

OUR SPECIALISTS

SNEC Laser Vision Centre is led by a team of experienced refractive surgeons who are certified and accredited to perform refractive laser vision correction. They undergo annual re-accreditation to maintain international standards and keep at the forefront in this field of refractive surgery.

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OUR RANGE OF REFRACTIVE SURGERY SERVICES

- LASIK
- LASIK Xtra
- ReLEx® smile
- Advanced Surface Ablation (ASA) - LASEK
- Implantable Contact Lens (ICL)

InTouch

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InTouch

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For Your EYES ONLY

LASIK isn't the only option to help you see better. There are other forms of surgery available at the SNEC Laser Vision Centre that can help you.

If you are short-sighted, far-sighted or have astigmatism

TRY: LASIK

This laser procedure changes the shape of the cornea - the transparent dome-shaped part at the front of the eye - so that light entering the eye can hit the retina in the right spot, giving you clearer vision. To do this, a tiny flap is made on the cornea's surface, before the exposed cornea is gently reshaped. The flap is then closed. The procedure should take 25 minutes for both eyes. Most patients can get 20/20 vision a day after surgery.

If you have high myopia

TRY: LASIK XTRA

This is still Lasik but with an extra component, which you have the option to add on, if your myopia is 800 degrees or more. It involves adding a special vitamin chemical into the flap to strengthen the cornea. The chemical aims to reduce the chances of myopia recurring.

If you suffer from a high degree of myopia, more of your cornea would have to be lasered off during treatment. Your cornea is made up of collagen fibres, which are bonded together. The chemical can create more corneal bonds.

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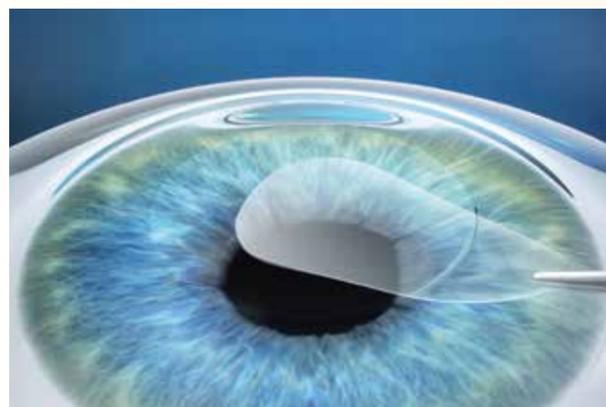
If you have relatively dry eyes

TRY: ReLEx® smile

This new technique of laser vision correction is relatively painless and can correct short-sightedness from 100 to 1,000 degrees and astigmatism of up to 500 degrees. Instead of creating a corneal flap, like with Lasik, ReLEx® smile removes a small amount of corneal tissue through a tiny cut to help reshape the cornea.

It takes about 25 minutes for both eyes and has fewer after-care-risks. Since there is no flap, there are no flap-related problems – if the flap doesn't heal nicely, it may get dislodged if you rub your eyes too much or accidentally poke them during the early healing period. Also, because the incision is so small, the cornea may be stronger, possibly reducing the chances of myopia or astigmatism from recurring.

However, it may take three to four days longer – compared to LASIK patients – for you to regain some



form of normal vision. There might be mild discomfort too, although this usually lasts no more than six hours. Most patients can get normal vision after six months.

If you tend to get dry eyes or if you have a high-risk job, there's a higher risk of 'traumatising' your eyes post-surgery. ReLEx® smile would be better for you than Lasik, as there won't be a flap on the cornea.

If you have thin cornea and mild myopia

TRY: ADVANCED SURFACE ABLATION

This is another flapless technique that takes 25 minutes for both eyes. Your ophthalmologist uses a chemical to remove the cornea's superficial layer before using a laser to reshape it. You can go for this if your cornea is too thin for Lasik. But your degree cannot be too high – it should be less than 500 – or the healing process will take longer and there may be scarring on the eye.

Recovery too, is slower, compared to the other procedures – about a week, as it takes time for the surface to heal. You'll also need to use antibacterial steroid eye drops for a few months, instead of the usual one week.

