

Kinds of Eye Surgery for Refractive Errors

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Abstract

Good vision depends on how well light rays are absorbed on the retina through the cornea and lens. To concentrate on the eye, light rays must bend (refract). The retina is the nerve layer sensitive to light that forms the back of the eye. It produces impulses from the rays of light that are sent to the brain by the optic nerve.

Vision issues brought about by a cornea that isn't totally framed are refractive mistakes. The straightforward piece of the front of the eye is the cornea. It twists and carries light waves to focus. Refractive mistakes permit an article's light not to be focused on the retina. An obscured picture is brought about by this. In any case sound eyes, refractive errors may happen.

Keywords: Eye • Surgery • Ophthalmology

Types of Refractive Errors

1. Near-sightedness (myopia)
2. Farsightedness (hyperopia)
3. Astigmatism
4. Presbyopia

Types of Surgery

Types of surgery to correct refractive errors include:

- LASIK (laser in-situ keratomileusis)
- Photorefractive keratectomy (PRK)
- Radial keratotomy (RK)
- Astigmatic keratotomy (AK)
- Automated lamellar keratoplasty (ALK)
- Laser thermal keratoplasty (LTK)
- Conductive keratoplasty (CK)
- Intracorneal ring (Intacs).

Lasik

This is a medical technique for treating near sightedness, astigmatism, or hyperopia. With an excimer laser, the procedure reshapes the cornea. LASIK has substituted a vast number of other surgical treatment methods with the refractive eye.

This medical procedure is completed using a cold laser operated by a PC. It also utilizes a computer called a microkeratome, which

(femtosecond laser).

Keratotomy Photorefractive (PRK)

The same form of excimer laser used for LASIK is used to do this surgery. To correct mild to moderate near-sightedness, PRK is performed to reshape the cornea (myopia).

By scraping tiny quantities of tissue from the outer surface, the excimer laser beam remodels the cornea. To chart the eye's surface, the technique uses a computer. It also predicts how much tissue you need to extract.

Keratotomy of the Radial (RK)

To correct moderate myopia, this technique is used. With a diamond scalpel, small cuts or incisions are made in the cornea. The cuts cause the cornea's core to flatten and alter its curve. It decreases refraction. It takes a few weeks to recover because the cornea is sliced. It was a very common surgery. But LASIK has almost replaced it.

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Automated Keratoplasty Lamellar (ALK)

For hyperopia and extreme cases of myopia, this is used. For myopia, the eye surgeon uses a special instrument to cut a flap across the front of the cornea (microkeratome). To the hand, the flap is folded. On the surface of the cornea, a thin slice of tissue is extracted. This flattens and decreases refraction in the central cornea.

Thermal Keratoplasty Laser (LTK)

This process adds heat to the edges of the cornea from a laser. This shrinks the fibers of collagen and remodels the cornea. To have this surgery, you must be 40 years old or older.

Keratoplastia Conductive (CK)

To fix mild to moderate hyperopia, this surgery is used. To shrink collagen and adjust the form of the cornea, it uses heat from low-level radio waves.

Rings in the Intracornea (Intacs)

These are used to treat myopia that is mild. They are small rings in the cornea that are inserted. They alter the cornea curve and enhance the vision.

About Ready to have Surgery

The majority of refractive eye procedures are conducted on an outpatient basis. This means the next day you go home and don't stay in a hospital overnight. Most surgeries are less than 1 hour in length. Prior to surgery.

What to Expect after and during Surgery

Minimal pain requires refractive eye surgery. The eye is also numb before surgery with eye drops. During the process, you might be awake. With an eye speculum, the eye can be left open. This is a mechanism similar to a spring that is mounted between the eyelids.

Surgery's most Popular After-Effects Include

- Light-sensitivity
- Vision for Fuzzy

Minor inconvenience

Dry eyes Dry eyes

Recuperation time from a medical procedure fluctuates relying upon the medical procedure. Full recuperation may require days, weeks, or months.

Picking a Process

The most popular form of refractive eye surgery is LASIK. LASIK's benefits include:

Less pain and quicker healing

A broad spectrum of myopia can be fixed

To further correct vision, it can be repeated to

But other forms of surgery may be more fitting for your requirements. And, for anyone, refractive eye surgery is not an option. Speak about your form of vision with your eye care provider.