

Precision Vision: Recent Advances in Vision Correction Procedures Make Perfect Vision Possible for Patients of All Ages and Vision Needs

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If you ever looked into vision correction procedures, such as LASIK, for example, and were told you were not a good candidate, it could be time to look into it again. The field of vision correction surgery has advanced and diversified tremendously since we first started doing LASIK for SFPOA members more than thirty years ago. Over the years, the procedures have gotten more sophisticated and the number of options increased as well. We can now correct vision in patients with very high prescriptions, patients who were told they were not candidates for procedures in the past, and patients who want to get rid of reading glasses. In this article, I will highlight three major advances in vision correction surgery: Wavelight Plus LASIK that makes better than 20/20 vision possible both day and night, EVO ICL implantable contact lens that helps patients who are not candidates for LASIK see great, and Refractive Lens Exchange (RLE) that helps people over 40 to get out of reading glasses.

LASIK and PRK were FDA approved almost 30 years ago. More than 40 million procedures have been performed world wide. Many advances have occurred over the years that allow us to



achieve vision better than 20/20 in most patients. The most significant recent advance is the newly FDA-approved type of LASIK called Wavelight Plus LASIK. This type of LASIK utilizes a highly detailed 3D digital map of the entire eye using special ray tracing imaging technology to capture unique imperfections in each person's individual eyesight.

Artificial intelligence system analyzes the data and creates a treatment profile to treat imperfections in each individual eye. This is the most sophisticated technology currently available to help patients see great without glasses and contacts both day and night. It is especially effective in improving night vision or vision in dim light or foggy conditions. Nearly 100% of patients in FDA trials achieved better than 20/20 vision, including many patients achieving 20/10 vision (which means patients can see twice as far as patients with 20/20 vision).

The second important advance in vision correction surgery is the Implantable Collamer Lens, called EVO ICL. We have been doing lens implants for the past 15 years and were the first practice in San Francisco to perform these procedures. Initially, the procedures were complex and reserved for patients with very high nearsightedness, such as -15 diopters,

for example. In the recent years, however, several significant changes were made to the procedure so that it is now safe and effective for most patients with nearsightedness and astigmatism, including those with lower prescriptions who are not candidates for LASIK or PRK. The results have been outstanding, with most patients achieving better than 20/20 vision, even patients with very high prescriptions. The recovery is similar to LASIK and patients can resume normal activities shortly after the procedure. Patients who were told they were not a candidate for laser vision correction because their prescription was too high, cornea too thin, or too uneven, may consider exploring EVO ICL.

The third very important advance in vision correction surgery has been a procedure called Refractive Lens Exchange (RLE) also known as Custom Lens Replacement (CLR). This procedure has truly revolutionized vision care for patients over 40 who don't want to wear reading glasses. As we get older, the eye's natural lens loses its ability to focus up close. This condition is called presbyopia and until recently, the only solutions for this were reading glasses, bifocals, or multifocal or monovision contact lenses. As many of us know, reading glasses can be a nuisance, especially if you also need glasses or contacts to drive, see TV or computer screens, or see people across the room. With RLE surgery, the eye's natural lens is replaced with an advanced lens implant to permanently correct nearsightedness, farsightedness, astigmatism, as well as age-related presbyopia, reducing or eliminating glasses and contacts for distance and near. There are four types of advanced lens implants used in RLE surgery: the Light Adjustable Lens (LAL), the multifocal lens, the extended range lens, and the toric lens. Clear vision for many activities, both up close and far away, can be achieved with these lenses providing freedom from reading glasses and bifocals.

