

Natural Lens Changes Within The Eye: Presbyopia And Cataracts

OVERVIEW

The crystalline lens is located behind the iris (colored portion) of the eye. As we age, this lens naturally changes; first becoming inflexible (PRESBYOPIA) and later becoming cloudy (CATARACTS). Laser vision correction will not accelerate or slow down these changes.

LASIK and PRK can correct eye problems such as nearsightedness, farsightedness, and astigmatism. However, these optical conditions are different from presbyopia, which is the normal loss of the crystalline lens' ability to focus for near viewing. Laser vision correction surgery cannot currently correct presbyopia or cataracts.

PRESBYOPIA

Presbyopia is a normal part of the aging process. Most people over age 40 find it difficult to focus on objects which are near to them and need some form of reading glasses. Presbyopia is the reason that reading glasses (magnifiers) eventually become necessary even for people who have excellent unaided distance vision.

What options are available for Presbyopia? There are several options available besides wearing bifocals or separate distance and reading glasses. For example:

- Contact lenses can be worn for distance vision in both eyes, and reading glasses can be used for reading.
- Bifocal contact lenses are available.
- Surgical procedures involving the implant of a special lens into your eye during cataract surgery.
- For some individuals wearing a contact lens that corrects one eye for distance vision and the other eye for near vision provides a reasonable solution. These are called monovision contacts ("mono" for "one"; one eye for distance, one eye for near vision). Monovision can also be created on a more permanent basis with laser vision correction surgery. If you are contemplating such correction for yourself, it is important to understand the advantages and drawbacks of monovision laser vision correction.

MONOVISION

Monovision is a process of providing both distance and near vision without glasses. This is achieved by correcting one eye for distance vision and one eye for near vision. It can take up to 12 weeks or more to adapt to this process.

MONOVISION WITH LASER VISION CORRECTION

If you choose to have monovision with laser vision correction and you are not able to adapt to your monovision, it may be possible to adjust your vision back to distance vision correction. This retreatment can only take place after the eye has fully healed and stabilized. On the other hand, once distance vision correction is achieved in both eyes, adjusting one eye for near vision may not be possible. Therefore, if monovision laser vision correction interests you, it is recommended it be simulated with contacts, or by other means, to see if monovision is effective for your visual needs.

For most people, distance and close vision are best when viewing with both eyes optimally corrected and "balanced." Eye care professionals refer to this as binocular vision. Monovision can impair distance vision and close vision because only one eye is primarily used. Distance vision will not be quite as crisp with one eye corrected for distance as it will with two eyes corrected for distance. Close vision will not be quite as clear with one eye corrected for reading as it will be with two eyes corrected for reading.

Similarly, depth perception can be decreased and night vision or driving at night may be compromised by monovision. Monovision can impair depth perception to some extent, because the eyes are not focused together. Because monovision can reduce optimum depth perception, your doctor may sample it for you during your preoperative evaluation in order for you to experience this effect.

Most people with monovision do not routinely use glasses or contact lenses. Some prefer to eliminate their monovision for specific visual tasks. Depth perception and night vision can be helped with the addition of "night driving glasses" which your doctor can prescribe for you. Some patients prefer to wear contact lenses for special activities which require best binocular distance vision (e.g., golf, tennis, or hunting). Tasks which require intensive or prolonged close vision (such as detailed crafts, extensive reading, or reading of very fine print) may require additional reading glasses. Keep in mind that an additional reading light will help with smaller print. Or, you may require mid-range vision glasses (for example: computer screen distance). Discuss with your doctor what near range of vision will work best for your lifestyle.