

Photorefractive Keratectomy

Until recently, if you were one of the millions of people with a refractive error (which means that light rays do not focus precisely on the retina, causing you to be nearsighted, farsighted or astigmatic), eyeglasses and contact lenses were the only options for correcting vision. But with the development of refractive surgery, some people today can have their vision corrected through refractive surgery.

Photorefractive keratectomy (PRK) is one of several refractive surgery procedures used by ophthalmologists (Eye M.D.s) to permanently change the shape of the cornea to improve the way it focuses light on the retina.

PRK is an outpatient procedure performed with topical anesthetic eyedrops. It takes only about 15 minutes. The epithelium, the outer cell layer of the cornea, is removed with a blade, alcohol or a laser. An excimer laser, which produces ultraviolet light and emits high-energy pulses, is used to remove a thin layer of corneal tissue. Your ophthalmologist guides the laser with a computer, and the laser beam sculpts the surface of the cornea. By breaking the bonds that hold the tissue molecules together, your cornea is reshaped, which corrects your refractive error and eliminates or reduces the need for eyeglasses or contact lenses. Because no incisions are made, the procedure does not weaken the structure of the cornea.

Immediately following surgery, the eye is patched or a “bandage” contact lens is placed on the eye. Vision is blurry for several days following PRK. It may take a month or longer to achieve your best vision. You may need to use medicated eyedrops for up to three months.

Possible complications of PRK surgery include undercorrection, overcorrection, poor night vision, and corneal scarring. Permanent vision loss is very rare. In recent studies monitored by the U.S. Food and Drug Administration, 95% of eyes were corrected to 20/40, the legal limit for driving without corrective lenses in most states.

To be a candidate for the procedure you must have a stable and appropriate refractive error, be free of eye disease, be at least 18 years old, and be willing to accept the potential risks, complications and side effects of PRK.

This information is provided by the American Academy of Ophthalmology.