#### About Sight and Smile Centre

Sight and Smile Centre is a state-of-the-art eye and dental care facility established in 2008 in the heart of the Indian capital, New Delhi with the aim of providing world-class healthcare services at affordable costs to all sections of society. Located in Central Delhi, 100 metres from the Patel Nagar Metro station (on the blue line of the Delhi Metro transit system), the facility is also easily approachable by road. Vehicle parking facility is available. Spread over an area of 7200 sq ft, the centre is fully air-conditioned and has an elevator facility for patient convenience. It complies with all fire safety regulations. The comforting ambience, the warm atmosphere and cleanliness make it stand apart. Medical records of patients are maintained for future reference. The facility prides itself in having a fully-equipped ultra-modern eye operation theatre, which is one of the largest in the city. The centre is registered with the Directorate of Health, Govt. of NCT of Delhi and functions from 9 am to 9 pm (Monday - Saturday). Emergency services can be availed round-the-clock. Dr. Pankaj Malik heads the eye department while Dr. Jyoti Malik heads the dental department. It is our constant endeavour to provide such preventive and restorative services to patients that they have the best of sight and smile.



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# LASIK & REFRACTIVE SURGERY

For a spectacle-free life



LASIK ICL RLE INTACS

Patient Information Brochure °Not valid for legal purposes

LASIK

#### What is LASIK?

LASIK (Laser-Assisted in-situ Keratomileusis) is a laser vision-correcting procedure wherein the corneal curvature is reshaped with utmost precision in such a way that spectacles / contact lenses are no longer required to be worn.

The laser used for the procedure is the Excimer laser which works at a wavelength of 193nm.

The procedure corrects nearsightedness (myopia), farsightedness (hypermetropia) and cylindrical (astigmatic) refractive errors.

#### **Eligibility criteria for LASIK**

- Age above 18 years.
- Stable refraction (spectacle power) for at least a year.
- Sufficient corneal thickness as measured by corneal pachymetry.
- Normal corneal profile as determined by corneal topography.
- Free from systemic illnesses and autoimmune diseases.
- Ladies should not be pregnant or nursing.

#### The LASIK procedure

LASIK is done by numbing the eye using anaesthetic eye drops and takes less than 5 minutes to perform.

Normal cornea



A partial thickness corneal flap is created using a microkeratome. The flap, which remains attached on one side, is then reflected to expose the corneal stroma (bed).

Excimer laser ablation is done on the stromal bed according to a corneal profile generated by a computer.



The corneal flap is laid back on the bed to which it adheres quickly within two minutes.

#### Variants of the LASIK procedure

- C-LASIK: C-LASIK or customized LASIK is an advanced form of excimer laser surgery which not only corrects the spectacle power but also the optical imperfections (aberrations) of the eye thus giving a better quality of vision than conventional LASIK. The laser procedure is customized (tailor-made) to the particular eye of the particular individual to achieve precise results.
- Aspheric LASIK: A normal eye is aspheric in nature. Aspheric LASIK reshapes the cornea in such a manner that it maintains its asphericity thereby improving vision clarity and contrast. The procedure is customized to the particular eye.
- SBK (Sub-Bowman's keratomileusis): This type of LASIK uses a newer design of microkeratome called epikeratome to create a thin corneal flap of the order of 90 microns. This leaves a thicker corneal bed for laser ablation and is a boon for those who have high spectacle powers and / or in whom the cornea is too thin.

#### **Newer LASIK techniques**

- Blade-free femto LASIK: In this type of LASIK, tiny pulses of femtosecond laser light are made to pass through the cornea to form a uniform layer of microscopic bubbles at the desired depth in the cornea (corneal flap creation). The flap is then reflected as in conventional LASIK and ablation done by the excimer laser. The need to use a microkeratome for corneal flap creation is obviated.
- Smile LASIK: Smile LASIK is a type of blade-free LASIK which does not involve the creation of a corneal flap. The femtosecond laser creates two planes in the cornea. The resulting corneal lenticule is loosened and removed to achieve the desired vision correction.

#### Lifestyle benefits of LASIK

- Freedom from spectacles and contact lenses.
- Wider scope of peripheral vision as compared to spectacles.
- Expanded career opportunities (police officers, pilots, air-hostesses, professional athletes etc).
- · Safer for ocular health vis-a-vis contact lenses.

## Implantable Collamer Lens (ICL)

#### What is ICL?

ICL, also called phakic intraocular lens, is a new modality of refractive surgery involving the placement of an ultra-thin, soft foldable IOL made of collamer material in the posterior chamber (space between the iris and the natural lens) in front of the natural lens of the eye without touching it. Each ICL is specially designed and custom-made to fit the patient's particular eye.



#### **Clinical indications of ICL**

ICL is advised in patients found unsuitable for LASIK either because of having extremes of myopia, hypermetropia and / or astigmatism or insufficient corneal thickness for the degree of refractive error.

# Is ICL removable once implanted inside the eye?

ICL can be removed by the surgeon at any time later in life, if necessary, as may be the case if patient develops cataract due to advancing age. In such a scenario, following removal of the ICL, cataract surgery with foldable pseudophakic IOL is done.

# **Refractive Lens Exchange (RLE)**

#### What is RLE?

RLE is a surgical procedure involving removal of the natural transparent lens of the eye and substituting it with a foldable IOL of appropriate calculated power that gives freedom from spectacles for distance.

#### <u>How is RLE different from cataract</u> <u>surgery</u>?

Although the techniques of RLE are the same as that of modern-day cataract surgery, **RLE differs** from cataract removal in that the natural lens is transparent in **RLE** while it is cloudy in cataract.

### **Clinical indication of RLE**

RLE is indicated in persons above 40 years of age with a very high spectacle power who want to get rid of spectacles.

#### <u>Can near vision also be corrected with</u> <u>RLE</u>?

It is possible to achieve complete freedom from near glasses too by implanting a multifocal IOL (which gives good vision at near, intermediate and far distances) or by imparting monovision (wherein monofocal IOL's of such calculated power are implanted in the eyes that one eye sees clearly for distance and the other for near.



#### What are INTACS?

**INTACS or Intrastromal corneal ring segments are small devices implanted in the eye to correct vision.** The segments are made of biocompatible polymethylmethacrylate (PMMA) material.

A femtosecond laser is used to make a tunnel of required length inside the corneal stroma at the desired depth, one on either side of the pupil. The INTACS are then inserted into the tunnels.



#### **Present status of INTACS**

**INTACS are a treatment modality in keratoconus** (a condition in which the cornea assumes a conical shape). By flattening the central cornea, they reduce corneal aberrations and improve the quality of vision.