

Self-management for presbyopia and myopia

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Linda Liang

Associate professor of Occupational Therapy, University of Southern California, USA

Correspondence: Linda Liang, Associate professor of Occupational Therapy, Keck Medical Center of USC, University of Southern California, USA

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Opinion

This is Linda Liang's own practice invention. It is the simplest method with great results for people having presbyopia and myopia. My background was an ophthalmologist. I developed the Low Vision Program including Homonymous Hemianopia and many other treatments at USC. I have a Special Certificate of Low Vision. There are only 99 people that have this in the USA. I blended my prior knowledge and experience to use as occupational therapy for comprehensive evaluation and effective treatment of patients. With all my experience and knowledge about treatment of presbyopia and myopia, the most common and important eye doctor treatment is to provide glasses. However, using glasses won't let presbyopia and myopia recover at all. Myopia can use surgery to treat, but most people don't want to have surgery. Now my invention can make presbyopia recover easily and it can make myopia get better. Recent research supports this approach. While glasses offer optical correction, they don't address the underlying muscular or neurological changes. Presbyopia results from decreased lens flexibility and ciliary muscle function. Yet, research shows that ciliary muscle strength can be maintained with use.¹ Vision therapy and accommodative exercises aim to improve natural focusing ability by engaging these mechanisms.² This supports the idea that reducing dependence on glasses may restore accommodation and reverse presbyopia in some cases (Figure 1).

Basic Refraction

- **Emmetropia:** Normal (A), at retina fovea with cone cells
- **Hypermetropia** (hyperopia or far sighted): Can see distance but not near (B)
- **Myopia** (near sighted): Can see near clearly but distance vision is blurred (C)
- **Presbyopia:** A form of hypermetropia due to gradual loss of focusing power (C)
- **Astigmatism:** part of the image in one plane is out of focus due to unequal refraction (axis)

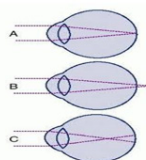


Figure 1 The basic information

Presbyopia and myopia with glasses

- Presbyopia:** Glasses and contact lenses use convex lens: positive power (+), light rays converge to make the image land on the fovea.
- Myopia:** Glasses and contact lenses use concave lens: negative power (-), light rays diverge to make the image land on the fovea.

However, when glasses are used continuously, the eye's natural focusing system may become underused. This ties into the principle of use-dependent plasticity, widely recognized in rehabilitation and occupational therapy. Regular use of the eye's own focusing system-by avoiding full correction-can help strengthen natural vision over time (Figure 2).³

My practice invention

My presbyopia was +3.00 (OD - right eye and OS - left eye) and myopia was -3.50 (OD & OS). I wore glasses with double convex and

concave lens. When I was doing ballet three times a week, I stretched my leg ligaments a lot. Then I thought that I could work on the eye lens - crystalline ligament - to get presbyopia and myopia better.

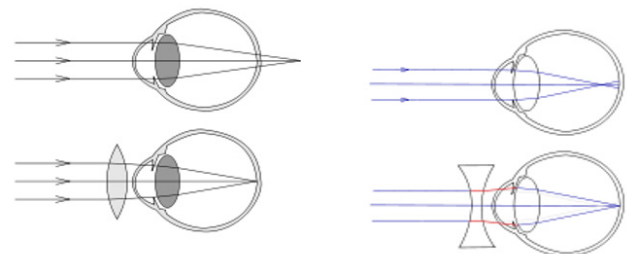


Figure 2 Presbyopia and myopia with glasses.

Eye lens and crystalline ligaments

When crystalline ligaments stretch, the ciliary muscle becomes stronger, and the eye lens gets thinner. It functions similarly to a concave lens and helps the image land closer to the fovea, which may improve nearsightedness (myopia). When the crystalline ligaments relax, they allow the lens to become thicker, focusing on near objects like a convex lens (Figure 3). To make the crystalline ligaments work effectively, the best strategy is not to use glasses for near work. If glasses are used, the crystalline ligaments are not engaged. This concept is consistent with findings from vision science: Near vision training has shown improvement in accommodative amplitude and uncorrected visual acuity, especially when patients reduce reliance on glasses.⁴ I did not use glasses for seeing near objects for several months, and my presbyopia completely recovered on 9/12/2024. I was only using glasses for driving a car due to myopia. My myopia was -1.75 on 9/12/2024. And now, I don't need to wear glasses to drive a car.

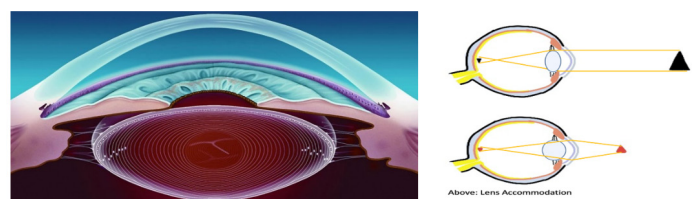


Figure 3 Eye lens and crystalline ligaments.

Helping others

I helped other people including my relatives and friends. I told them to buy +1.00 presbyopia glasses and gradually reduce to no glasses. Because mild presbyopia glasses are safe, this method works progressively. Most people recovered from presbyopia. They are very happy about it. For others with myopia, I advised using weaker glasses to stay safe but promote natural focusing effort. Studies on under correction for myopia show mixed results. Some suggest it may increase progression,⁵ while others find that partial correction or active visual tasks can slow progression or improve focusing flexibility.⁶ This supports gradual reduction of lens strength under supervision, as done in this method. I talked to many ophthalmologists and they never used this method.

Conclusion

In summary, while more clinical studies are needed, current literature from ophthalmology, optometry, and occupational therapy supports the feasibility and effectiveness of self-managed vision recovery using targeted use of natural focusing mechanisms and reduction of corrective lens dependence. My method is consistent with modern understanding of vision training, ciliary muscle engagement, and neuroplasticity in the visual system.

Acknowledgments

None.

Conflicts of interest

The author declares that there are no conflicts of interest.

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