

Background: Presbyopic Correction using Refractive Lens Exchange

Refractive lens exchange (RLE) continues to increase in popularity. The driving force behind its growing acceptance has been the development of presbyopia-correcting IOLs.

Presbyopia

Presbyopia refers to the natural decrease in the eyes' ability to see up close as we get older.

Presbyopia starts to become noticeable usually at around age 40 and it affects everyone. Nearsighted people (with Myopia) can usually remove their glasses, hold the print up close, and read without glasses or have bifocals put in their distance glasses. Slightly farsighted people (with Hyperopia) will initially just need glasses to read but as they get older, they will need them for near and far. Moderately or severely farsighted people will already be wearing glasses for distance but will now need either bifocals or two separate pairs of glasses. Normal sighted people (called Emmetropia) who have never needed glasses will now need them in order to read small print. Presbyopia gets worse as we get older and thus patients require changes in reading power every few years.

A procedure called Refractive Lens Exchange is a significant advancement in refractive vision correction and a long awaited surgical option for people who want to diminish or eliminate their dependence on glasses, contacts, and reading glasses.

Refractive Lens Exchange:

RLE is performed using a multifocal intraocular lens or an accommodating intraocular lens in a non-laser corrective procedure where the natural lens of the eye is removed and replaced with an artificial lens. This procedure is the same which is performed in the most common surgical procedure performed; that of cataract surgery.

In the Refractive Lens Exchange procedure, a presbyopia correcting multifocal lens is used with the patients unique correction built in. The lens works by providing simultaneous near, mid and distance vision in each eye, thus allowing both eyes to work together to enable vision over all distances.

RLE is meant to be permanent, however if the patients vision changes throughout the years, Lasik can be performed to fine tune their prescription. Additionally, the patient does not have to worry about developing cataracts later in life, as the natural lens is removed during the procedure and replaced with the new multifocal lens.

FDA Approved RLE Intraocular Lenses

Three FDA approved lenses; ReZoom, ReSTOR, and Crystalens are commonly used for Refractive Lens Exchange procedures. These lenses have what Dr. Ella Faktorovich, Director of Pacific Vision Institute refers to as "zoom"; providing simultaneous distance, intermediate and near vision correction without the need for glasses or contacts.

Presbyopia correcting intraocular lenses include the multifocal ReZoom Lens Implant and the ReSTOR Lens Implant, which provide far and near vision concurrently through the use of refractive and diffractive optics respectively. And the accommodating Crystalens Intraocular Lens Implants, which is designed to achieve focusing power in response to flexing of the eye muscles that manipulate the crystalline lens.

Who is a candidate for RLE?

Ideal candidates are in their late 40's and over 50 who are hyperopic (farsighted) and presbyopic (need reading distance). Highly myopic (nearsighted) or hyperopic people may also be candidates.

A patient example is Jim Snidle; a San Francisco art consultant in his mid 50's whose vision was both farsighted and presbyopic. As an art and antiques appraiser, he was very dependent on near vision to perform his work. When his deteriorating near vision due to presbyopia began to compromise his work, he sought a LASIK consultation at Pacific Vision Institute. During the consultation he was determined not to be a candidate for LASIK, and was referred to a Cataract and Lens Surgery Division at PVI who found him to be an ideal candidate for Refractive Lens Exchange. Doctors at PVI find that many of the patients have initially sought LASIK vision correction, and for various reasons; typically a high correction and presbyopia, were found not to be candidates for LASIK.

What are the Risks of RLE?

As in any surgical procedure there can be risk of infection, however for the majority of patients, the risk of serious complications is relatively low. The procedure takes little time, is relatively painless, and the results are fairly immediate.