

What Is a Corneal Ulcer?

A corneal ulcer is an open sore on the cornea — the clear front window of the eye. The cornea covers the iris (the colored portion of the eye) and the round pupil, much like a watch crystal covers the face of a watch. A corneal ulcer usually results from an eye infection, though it can be caused by severe [dry eye](#) or other eye disorders.

Corneal Ulcer Symptoms

Symptoms of corneal ulcers include:

- Redness of the eye;
- Severe pain and soreness of the eye;
- The feeling of having something in your eye;
- Tearing;
- Pus or other discharge;
- Blurred vision;
- Sensitivity to light;
- Swelling of the eyelids;
- A white spot on your cornea that you may or may not be able to see when looking in the mirror.

If you think you have a corneal ulcer or have any eye symptoms that concern you, it is important to see your ophthalmologist (Eye M.D.) immediately. If not treated, corneal ulcers can severely and permanently damage your vision and even cause blindness.

Who Is At Risk for Corneal Ulcers?

People at risk for corneal ulcers include:

- Contact lens wearers
- People who have or have had cold sores, chicken pox or shingles
- People who use steroid eyedrops
- People with dry eye
- People with eyelid disorders that prevent proper functioning of the eyelid
- People who suffer injury or burns to the cornea

If you wear contact lenses, safe handling, storage and cleaning of your lenses are key steps to reduce your risk of a corneal ulcer.

What Causes Corneal Ulcers?

Many causes of corneal ulcers can be prevented. Use the correct [protective eyewear](#) when doing any work or play that can lead to eye injury. And if you wear contact lenses, it is important to care for your [contact lenses](#) safely and correctly.

Corneal ulcers are usually caused by the following types of infections:

- **Bacterial infections**
These are common in contact lens wearers, especially in people using extended-wear lenses. *Acanthamoeba* keratitis is particularly common in contact lens users, especially those who make their own homemade cleaning solutions.
- **Viral infections**
The virus that causes cold sores (the *herpes simplex* virus) may cause recurring attacks that are triggered by stress, an impaired immune system, or exposure to sunlight. Also, the virus that causes chicken pox and shingles (the *varicella* virus) can cause corneal ulcers.

- *Fungal infections*
Improper use of contact lenses or steroid eyedrops can lead to fungal infections, which in turn can cause corneal ulcers. Also, a corneal injury that results in plant material getting into the eye can lead to fungal keratitis.
- *Parasitic (Acanthamoeba) infections*
Acanthamoeba are microscopic, single-celled amoeba that can cause human infection. They are the most common amoebae in fresh water and soil. When *Acanthamoeba* enters the eye it can cause severe infection, particularly for contact lens users.

Other causes of corneal ulcers include:

- Abrasions or burns to the cornea caused by injury to the eye. Scratches, scrapes and cuts from fingernails, paper cuts, makeup brushes and tree branches can become infected by bacteria and lead to corneal ulcers. Burns caused by caustic chemicals found in the workplace and at home can cause corneal ulcers.
- [Dry eye](#) syndrome.
- [Bell's palsy](#) and other eyelid disorders that prevent proper eyelid function. If the eyelid does not function properly, the cornea can dry out.

Corneal Ulcer Diagnosis

Your Eye M.D. will use a special dye called fluorescein (pronounced FLOR-uh-seen) to illuminate any damage to your cornea then examine your cornea using a special microscope called a slit lamp. The slit-lamp exam will allow your ophthalmologist to see the damage to your cornea and determine if you have a corneal ulcer.

If your Eye M.D. suspects that an infection is responsible for your corneal ulcer, a tiny tissue sample will be taken so that the infection can be identified and properly treated.

Corneal Ulcer Treatment

Though usually treated on an outpatient basis, you may need to go to the hospital for treatment if an ulcer is severe enough.

Medical treatment

Antibiotics, antifungal or antiviral eyedrops are the mainstay of treatment. Sometimes antifungal tablets will be prescribed, or an injection of medication is given near the eye for treatment.

Once any infection has diminished or is gone, then steroid or anti-inflammatory eyedrops may be used to reduce swelling and help prevent scarring. The use of steroid eyedrops is controversial and should only be used under close supervision by your Eye M.D. It is possible that steroid eyedrops may worsen an infection.

Oral pain medication may be prescribed to reduce pain.

If symptoms of corneal ulcer continue after treatment—including pain and redness of the eye, tearing and discharge from the eye and blurry vision—let your ophthalmologist know right away so a different course of treatment can be started promptly.

Surgical treatment

If corneal ulcers cannot be treated with medication, surgery may be needed to keep your vision. A [corneal transplant](#) can replace your damaged cornea with a healthy donor cornea to restore vision.