

Flap complications: Sometimes the anterior corneal flap that is made in LASIK may not be complete. In such situations the flap is repositioned and surgery may be re-attempted after three months. In rare instances, the flap may tear or become detached.

Corneal ectasia: This can occur if the corneal thickness is less to begin with, or if the cornea is thinned more than it can withstand. Persons with low corneal thickness are not suitable for LASIK. Other serious complications like corneal infections, corneal edema, corneal perforation, etc., though possible, are extremely rare.

Important!

Although LASIK is an excellent procedure for low and moderate refractive errors, it may not totally dispense with the need for glasses in everybody. Though doctors strive to make the refractive error zero, this is not always possible. The main purpose of surgery is to offer sufficient good vision so that patients are not dependent upon glasses most of the time. A detailed eye examination, followed by a realistic discussion with the surgeon on the expected outcome of surgery, will help you to know what to expect.

Alternatives to LASIK

Patients who are unsuitable for LASIK can opt for alternatives such as photorefractive keratectomy (PRK), phakic intraocular lens implant, and clear lens extraction (refractive lens exchange) with negative intraocular lens implantation.

Phakic IOL is recommended for patients with very high refractive powers, or those with very low corneal thickness or flat corneas who are unsuitable for LASIK. In this procedure an intraocular lens (made of biocompatible material that has been tested and proven fit for implantation for over 50 years) is fixed in front of the natural clear lens. Three types of lenses are used: anterior chamber, iris fixated, and posterior chamber. The quality of vision is usually very good in patients after phakic IOLs, as compared to those with LASIK.

In phakic IOL the lens is implanted inside the eye and cannot be felt. Unlike other implant procedures or lasers, this implanted lens can be removed any time, as the surgery does not affect the important natural structures of the eye. Therefore, the entire procedure is reversible.

If there is an emergency at night, during a weekend, or on a holiday, come for emergency care to the Institute. Always mention the patient's ID number, name and the doctor's name in all communications.



L V Prasad Eye Institute

Hyderabad

Kallam Anji Reddy Campus
LV Prasad Marg, Banjara Hills, Hyderabad 500034
Tel: 91 40 39892020 / 30612108; **Fax:** 91 40 23548339
Emergency Services: 91 40 30612100
Email: appointment@lvpei.org, info.hyd@lvpei.org

Bhubaneswar

Patia, Bhubaneswar 751024, Orissa
Tel: 91 0674 3987999; **Fax:** 91 0674 3987130
Emergency Services: 91 0674 3987220
Email: B.LVPEI-Appointment@lvpei.org, info.bbsr@lvpei.org

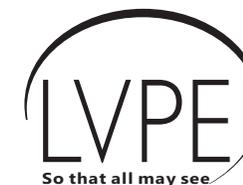
Visakhapatnam

GMR Varalakshmi Campus
Door No: 11-113/1, Hanumanthawaka Junction
Visakhapatnam 530040
Tel: 91 0891 3984555 / 984666; **Fax:** 91 0891 3984444
Email: gmrappointment@lvpei.org

Vijayawada

Kode Venkatadri Chowdary Campus
Tadigadapa Village, Penamaluru Mandal
Vijayawada 521137
Tel: 91 0866 306 2020
Email: kvc-appointment@lvpei.org

Website: www.lvpei.org



L V Prasad Eye Institute

LASIK

REFRACTIVE LASER SURGERY



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Vision correction surgery with LASIK and Wavefront

Lasers have proved especially useful in eye care, where they are also used to correct refractive errors, thus minimizing or eliminating the need for glasses or contact lenses. Ophthalmologists at L V Prasad Eye Institute (LVPEI) have an international reputation for performing laser refractive surgery or Laser-Assisted In-Situ Keratomileusis (LASIK) with extremely successful outcomes.

LVPEI also offers Wavefront assisted vision correction technology, which scores over other procedures for vision correction in several ways. This procedure not only helps correct common vision defects such as myopia, hyperopia, and astigmatism (cylindrical vision), it is also capable of measuring and correcting even minute aberrations in the eye, giving results that were, until now, considered impossible.

What are refractive errors

The eye functions like a camera. Light rays entering the eye are focused by the cornea and the lens of the eye onto the light sensitive retina at the back of the eye, which is like the film of a camera. The retina then transmits a clear image, or photo, to the brain. In people with refractive errors like myopia (nearsightedness) and hyperopia (farsightedness), the light rays are not focused properly and blurred images are formed. These can be measured as aberration patterns.

