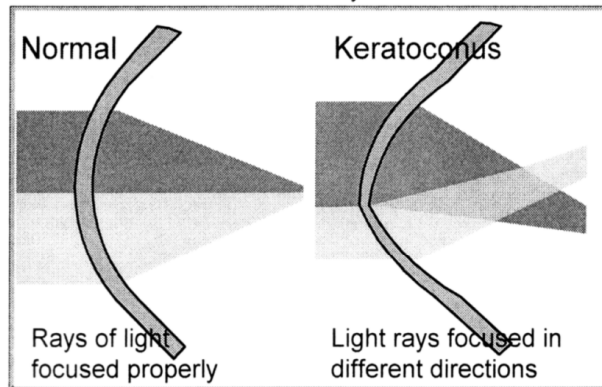


# Corneal keratoconus

An uncommon condition that causes blurred vision due to corneal distortion.

**Keratoconus usually is first noticed in young adults and progresses for a few years until it reaches a stable state.**

The cornea is the window of the eye. It acts as a lens due to its shape which is normally rounded.



Some people have a cornea with a protrusion giving it a cone shape, (similar to a bulls eye window pane). This causes optical distortion which be at least partially corrected by spectacle lenses. The condition usually affects both eye to a greater or lesser degree. Minor degrees merely cause astigmatism which can be aided by glasses.

## Treatment

- Preventive treatment - none known
- Mild keratoconus - spectacles to correct astigmatism
- Moderate cases - hard gas permeable contact lenses so that the front of the eye regains a normal curve.
- Severe keratoconus - A corneal graft to replace the distorted cone with a corneal transplant. The operation is complex and requires a general anaesthetic. Afterwards sutures hold the graft in position. Healing of the cornea is slow so the sutures are generally left alone for 12 months. After this they are usually removed. Suture removal is straightforward and is usually done in outpatients. It often improves vision because the sutures themselves inevitably distort the cornea to some extent.

## Corneal graft problems

Anyone who has had a corneal graft can be prone to rejection weeks to years after surgery.

It is most important that any patient with a corneal graft attends an ophthalmologist urgently, if the eye with the graft

- becomes red
- painful
- blurred vision
- persistent irritation.

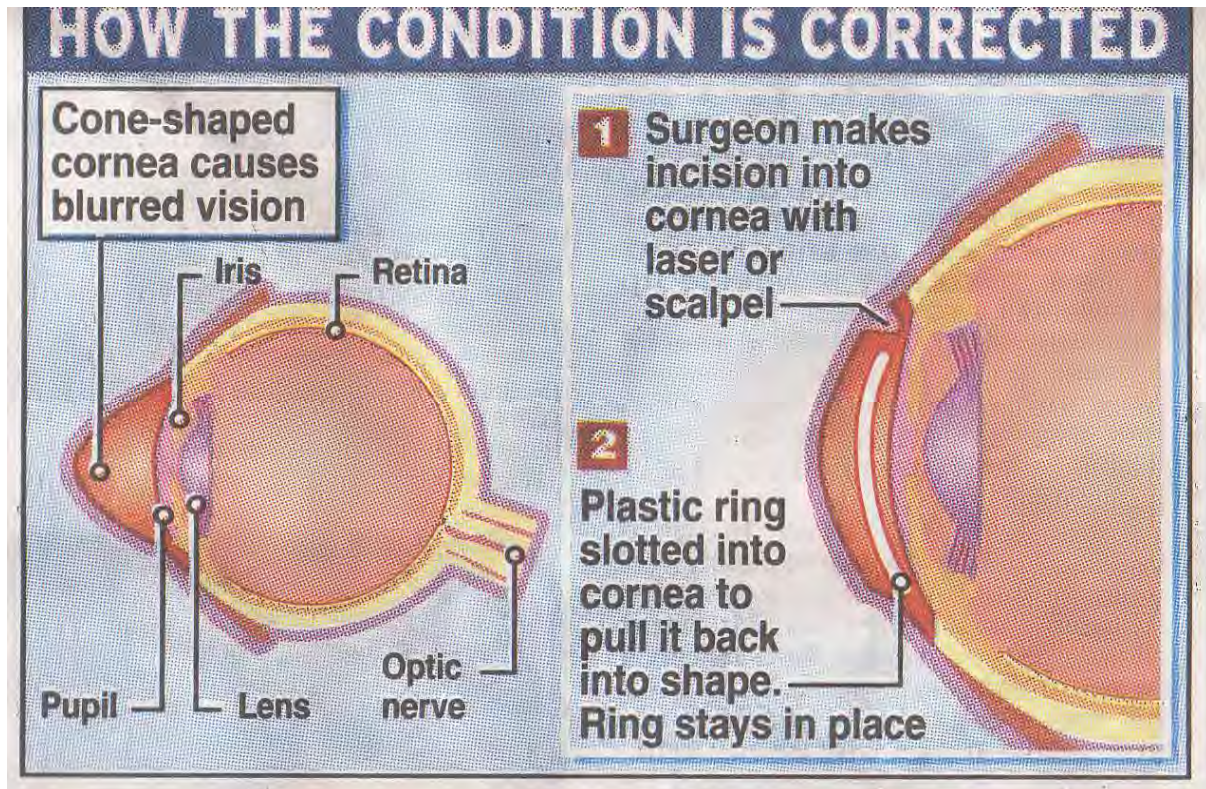
Patients with corneal graft normally require eye drops for at least 12 months following surgery. Do not stop the eye drops unless advised to do so by your ophthalmologist because of the risk of corneal graft rejection. If you run out of eyedrops you can always get further supplies from your general practitioner.

## There is a Keratoconus Patient Support Group:

Contact: Nasreen Fazal-Short,  
28 Goldsmith Road,  
Birmingham, B14 7EE.  
Tel: 0121-444-6318

**See also:** [Astigmatism \(patient info\)](#)

For those with more severe Corneal keratoconus there is a new technique that you may have heard about which is Intrastromal ring implants or Intacs into the cornea. This was recently highlighted in the Daily Mail 1/3/2005. This is a promising technique to try and avoid the need for a corneal graft. Mr. Sheraz Daya at East Grinstead Corneal (01342 410201 X 217 or privately 07000 288 288) unit performs this operation under the NHS and Privately.



A new treatment for keratoconus is corneal inserts. Intacs corneal rings received FDA approval in August 2004 to be marketed to correct or reduce nearsightedness and astigmatism in keratoconus patients who can no longer obtain functional vision with contact lenses or eyeglasses. The procedure involves placing the plastic inserts just under the surface of the eye in the periphery of the cornea. The result is a flatter cornea and clearer vision.

Several small studies have found that Intacs improved keratoconic participants' eyeglass-corrected vision by an average of two lines on a standard eye chart. Other advantages are that the inserts are removable and exchangeable, the procedure takes only about 10 minutes, and while the inserts may defer a corneal transplant, they don't preclude the procedure if necessary later on (see below). Potential risks are infection, little or no improvement in vision, glare and halos, and foreign body sensation, so it is important to discuss the procedure in detail with a surgeon to make sure you are a good candidate. This procedure is just being considered in the NHS. (Privately Cost around £2,400 per)

## **Collagen Cross Lining**

with Riboflavin was developed 13 years ago and is now becoming a well established procedure especially in Europe.

The idea is that this treatment increases the strength of the cornea to prevent progression and has also been reported to partially reverse the corneal steeping that has already taken place.

Multicentre studies have shown that cross-linking halts the progression of corneal ectasia and that it is a safe procedure.

This procedure is just being considered in the NHS. (Privately Cost around £925 per eye).

Nicholas Lee 2012



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