

LASIK & ASLA

Potential Risks and Complications

LASIK surgery is a surgical procedure done on a delicate part of the eye and therefore, complications can occur. The complication rate is very low and problems can usually be readily treated. Complications will be more common in patients with high amounts of shortsightedness, farsightedness, or astigmatism, because these patients require larger amounts of treatment.

The chance of having a serious vision-threatening problem is much less than 1%. More precisely, the sight-threatening complication rate cited in large studies is between 0.001% and 0.05%. Treatment should not be undertaken if you cannot accept there is a rare possibility of a complication that could permanently reduce vision in an eye.

Under-correction and Over-correction

Occurring in less than 5% of treatments, but by far the most common issue encountered after laser vision correction is under-correction or over-correction. Under-corrections and over-corrections are the main reason that all patients do not have perfect uncorrected vision after the initial laser treatment.

This occurs because the patient absorbs slightly less or more of the laser energy than anticipated, or because the patient experiences

an abnormal healing response. Further laser treatment, known as an "enhancement" or a "touch-up," can often be used, usually resulting in excellent vision without glasses or contact lenses.

Regression

Regression is the tendency of your eye's refraction to shift back towards your original refraction. The cornea may lose some of its new shape during the healing process.

The amount of regression experienced depends on your starting refraction and your eye's healing response. Regression tends to be minimal with LASIK, and is taken into account when planning your treatment. If regression occurs and bothers you, an enhancement may be necessary.

Glare and haloes

About 2% of laser vision correction patients will notice increased optical aberrations, including glare or haloes at night. Every person, even if they have never had laser vision correction, to some degree has glare or haloes when viewing a bright object against a dark background.

Most people are not aware that they have glare or haloes. You can demonstrate this to yourself by going outside, away from other lights, and viewing the moon; every person will

notice a small glow or unevenness around the edge of this bright object.

After laser vision correction, increased glare or haloes is common during the first three months of healing. After the initial healing period, only a very small percentage of people will have more glare or haloes than prior to the treatment, and a greater number of people will experience a decrease in the glare or haloes. Those patients with large pupils requiring large treatments are the most likely to experience this problem. The incidence of significant glare is 1 in 1000. Use of the newer lasers has dramatically improved this problem.

Haze

Your vision may lose contrast sensitivity, which means that things look slightly hazy despite having 20/20 vision. This is usually temporary, and any corneal haziness resolves, with your contrast sensitivity returning to normal within six months of surgery. This complication is more frequently encountered with ASLA than LASIK. In ASLA, your eyes are treated with a special medication (Mitomycin C) at the time of surgery to reduce the risk of this complication.

Dryness

Many patients will experience dryness during the first weeks or months following treatment.

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Potential Risks and Complications Continued...

Dryness manifests itself as grittiness or light sensitivity. Dryness is most common in people who have a lot of dryness prior to laser vision correction. Eye drops are used to control the dryness, which usually resolves by three to six months after treatment.

Infection

During the early healing phase, the eye is susceptible to infection. You will be asked to follow certain instructions, including using antibiotic eye drops. Carefully following these instructions will decrease the infection rate to far below 1%. Even if an infection does occur, use of antibiotic eye drops will almost always control the infection. In exceedingly rare cases, infection can result in severe visual loss in the eye.

Loss of best-corrected vision

About 1% of laser vision correction patients experience some minimal to mild loss of best-corrected vision, which is the absolute best vision possible when using glasses or contact lenses. About 2% of patients will experience an improvement in the best corrected vision. Of course, you probably will no longer use glasses or contact lenses for distance vision after the surgery, so you may not even be aware that your best possible vision is different.

Either an irregularity or haziness in the corneal surface could cause a

decrease in best-corrected vision. Short-term irregularities during the initial months of healing may occur, and almost always resolve as the healing progresses. Rare complications such as infection, scarring, or difficulties with the corneal flap can result in a more significant loss of best-corrected vision. Corneal flap complications occur much less frequently when the Intralase Laser is used to create the flap, as opposed to a blade.

A mild loss of best-corrected visual acuity might not even be noticed or might be just a minor annoyance. Severe losses of best-corrected visual acuity are exceedingly rare.

A severe loss of best-corrected visual acuity would be noticed by almost every patient and might make it hard to work in occupations that require fine vision. If your occupation is dependent on fine visual acuity (eg. microsurgeon or commercial/military pilots) the impact upon your career must be considered should you experience either a temporary or permanent reduction in best-corrected vision.

Ectasia

This is a progressive thinning of the cornea after surgery. Careful pre-operative assessment with the latest diagnostic equipment makes the risk of this condition exceedingly low. It is for this reason we will not perform LASIK on corneas that are too thin.

Complications of a Corneal Flap

Please note these complications occur much less frequently when the Intralase laser is used to create the corneal flap, as opposed to a blade (micro-keratome).

Flap complications do not occur in ASLA, as no flap is made.

During surgery, difficulty may be encountered in making the flap, or the flap that has been made may be too thick, thin, irregular, or come free from its hinge.

In most cases these problems will not cause any permanent damage to the eye. The surgery can generally be rescheduled after healing.

In the days after surgery, wrinkles may occur in the flap, or the flap may move, particularly if the eye has been rubbed or traumatised. If causing problems with vision the flap requires repositioning.

Infrequently, microscopic debris or cells from the surface of the cornea may get trapped under the corneal flap. If affecting vision or causing inflammation, this condition can often be treated with drops.

If more significant, surgery may be required to lift the flap and clear the unwanted material.