

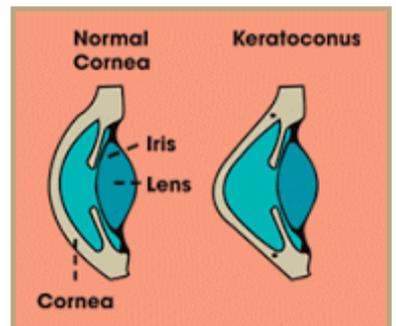
## KERATOCONUS

### What is keratoconus?

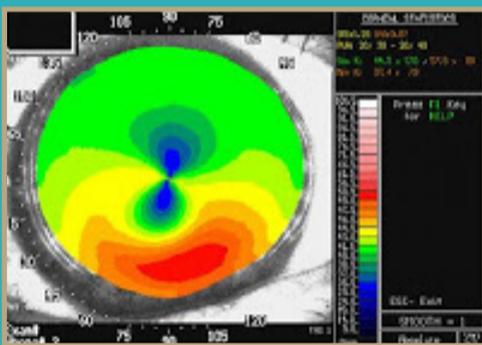
Keratoconus is a degenerative condition that results in a cone-shaped cornea. In addition to being cone-shaped the surface of the cornea is irregular, resulting in a distorted image being projected to the brain.

### What causes keratoconus?

The exact cause is unknown. A family history (genetic factors), eye rubbing, allergic eye disease and Down's Syndrome are associated with a higher possibility of developing keratoconus.



### Symptoms and signs of keratoconus



Patients develop progressive nearsightedness and blurring of vision. Glare and light sensitivity may also occur.

Delay in diagnosis is common as the early signs are subtle. A very careful examination by an ophthalmologist and a special investigation called computerised corneal topography is usually necessary to make the diagnosis.

### How is it treated?

#### Spectacles and contact lenses

In the early stages, spectacles and soft contact lenses may help to correct vision. As keratoconus progresses, hard contact lenses or other types of specialised types of contact lenses are necessary to improve vision. Hard contact lens fitting is challenging and time-consuming and may require frequent visits and adjustments to obtain optimal results.

#### Corneal cross-linking

Corneal cross-linking strengthens the bonds within and between collagen fibres in the cornea.

The shape of the cornea thus becomes more stable and the progression of keratoconus is halted or slowed.

Cross-linking is a straightforward procedure performed under topical anaesthesia. The surface layer (epithelium) of the cornea is removed. Riboflavin drops are then applied to the eye for about half an hour. After that the eye is exposed to a highly specialised ultraviolet light for 30 minutes. A bandage contact lens is then worn for a few days while the corneal epithelium heals. Eyedrops must be used for a few months after cross-linking.

#### What to expect after cross-linking

Some pain and discomfort is normal for about a week after the procedure while the epithelium heals.

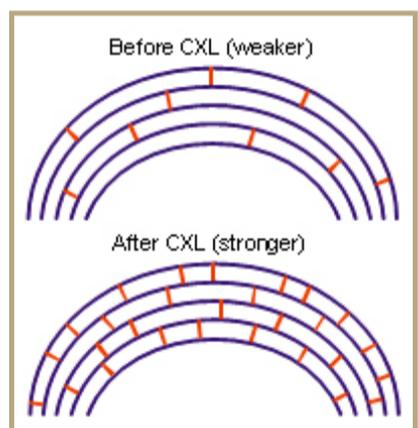
Blurring of vision and haze is normal for a few weeks or months after cross-linking. In most cases, contact lens wear can be resumed a month after the procedure.

#### What are the risks of cross-linking?

Infection can occur after cross-linking and must be treated immediately by your ophthalmologist.

The inner lining of the cornea (endothelium) and other structures deeper in the eye can be damaged by the ultraviolet light if the cornea is too thin. Studies so far indicate that this is a safe procedure without significant risk of damage.

Not everyone improves after cross-linking. Progression of the keratoconus is possible, and a corneal graft may be required.



### Corneal graft

When hard contact lenses can no longer correct vision adequately, a corneal graft (transplant) may be necessary.

Please note that these are general guidelines. If in doubt, consult your ophthalmologist.