

## Laser Refractive Surgery

### Is Laser surgery for you?

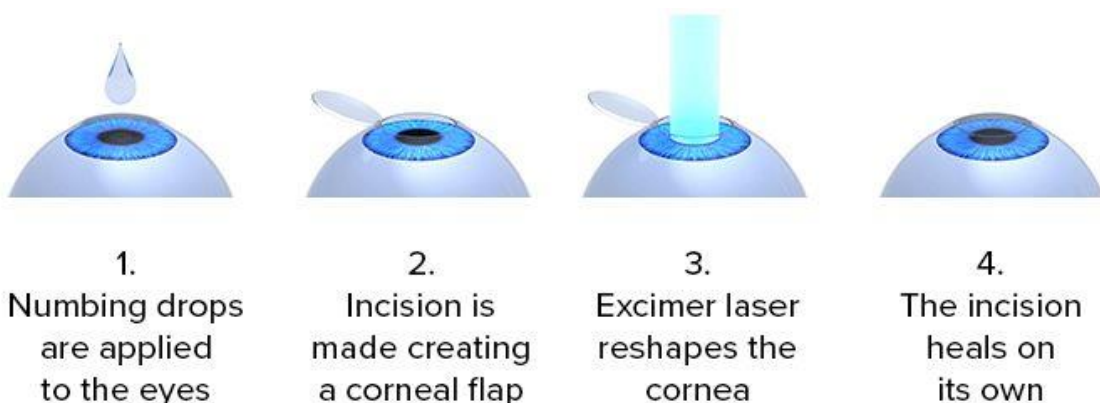
We have many patients who have undergone refractive laser surgery of one type or another over the past 35 years. Most have experienced positive outcomes; many now have recurrent dry eye issues and many are now wearing glasses again or have needed enhancements to regain the improvement. Refractive laser surgery encompasses various procedures aimed at correcting vision problems such as myopia, hyperopia, and astigmatism by reshaping the cornea. There are also alternative refractive correction procedures which suit different refractive errors and ages.



### The main types of refractive laser surgery:

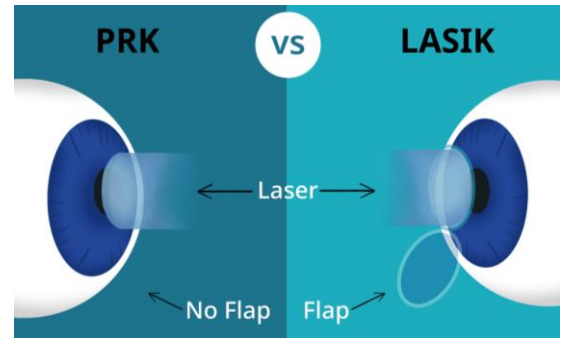
LASIK (Laser-Assisted In Situ Keratomileusis) is the most commonly performed laser eye surgery. It involves creating a thin flap in the cornea using a microkeratome or femtosecond laser. The underlying corneal tissue is then reshaped with an excimer laser to correct the refractive error, and the flap is repositioned.

- Advantages: Quick recovery, minimal discomfort, and significant improvement in vision.
- Ideal for: Individuals with mild to moderate myopia, hyperopia, and astigmatism with normal or thick corneas.



PRK (Photorefractive Keratectomy) involves removing the corneal epithelium to expose the underlying stroma, which is then reshaped using an excimer laser. Unlike LASIK, no flap is created, and the epithelium regenerates under a bandage contact lens for 3-5 days and continues to alter over the next 2-4 weeks.

- Advantages: Suitable for patients with thinner corneas, less risk of complications related to the flap.
- Ideal for: Mild to moderate myopia, hyperopia, and astigmatism, especially in patients with thin or irregular corneas.

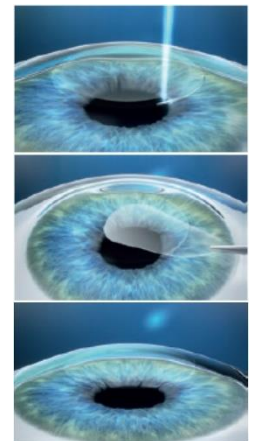


LASEK (Laser Epithelial Keratomileusis) is a variation of PRK where the epithelial layer is preserved and pushed to the side instead of being removed. The excimer laser then reshapes the corneal stroma, and the epithelial layer is repositioned.

- Advantages: Combines benefits of PRK and LASIK, suitable for patients with thin corneas.
- Ideal for: Like PRK, but with potentially quicker healing times.

