

Treating convergence excess

Why the eyes turn inward too far up close and how glasses and therapy help.

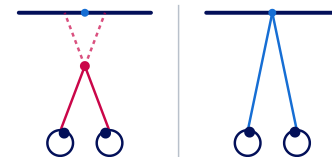


1. What is happening

Convergence excess is an eye-teaming problem in which the eyes turn inward too far during reading and other close work. When the eyes focus on something close they also turn inward, because the brain links the two actions.

In convergence excess, focusing pulls the eyes inward more than it should, so they aim at a point in front of the page. The brain must keep pushing the eyes back outward to see one clear image, and close work tires the eyes when that outward push is weak.

Convergence excess is the opposite of convergence insufficiency, in which the eyes struggle to turn inward enough for close work. One study found convergence excess in 5.9 percent of people seeking eye care, slightly more often than convergence insufficiency. Symptoms include blurred or double vision, headaches, and trouble concentrating on close work, although some people have none.



Seen from above, the eyes at left cross in front of the page, while a reading lens lets the eyes at right meet on it.

2. Why lenses come first

If you are farsighted by +0.50 diopters or more, the first step is glasses that correct it fully, because that lowers focusing effort and the inward pull. Your eye doctor may use drops that relax focusing, so that any hidden farsightedness shows up. The usual next step, especially in children, is extra lens power for close work, called a near add, which often eases that pull.

School-age children usually get flat-top bifocals set high, so they read through the add and can still look up at the board. Teens and adults who need no distance correction can often choose prescription reading glasses instead. In one small study of children whose eyes turned in at near, progressive lenses controlled the drift about as well as bifocals. In trials of nearsighted children with this pattern, the near add also slowed nearsightedness, but only slightly.

3. If glasses alone are not enough

Vision therapy

Office visits and home practice train the eyes to turn outward, and focusing to relax, whenever close work calls for it. A common first exercise is the Brock string, a cord of colored beads that shows where the two eyes are aiming. Later sessions add vectograms, which are 3-D targets viewed through polarized glasses, along with lens flippers that exercise focusing. In a review of 83 treated patients, 84 percent reported that their symptoms were gone.

Prism

Prism built into the lenses shifts the image toward where the eyes already point, so they need less outward push. Prism helps mainly when the eyes also drift inward at distance, and otherwise it is rarely needed.

Working distance

Many people with convergence excess read unusually close, which raises the inward pull on the eyes. Holding work farther away, or cutting down long stretches of close work, can ease the strain.

For convergence excess, glasses with a near add are usually the main treatment, and many people need nothing else. Therapy is added when symptoms persist in the glasses, and surgery is seldom needed.

How strong the evidence is

These treatments follow the guideline of the American Optometric Association and the main textbooks on binocular vision. That support comes from clinical experience and from record reviews that had no untreated group for comparison.

As of 2026, no randomized trial, which assigns treatments by chance, has tested whether these treatments relieve the symptoms of convergence excess. The near-add trials in nearsighted children measured only nearsightedness, so they cannot show whether a near add eases symptoms.

4. What to expect

Today

Your eye doctor prescribes glasses for farsightedness that needs correcting, usually with a near add.

First several weeks

Therapy is considered if symptoms continue after several weeks of wearing the glasses as prescribed.

If symptoms continue

Vision therapy usually takes 12 to 24 office visits, and results were best when office visits were paired with home practice.

Afterward

Checks every 3 to 6 months aim to reduce the near add, and they matter in children because the inward pull often grows once school starts.

5. What you can do

- **Wear the glasses as prescribed**, because skipping them is a main reason treatment fails.
- Call your eye doctor right away about new double vision or an eye that visibly turns in.
- Keep follow-up visits even when you feel fine, since the near add is reduced over time.



A child's bifocal segment sits high on purpose.