

Eye M.D. Fact Sheet

What Everyone Should Know About

VISION CORRECTION

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There is no “best” method for correcting refractive errors. The most appropriate correction for you depends on your eyes and your lifestyle.

You should discuss your refractive errors and your lifestyle with your Eye M.D. to decide on which correction will be most effective for you.

Eyeglasses

An easy solution to correct refractive errors rests with eyeglasses. There are several types of frames and lenses to suit any individual's vision and lifestyle needs. Remember to pay equal attention to selecting your frames and lenses. This will provide you with the best in fashion, safety and vision.

Frames - Most frames today are metal or plastic. Both are durable and available with flexible or sturdy hinges. If you're looking for safety glasses, be sure you're getting a protective frame with “Z87.1” imprinted on the frame. This reflects standards put forth by the American National Standards Institute in Standard Z87.1-1989.

Lens Material - Plastic lenses are most common today. They are light weight and more resistant to wear and tear. Polycarbonate material is the most durable, and is highly recommended for children and anyone who may be in a hazardous workplace or engaging in sports.

Developments in eyeglass lenses:

High Index Lenses - recommended for people with strong prescriptions, these lenses are thinner and lighter in weight.

Multifocal Lenses - allows for the change in lens power from the top to the bottom of the lens, without the usual “jump” found in traditional bifocals and trifocals. Also known as progressive addition lenses.

Photochromic Lenses - adjust to the amount of light available indoors and out. These lenses can shade up to 85% of all light, or as little as 10% in the brightest of settings.

Tints and Coatings - these enhancements can help reduce glare and damage caused by the sun. Tints can shade up to 85% of light, but tint is not an indicator of the level of UV protection offered. Look for lenses that state they protect eyes from 99-100% of ultraviolet rays. Coatings help keep glare away, and are useful while driving or in preventing the appearance of glare on your lenses. They can also help prevent scratching of the lens.

Contact lenses

There are now a wide variety of contact lenses available. The type that is best for you depends on your refractive error and your lifestyle. If you want to wear contact lenses, discuss the various options with your Eye M.D. Soft lenses are made of thin, flexible plastic, letting your eyes “breathe” by letting oxygen pass through. Gas-permeable (RGP) lenses are a little less flexible than soft lenses, but are more durable.

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Developments in contact lenses:

Orthokeratology - treat myopia using a series of hard contact lenses to gradually flatten the cornea and reduce the refractive error. Improvement of sight from orthokeratology is temporary. After the use of the lenses is discontinued, the cornea returns to its original shape and myopia returns.

Wearing patterns - available in disposable, daily and extended wear material. Disposable (soft) lenses are worn for 1-2 weeks before they are thrown away. They are convenient because they do not require as much care. Extended wear (soft or RGP) lenses can be worn for an entire week without removing them.

Refractive Surgery

People who want to minimize or eliminate their reliance on corrective lenses may choose refractive surgery as an option for vision correction. Continuing refinements and improvement of refractive surgery procedures mean that Eye M.D.s can offer more vision correction options to more people than ever before.

Laser In Situ Keratomileusis (LASIK) - the most prevalent type of refractive surgery, in which the surgeon uses a microkeratome to cut a flap in the cornea and then uses an excimer laser to reshape the underlying corneal tissue. In 1999, 846,000 LASIK procedures were performed in the United States. Over 1.5 million procedures have occurred since 1996.

Photorefractive keratectomy (PRK) - the second most prevalent type of refractive surgery, in which the surgeon uses an excimer laser to remove layers of tissue from the cornea. There were over 90,000 procedures performed last year.

What's next in refractive surgery? Several procedures are being developed, which may someday offer even more choices for vision correction.

Intrastromal Corneal Ring Segments (ICRS) ["Intacs"] - clear, thin, polymer inlays placed in the eye to correct low myopia.

Implantable Contact Lens (ICL) - an intraocular lens surgically inserted into the front section of the eye and placed over the eye's natural lens for the correction of myopia, hyperopia, and astigmatism. Currently in FDA Phase II trials.

Laser Thermal Keratoplasty (LTK) - a nonincisional laser treatment for correction of mild to moderate farsightedness. Phase II trials have been completed, but LTK is not FDA-approved. Further trials are underway.

Radio-Frequency Keratoplasty (RFK) - also called Conductive Keratoplasty (CK), uses radio frequency waves to shrink corneal collagen for correction of low to moderate hyperopia. In Phase III trials.

Scleral Expansion Band (SEB) - four crescent-shaped plastic segments implanted into the white of the eye to reverse aging eye (presbyopia) by restoring normal vision (accommodation). In investigational trials in Canada, France, and Mexico.

For more information, visit the Web site of the American Academy of Ophthalmology - The Eye M.D. Association - www.eyenet.org. An Eye M.D. is an ophthalmologist-a medical doctor specially trained to provide the full spectrum of eye care - medical, surgical and optical.