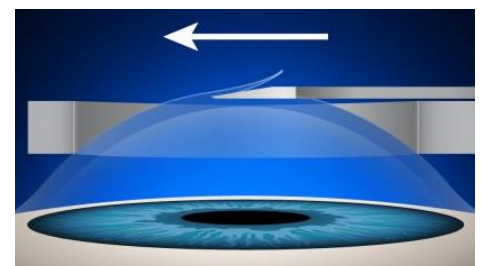
SMILE (Small Incision Lenticule Extraction) involves creating a small, lens-shaped piece of tissue (lenticule) within the cornea using a femtosecond laser, which is then removed through a small incision. This reshapes the cornea to correct the refractive error.

- Advantages: Minimally invasive, no flap creation, potentially less dry eye post-surgery.
- Ideal for: Mild to moderate myopia and astigmatism.

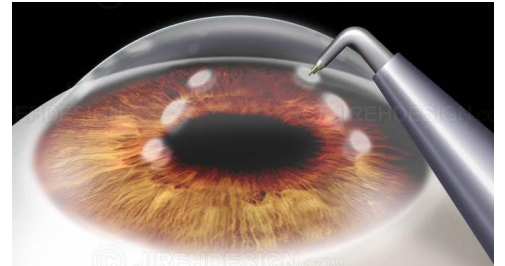


Epi-LASIK (Epithelial LASIK) involves the creation of an epithelial flap using an epikeratome. The flap is lifted, and the underlying corneal tissue is reshaped with an excimer laser. The epithelial flap is then repositioned.

- Advantages: Reduced pain and quicker recovery compared to PRK.
- Ideal for: Patients with thin corneas or those involved in contact sports.



Conductive Keratoplasty (CK) uses radiofrequency energy to apply heat to the corneal periphery, causing the collagen fibres to shrink and change the shape of the cornea. This is typically used for the correction of mild hyperopia and presbyopia.



- Advantages: Non-laser procedure, less invasive, and reversible in some cases.
- Ideal for: Mild hyperopia and presbyopia.

Each of these procedures has its own benefits and suitability depending on the patient's age, eye health, refractive error, corneal profile, and lifestyle needs. It's essential for individuals considering refractive surgery to have a thorough consultation with our optometrist to guide the most appropriate option for their specific condition.

## Some of the criteria that need to be met include:

- 18 years of age or older.
- Have maintained a stable prescription for a minimum of 2 years prior to surgery.
- No significant medical issues, conditions, or eye problems.
- Not pregnant or breastfeeding.

To undergo refractive laser surgery you must be over the age of 18, as hormonal changes during puberty can affect the eyes. Undergoing refractive laser surgery before puberty ends can minimise the potential long-term effects that would be gained once in adulthood. Some patients experience frequent fluctuations in vision quality, making it challenging to maintain a regular prescription. Your prescription needs to be stable to insure positive results from refractive laser surgery intervention. Please note certain prescriptions may fall outside the treatment capabilities of refractive laser surgery so discussing options with your optometrist is crucial.

If you are experiencing any eye health issues such as glaucoma, keratoconus, macular degeneration, or corneal ulcers, refractive laser surgery may not be suitable, and alternative treatments should be pursued with your optometrist or ophthalmologist.

Pregnant women should also be cautious, as hormonal changes during pregnancy can affect vision and the outcome of the surgery. Post-operative drops can be harmful for your baby. It is best to wait until after childbirth and after breastfeeding is complete before any refractive laser surgery.



We strive to offer each patient personalized advice and comprehensive information when considering laser vision correction. We recommend conducting your own research before proceeding with the procedure. While it's typical to resume work and normal activities within a few days after refractive laser surgery, the full recovery period can span from 3 to 6 months. Additionally, patients are required to administer eye drops throughout the day and wear sunglasses when outdoors during the first month post-op. These precautions are essential for proper healing and optimal outcomes.

Refractive laser surgery typically involves four steps. First, the surgeon creates a thin flap in your cornea. Next, the cornea is reshaped using an Excimer Laser to correct vision. Once the laser treatment is complete, the flap is repositioned back into place. The entire procedure usually takes about 10 minutes per eye. Following the surgery, full vision recovery can occur within a few hours to a few days. It's important to note that, apart from numbing solutions, you will be awake for the entire Lasik corrective surgery.



Overall, while laser eye surgery offers benefits, at Buck and Todd, we advocate for thorough research and discussion of your options with your optometrist. We are committed to providing the highest quality service and healthcare, meticulously examining your vision and determining your eligibility for refractive laser surgery if it aligns with your preferences and needs.

Don't forget there are also overnight vision correction options with orthokeratology lenses and daytime or continuous wear (30-days) contact lenses available as viable glasses free options.