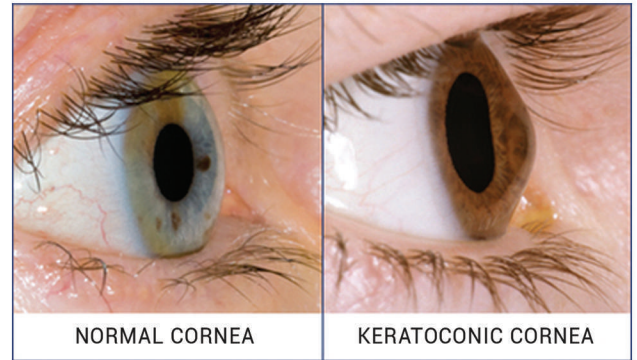


KERATOCONUS

NON-INFLAMMATORY THINNING & BULGING OF THE CORNEA

WHAT IS KERATOCONUS?

Keratoconus is a degenerative disease of the eye characterized by a thinning, conical shaped cornea. Both eyes are usually affected but to varying degrees. Substantial distortion of vision can occur with glare, sensitivity to light and double or ghosting vision. Visual acuity is affected at all distances and night vision is frequently the worst. Keratoconus is typically diagnosed during the patient's teenage years with progression of the disease continuing into their twenties and thirties.



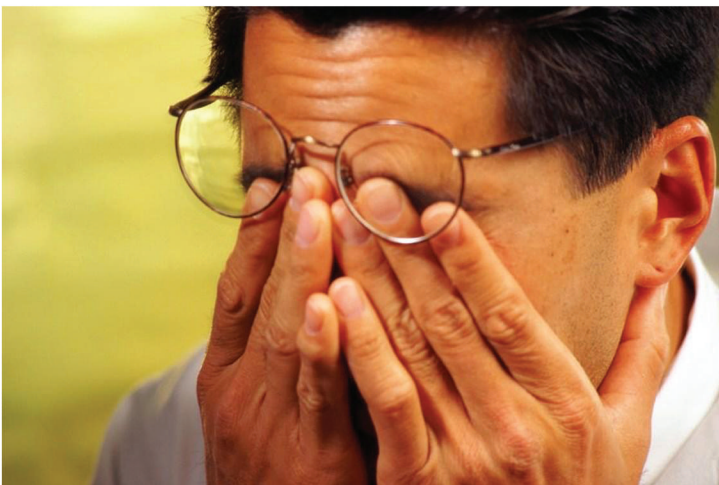
WHAT CAUSES KERATOCONUS?

To date, the exact cause of the disease is not fully understood but genetics, environmental and cellular factors may play a part.

GENETIC

One hypothesis is that keratoconus is genetic because in some cases there does appear to be a familial association. From the currently available information there is less than a one in ten chance that a blood relative of a keratoconic patient will have keratoconus. The bulk of patients with keratoconus do not have other family members with this disease. Studies show that keratoconus corneas lack vital anchoring fibrils that structurally stabilize the cornea, which allows that cornea to "protrude forward" into a cone-shaped appearance.

ENVIRONMENTAL



Eye Rubbing: Keratoconus corneas are undoubtedly damaged by minor trauma such as eye rubbing. Poorly fit contact lenses that rub against the irregularity of the keratoconic cornea have also been implied as a possible cause of keratoconus.

Allergies: Many who have keratoconus report forceful eye rubbing and also have allergies, which result in itching, leading to eye rubbing, however the link to allergic disease also remains unclear. A higher percent of keratoconic patients have disorders such as hay fever, eczema, asthma, and food allergies, which are considered atopic diseases.

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WHAT ARE THE SYMPTOMS OF KERATOCONUS?

- Multiple (ghost) images
- Impaired vision at all distances
- One or both eyes may be affected
- Sensitivity to bright light
- Poor night vision
- Little or no pain

TREATMENT

Contact Lenses

Keratoconus is usually managed by many distinctive contact lens designs. No one design is best for every type of keratoconus. Since each lens design has its own unique features, the doctor carefully assesses the needs of the individual condition to fit the lens that offers the greatest combination of visual acuity, comfort and corneal health.

Corneal Collagen Crosslinking

There is a lot of research currently being conducted in many areas of eye care including Keratoconus. Corneal Collagen Crosslinking with riboflavin is a new advanced procedure that is proving to both preserve and recoup some of the mechanical strength of the cornea. In this procedure, a solution of riboflavin is applied to the cornea and then activated by illumination with UV-A light. This technique stimulates the production of new bonds in adjacent collagen strands, improving the strength of the stroma. The new procedure has a promising, growing role in keratoconus management and typically provides the best overall results for mild to moderate cases.

PREVENTION IS THE BEST MEDICINE

Early detection and management of keratoconus is important to arrest or slow the development of the more sight damaging stages of the disease. Even when no symptoms are noticed, the keratoconic patient should have frequent eye examinations, as recommended by their Coachella Valley Optometry doctor.

If you are experiencing the symptoms of keratoconus or other vision problems, you should obtain a complete eye examination with one of our doctors at Coachella Valley Optometry immediately. Left untreated keratoconus can lead to other more serious complications including blindness.