Plano and Wavefront assisted customised LASIK surgery

In addition to spectacles and contact lenses for vision correction, LASIK surgery is now a widely accepted procedure. This is an advanced laser vision correction technique for correcting myopia, hyperopia, and astigmatism. In LASIK the curvature of the cornea is reshaped using a laser that removes tissues with precision of up to a micron level.

Wavefront assisted customized LASIK is a cutting edge laser vision correction technique where a spot laser also removes tiny aberrations in the eye, that may occur after conventional (or Plano) LASIK, thus improving the outcome of the surgery. Surgeons use an instrument called the aberrometer to measure minute imperfections in the eye, which are then corrected during surgery. While older lasers only correct the spherical and cylindrical power, the aberrometer can measure many more types of aberrations and correct them.

The procedure also minimizes the occurrence of new aberrations, which lead to night vision problems like haloes, glare and ghost images. This leads to more accurate vision correction and better night vision, along with reduced glare and enhanced contrast sensitivity.

In general, LASIK is recommended for patients with mild to moderate degree of myopia. More caution needs to be exercised while operating on patients with hyperopia. It is relatively easier to flatten the cornea (in myopia), but it is more difficult to steepen the cornea (in hyperopia). Making the cornea too steep may lead to a gradual regression of the power and a risk of the patient losing the best corrected vision. If the refractive error is high, in young patients contact lenses are preferable to surgery. For patients above the age of 40, refractive lens exchange (along with the removal of the clear lens) with a regular monofocal/multifocal lens is recommended.

Who is suitable for LASIK

Persons who opt for LASIK are those who find spectacles visually unacceptable, those who are intolerant to lenses, those who would like to participate in outdoor sports or people interested in professions demanding excellent uncorrected vision. Prospective patients should be above 18 years of age and their spectacles' power should have been unchanged for at least a year. Further, they should not have any ocular surface abnormality such as dry eyes. Most importantly, the cornea should have adequate thickness for it to be operated upon.

Before the laser procedure

The patient undergoes a complete eye examination, in which the structure and functioning of the eyes are checked. An Orbscan is done to ascertain the thickness and curvature of the cornea. This also helps in ruling out keratoconus, a progressive thinning disorder of the cornea, which is a contraindication for LASIK. The ophthalmologist studies the test reports before making a final decision, in consultation with the patient.

During surgery

At LVPEI laser surgery is done on an out-patient basis; this means you go home immediately after surgery. Usually one eye is treated at a time. The procedure is performed under topical anesthesia. You will be made to lie down on a couch and asked to look up at the microscope where you will see a blinking green light. When the suction ring is applied, your

vision will fade out. You will start seeing the light again after the suction ring is removed. The whole procedure will be over in a few minutes. There is usually no pain.

After laser surgery

After surgery your eye will be covered with a shield and you can return home. You may have some pain for the first 24 to 36 hours, for which the doctor will prescribe oral analgesics. You will have to come for follow-up visits from the very next day onwards. Please be careful and follow the schedule suggested by the doctor.

The usual check-up schedule is:

- ◆ First check-up on the morning after surgery
- ◆ Seven days after surgery
- ◆ One month after surgery
- ◆ Three months after surgery
- ◆ One year after surgery

When will you know the result

You will undergo special diagnostic tests on each visit to assess your visual acuity. Your vision will become clear within a few days. Sometimes you may require another session of laser treatment, especially if you have a high degree of refractive error. This is done after three months.

Possible side effects

Laser surgery is very safe and effective. But some patients may have side effects. Your doctor will discuss these with you and clear your doubts before surgery. Some possible side effects are:

Undercorrection/overcorrection: Undercorrection may sometimes be planned intentionally or may occur as an unintentional effect. As a result, the eye may remain short-sighted. If the degree of residual myopia is significant, you may be treated again later. Overcorrection occurs very rarely.

Glare/halo effect: You may feel some sensitivity to light at night or in bright sunlight. Sometimes in dim light, you may see a faded ghost image around the sharp bright image. This will pass after the first few days or weeks.

Decrease in contrast sensitivity: Some people find that their night vision has become a bit dull. This happens because of a decrease in their ability to discriminate between different contrast levels. The Wavefront assisted procedure minimizes night vision problems since minute imperfections and aberrations are also taken care of.