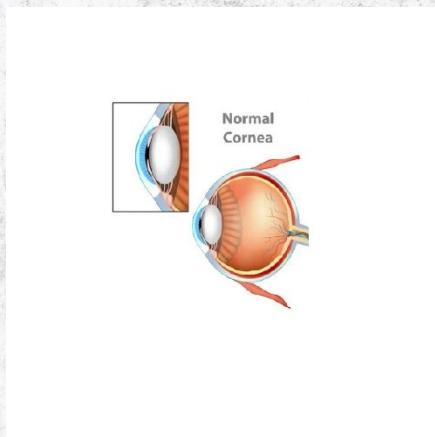


Keratoconus



What Is Keratoconus?

Normally your cornea, the clear outer lens of the eye, has a dome shape, like a ball. Sometimes the structure isn't strong enough to hold its round shape and it bulges outward, like a cone. This is called keratoconus.

Tiny fibers of protein in your eye called collagen help hold your cornea in place. When these fibers get weak, they can't hold their shape. Your cornea gets more and more cone-like.

What Causes It?

The exact cause is not known but there are some risk factors that can increase the chance of developing keratoconus:

- **Family history:** If someone in your family has this condition, you have a greater chance of getting it yourself. If you have it, get your children's eyes checked for signs starting around age 10.
- **Age:** It usually starts when you're a teenager. But it might show up earlier in childhood or not until you're 30. It can also affect people 40 and older, but that's less common.
- **Certain disorders:** Studies have found a connection between keratoconus and systemic conditions such as Down syndrome,

Ehlers-Danlos syndrome, osteogenesis imperfecta, and retinitis pigmentosa.

- **Inflammation:** Inflammation from things like allergies, asthma, or atopic eye disease can break down the tissue of the cornea.
- **Eye rubbing:** Rubbing your eyes hard over time can break down the cornea. It can also make keratoconus progress faster if you already have it.

What Are the Symptoms?

Keratoconus changes your vision in two ways:

As the cornea changes shape from a ball to a cone, the smooth surface becomes wavy. This is called irregular astigmatism.

As the front expands, your vision becomes more nearsighted. That means you can see objects clearly only when they're up close. Anything too far away looks like a blur.

An eye doctor may spot the signs during an eye exam. You should also mention symptoms like:

- Double vision when looking with just one eye
- Objects both near and far that look blurry
- Bright lights that appear to have halos around them
- Light streaks
- Blurry vision that makes it hard to drive



How Is It Diagnosed?

Your doctor needs to measure the shape of your cornea. There are different ways, but the most common is called corneal topography. The doctor snaps a photo of your cornea and checks it closely.

How Is It Treated?

- You'll probably start with new glasses. If you have a **mild case**, new eyeglasses should clear things up. If they don't, your doctor will suggest contact lenses. Rigid gas permeable contacts are usually the first choice. Over time, you may need other treatments to strengthen your cornea and improve your sight.
- A treatment called **cornea collagen crosslinking** may stop the condition from getting worse. Or your doctor could implant a ring called an Intacs under the cornea's surface to flatten the cone shape and improve vision.
- When other treatments don't give you good vision, the last resort is a **cornea transplant**. This is a very safe operation, and it's successful in more than 90% of cases. The doctor will remove the center of your cornea, replace it with one from a donor, and stitch the new one into place. You may need contact lenses afterward.

LASIK and keratoconus

- Because keratoconus is a degenerative corneal disease that causes thinning of the cornea and leads to unpredictable and irregular changes in the shape of the front surface of the eye, **LASIK generally is not recommended for anyone with keratoconus.**

