

## 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.



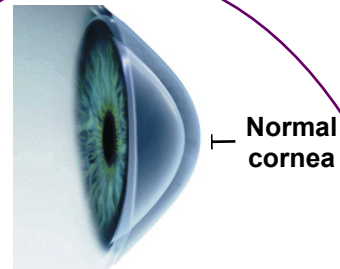
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Tel: 011-25882945

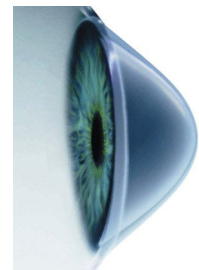
24 hours helpline: 0-85-0605-0705  
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# KERATOCONUS

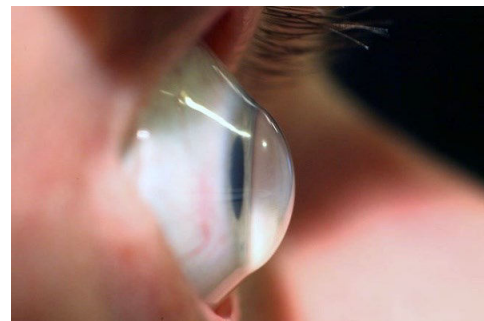
The conical cornea



Normal cornea



Keratoconus



Patient Information Brochure \*Not valid for legal purposes

## About the cornea

The cornea is the transparent, dome-shaped front part of the eye that covers and protects the iris, pupil and anterior chamber. It is a powerful refracting surface and provides more than 2/3rd of the eye's optical power. To see well, all layers of the cornea must be free of any cloudy or opaque areas.

### What is keratoconus?

Keratoconus (Greek: kerato meaning cornea, konos meaning cone) is a degenerative disorder of the eye in which the cornea becomes thin, bulges forward and assumes a conical shape, in contrast to a round, normal shape. This adversely affects the quality of the image projected into the eye and blurred vision results.

### What causes keratoconus?

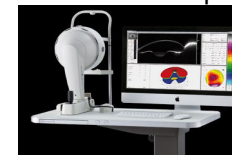
Keratoconus is an inherited condition which often skips generations. It typically starts in the teenage years and is often related to allergies. Both eyes are usually affected.

### Symptoms of keratoconus

- Decreased and distorted vision.
- Frequent change in glasses without much visual improvement.
- Multiple images or ghosting of images.
- Recurrent foreign body sensation.
- Intolerance to light (glare).

### Diagnostic tests for keratoconus

- ♦ **Corneal topography:** Pentacam, the latest corneal topography system helps in early detection of keratoconus and monitors disease progression as well as response to treatment. Pentacam produces a 3D measurement data of the corneal architecture in the form of colour-coded maps.

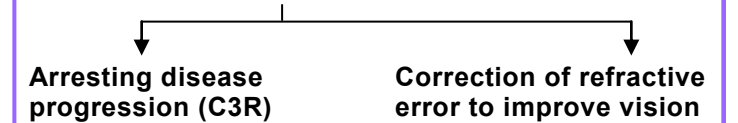


Pentacam

- ♦ **Pachymetry:** Measurement of corneal thickness is done using a pachymeter.

## Treatment of keratoconus

The approach to treatment of keratoconus can be divided into two parts



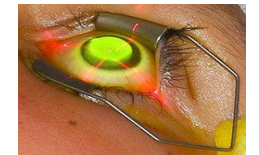
### What is C3R?

C3R (Corneal Collagen Crosslinking) is a revolutionary new modality in keratoconus treatment aimed at strengthening the corneal architecture and arresting disease progression.

In C3R, the superficial layer of the cornea (epithelium) is removed and riboflavin eye drops are instilled onto the cornea for 25-30 minutes. Exposure of the riboflavin-bathed cornea to ultraviolet (UVA) light from a special device called cross-linker stimulates the formation of normal chemical bonds between the corneal collagen protein strands. C3R is not a cure for keratoconus, albeit it can obviate the need for a corneal transplantation.



Cross-linker



Photopolymerization in C3R

### How can vision be improved in keratoconus patients?

- ♦ Spectacles.
- ♦ RGP (Rigid gas-permeable) contact lenses.
- ♦ Customized hybrid (Rose-K) contact lenses.
- ♦ INTACS (Intrastromal corneal ring segments): These are semi-circular acrylic rings made of biocompatible PMMA material inserted into the corneal stroma, one on either side of the pupil, through tunnels made by femtosecond laser. By flattening the central cornea, they reduce corneal aberrations and improve the quality of vision.
- ♦ ICL (Implantable Collamer Lens): ICL is implanted into the eye to correct refractive error.
- ♦ Corneal transplantation: Advanced cases with corneal scarring need corneal transplantation.