



North Shore Eye Centre

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PRESBYOPIA

What is presbyopia?

Presbyopia is a condition where an elderly person's *near* sight fails gradually, due to hardening of the lens. Many people around the age of 40 have to hold newspapers or books far away from their eyes to be able to read them. This is often the first sign of presbyopia. If uncorrected, presbyopia can cause headache and fatigue.

What are the causes of presbyopia?

As you focus on an object your lens gets thinner or thicker, depending on the distance of the object. An object that is up close causes the lens to thicken and therefore adds focusing power to the eye. The ciliary muscle inside the eye allows the lens to get thicker or thinner. To focus on something at a distance the ciliary muscle relaxes, which causes the lens to flatten. As we age, the lens loses its flexibility. When the ciliary muscle contracts the lens has difficulties to accommodate the movement of the muscle. This reduces the focusing power and causes difficulties in reading and performing other close up activities.

How can presbyopia be corrected?

The traditional tool to correct presbyopia is a pair of reading glasses. These are slim glasses that sit on the tip of your nose to help you focus when you look down.

People with good distance vision usually wear half-glasses, which can be purchased at the pharmacy. Half-glasses have a reading lens on the bottom, and no lens on the top. Ask your pharmacist to help you in finding the needed magnification.

If you have particular visual needs there are also prescription-reading glasses available. Prescription reading glasses give you a better choice in frame styles and can be made as bifocal, trifocal, or no-line bifocal. Bifocal glasses provide correction for both, near and far distances. To correct the intermediate distance, trifocal glasses are provided. No-line bifocal glasses provide correction for all distances.



Some people prefer contact lenses rather than glasses. The most common option is to correct one eye for near and the other for distance vision (monovision). Another option is bifocal contact lenses. There are several types of bifocals, some let you read when you look down, others let you read in any position. You should discuss the differences with your ophthalmologist or optometrist to decide which correction will be most effective for you.

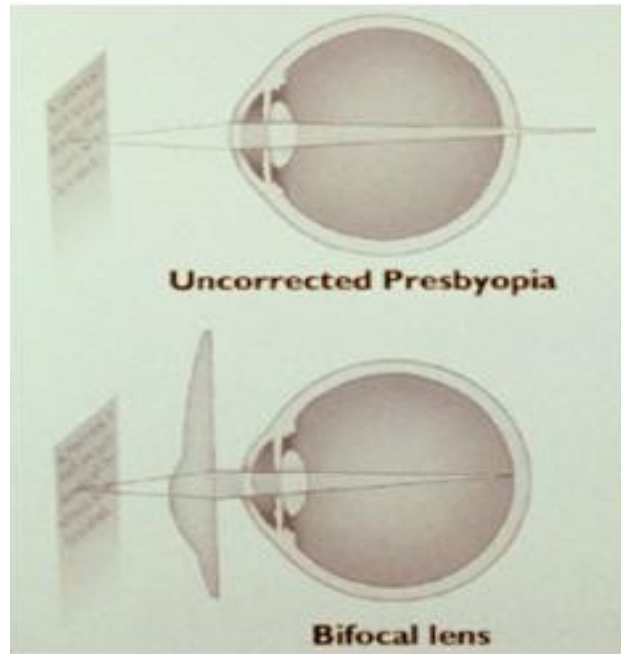


Figure 1: Uncorrected lens and corrected lens with bifocals.

Medications, vitamins or exercise cannot stop the normal aging process responsible for presbyopia.

Can presbyopia be corrected with refractive surgery?

Presbyopia is part of the natural aging process and cannot be easily corrected by refractive surgery, although work on this problem is continuing around the world. Recent developments with laser thermokeratoplasty hold some promise for the future. Refractive surgery can be done to achieve monovision, where laser surgery corrects one eye for distance and the other for near vision. It might be advisable to try monovision with contact lenses before surgery to determine your individual requirements and your ability to adjust to this correction.