If you have a thin cornea and moderate to high myopia

TRY: IMPLANTABLE CONTACT LENSES

In this type of surgery, your ophthalmologist inserts a lens into the eye, behind the iris, and in front of your natural eye lens. You won't feel the lenses or need to take them out – they're permanent insertions. However, your ophthalmologist will still be able to remove them if necessary - for example, if you develop a cataract.

The lenses are customised for you, and can correct myopia as high as 2,000 degrees, which Lasik or ReLEx® smile can't fix. The procedure takes about 20 minutes for each eye.

You may experience side effects like high pressure on the eyes or poor night vision. But if all goes well, you should get your good vision three to four days after surgery.

OUR LASER TECHNOLOGY

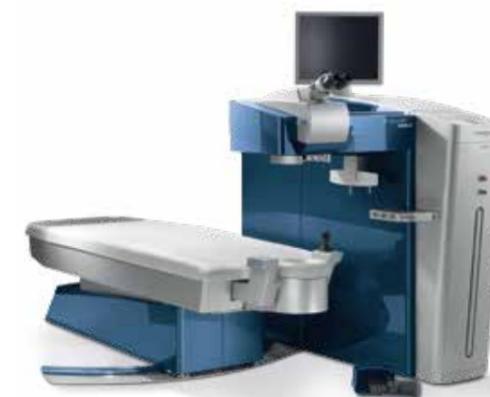
At the SNEC Laser Vision Centre, there is a constant quest to expand the range of refractive errors that can be treated, to improve the predictability and accuracy of the outcomes and to enhance the safety of the surgery. Our specialist team is always at the forefront of innovation, leveraging emerging laser technology to offer customised treatment for patients.

Wavelight EX500 Excimer Laser

This excimer laser by Alcon is a flying spot laser that delivers treatment at 500Hz, with an average treatment time of approximately 1.4 seconds per diopter. It sculpts and treats refractive errors following flap creation by the femtosecond laser.

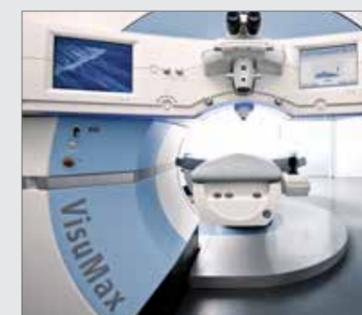
Faster laser treatment improves the predictability and results of LASIK by reducing the problems of dehydration of the cornea during treatment, flap shrinkage, treatment sensitivity to patient's eye movement and fixation fatigue.

For safety and precision, the laser is coupled with a faster, 1050Hz multi-dimensional eye tracker that



tracks horizontal, vertical, rotational and torsional movements of the eye. This excimer laser can also be linked to corneal mapping instruments like the topolyzer and oculyzer, enabling customised mapping of the corneal surface or the global mapping of the eye.

VISUMAX®



The Visumax® femtosecond laser from Carl Zeiss Meditec is a new generation femtosecond laser platform designed for the creation of corneal flaps during LASIK. Its repetition rate of 500kHz enables faster flap creation and uses lower energy levels, thereby reducing the amount of thermal energy delivered to the cornea. A specially designed spherically curved contact glass used during the procedure prevents unnecessarily high rise in intraocular pressure and temporary vision loss during the procedure. The net result is a fast, safe and comfortable LASIK procedure.

IntraLase™ iFS Laser System

This iFS laser system by AMO has a repetition rate of 150kHz, enabling corneal flaps to be created in just 12 to 16 seconds during LASIK. The lower energy levels used with this laser also reduces risk of tissue burns and injury. With iFS, the flap dimensions are customisable based on patient factors, such as corneal thickness, diameter and pupil position.



LDV Femtosecond Laser System

This system by Ziemer is another femtosecond laser for making LASIK flaps. It operates at low pulse energy (nJ) and short pulse width, but at high pulse frequencies (MHz). As a result, fewer gas bubbles are formed during flap creation and more tissue is preserved. The effect is quiet eyes which are free from edema post-surgery.



This high-speed system also allows generation of tightly focused low-energy laser pulses in an overlapped pulse raster, resulting in a complete and smooth resection for easy flap lift, and faster visual recovery.