page is not tilted.

If voluntarily going cross-eyed is not possible, hold the chart about 16 inches away and place a pen with its tip just under the top pair of dots. Look at the pen point while slowly pulling it nose-ward. Notice the dots behind the pen. First they double into four but when the pen is about halfway to the page, the middle two dots merge together and three dots magically appear. This is a big thrill and in the excitement fixation on the pen is lost and the original two dots return. Practice seeing three dots by looking back at the pen. Look at the pen and not the dots. Become aware of when the pen doubles.

To gain strength, place the pen at this distance, see the three dots, and slowly move the pen and chart together a few inches to the right, then left, up, down. Try moving closer, farther or in a circle always seeing three dots. Practice while standing up, walking and sitting down. Learn to blink and breathe to reduce strain. Don't tip the target.

The next step is to see three after removing the pen by learning to see three while making brief and then slow blinks.

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Can you feel your eye converge? See the middle dot try to hold three as you slowly move the pen toward your nose. At first the three dots stay briefly for just a second but with practice for longer. To strengthen the reflex, move the target left, right etc., as described before. Soon converge will come easy with no pen required.

Now look at the words in the paragraph around the middle dot. Look at the big letters in the word "Cross" and then at smaller print. If this is difficult, use the pen for support. Relax to read the small print. Near vision should be significantly clearer while converging. With continued practice it will get even clearer and you should notice improvement in your every-day near vision.

### **Change brightness, nearness and text size.**

Bright light increases clarity. To improve near acuity, start in high brightness. As the letters clear, reduce the light to learn to relax and clear them in dim or even in candlelight. If so, even smaller print will be clear under bright light. Repeat the process: Find the threshold of clear vision under ideal lighting, relax and then clear in less light. Use the same technique holding the chart at different distances. Clear large letters at sixteen then fourteen, twelve, ten or even six inches away. At each distance relax and let the print clear. With success, move back to sixteen inches and do the same with smaller text size. Repeat for smaller letters. Stay just at the threshold for seeing clearly, go into slight blur, relax to clear (this may take several minutes), then slowly move toward more demanding conditions.

Learn to relax by following the directions in the bottom paragraph. Let the target focus without strain. Let convergence stimulate and strengthen accommodation so that focus eventually clears at the near reading distance without glasses and without converging.

The paragraphs are positioned on the page to appear in 3-D. Converging two adjacent paragraphs makes just the middle one sink behind the others. Diverging produces the opposite: the center paragraph floats between you and the page.

### **Diverging the charts**

Although the text in the presbyopia chart mentions only convergence, divergence is also important. Place the nose on the page below the top two dots so that one dot is before each eye. Pretend to look through the dots into the room beyond the page to see one big, blurry dot. Move the page slowly out and two more dots should appear on the left and right side of the central dot. Don't focus directly at the page but focus softly and be aware of the whole room. Learn to keep three dots while looking at the center one. If this method fails, copy the presbyopia chart on transparency. Look through this transparent chart at a plane wall one or two yards away. This will force the eyes to diverge beyond the page to see three dots. The next step is to look at the center dot without converging back to two dots. Try sliding a white piece of paper behind the transparent chart. It helps to look for the 3D effect. Diverging makes middle paragraph to appear to float closer, above the page. Practice moving the target and walking as described above. Work to diverge the targets and see the print clearly. If you can see the small print while diverging the chart, you are no longer a presbyope.

Some people over-converge (esophoria) and can't diverge easily. They compulsively try too hard and instead of letting convergence relax they unconsciously converge more. Lenses and prisms and more extensive vision training may be necessary. Myopes usually do better at divergence without glasses.

Diverge and converge the chart during each session. Practice the difficult way until it becomes easy. Practice with and without glasses. Teach yourself to alternate, diverging and converging the targets quickly and with clear vision. This stretches accommodation and convergence ranges even more.

Blink and breathe.

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If you cannot read this fine print, do not strain. The more you strain the worse you'll see. The secret to better vision is relaxation. Excess tension in eye muscles stops circulation and makes vision inflexible and insensitive. To clear this print, cross (converge) your eyes as above. Can you see the print through either dot while converging? Can you read it?

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You can overlap these eight paragraphs seven ways by converging at different distances. Hold your pen closer to converge more or further to converge less. Do you have to converge more to clear this print? Notice the depth in the center paragraphs as you change convergence. Breathe!

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Relax while clearing this tiny print. Learn to wait for the letters to clear. If you see blurred images, ghost letters or black or white lines, do nothing. Allow the image to change by itself. Don't strain for clarity. Breathe, blink and practice letting go in your feet, legs, pelvis, stomach, hands, shoulders, neck, jaw, and eyes. Breathing should not be forced. Try rapid and slow blinking. This new way to focus will become stronger and more automatic. Eventually you will see clearly without converging.

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