

Keratoconus

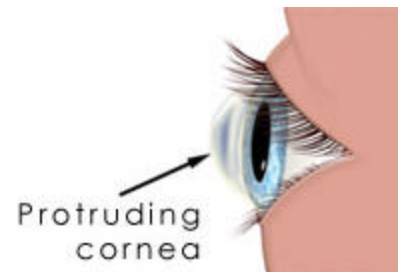
Overview

Keratoconus is a degenerative disease of the **cornea** that causes it to gradually thin and bulge into a cone-like shape. This shape prevents light from focusing precisely on the **macula**. As the disease progresses, the cone becomes more pronounced, causing vision to become blurred and distorted. Because of the cornea's irregular shape, patients with keratoconus are usually very **nearsighted** and have a high degree of **astigmatism** that is not correctable with glasses.

Keratoconus is sometimes an inherited problem that usually occurs in both eyes.

Signs and Symptoms

- Nearsightedness
- Astigmatism
- Blurred vision - even when wearing glasses and contact lenses
- Glare at night
- Light sensitivity
- Frequent prescription changes in glasses and contact lenses
- Eye rubbing



Detection and Diagnosis

Keratoconus is usually diagnosed when patients reach their 20's. For some, it may advance over several decades, for others, the progression may reach a certain point and stop.

Keratoconus is not usually visible to the naked eye until the later stages of the disease. In severe cases, the cone shape is visible to an observer when the patient looks down while the upper lid is lifted. When looking down, the lower lid is no longer shaped like an arc, but bows outward around the pointed cornea. This is called Munson's sign.

Special corneal testing called **topography** provides the doctor with detail about the cornea's shape and is used to detect and monitor the progression of the disease. A **pachymeter** may also be used to measure the thickness of the cornea.

Treatment

The first line of treatment for patients with keratoconus is to fit rigid gas permeable (RGP) contact lenses. Because this type of contact is not flexible, it creates a smooth, evenly shaped surface to see through. However, because of the cornea's irregular shape, these lenses can be very challenging to fit. This process often requires a great deal of time and patience.

When vision deteriorates to the point that contact lenses no longer provide satisfactory vision, **corneal transplant** may be necessary to replace the diseased cornea with a healthy one.