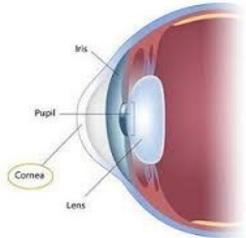
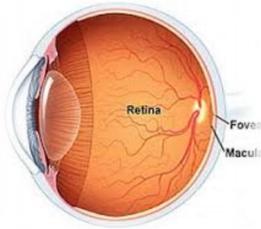


## Background:



The **Cornea** is the transparent front part of the eye that covers the iris, pupil, and the other front components of the eye, known as the anterior chamber.

The **retina** is the layer of tissue in the back of the eye that receives light and communicates directly with the brain to form images. The **macula** is an oval yellowish area near the center of the retina, which is the region of the most precise vision.



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.

## Causes:

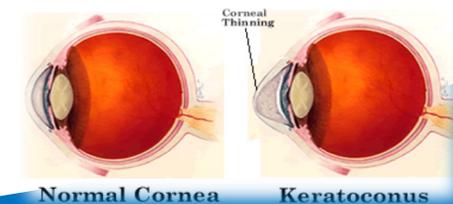
Keratoconus has no known cause. Some studies have found it to be hereditary, while other studies have correlated it with severe childhood allergies and frequent eye-rubbing. It usually starts to progress when a person reaches their 20's. For some it may advance over several decades, while for others the progression may reach a certain point and stop.

## Symptoms:

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

## Detection and Diagnosis:

- Keratoconus is not typically 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.
- Munson's Sign- When looking down, the lower lid is no longer shaped like an arc, but bows outward around the pointed cornea.
- Topography shows the doctor the cornea's shape and detects and monitors the progression of the disease
- Pachymetry may also be used to measure the thickness of the cornea.



## Treatment:

1) **Medical Contact Lenses:** There are several types of medical contact lenses that can be used to mask the distortion and blurred vision caused by keratoconus. These contact lenses are designed to create a smooth, evenly shaped surface to see through. These can be challenging to fit and require a great deal of time and patience. Contacts do not slow down the disease, but it allows you to use your vision.

2) **Corneal Transplant-** when vision deteriorates to the point that contact lenses no longer provide satisfactory vision, the cornea may need to be replaced with a healthy cornea.

3) **Corneal Cross-Linking** The recently FDA approved procedure is the only treatment for keratoconus that can slow down or halt the progression of keratoconus, preventing those with mild or moderate forms of the disease from progressing to the severe stages which would require corneal transplantation.



## Mid-Atlantic Cornea Consultants

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