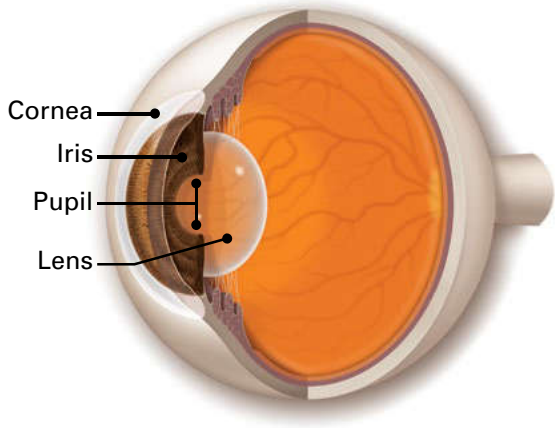
Corneal Ulcer

What is a corneal ulcer?

A corneal ulcer is an open sore on the cornea. The cornea covers the iris and the round pupil, much like a watch crystal covers the face of a watch. A corneal ulcer usually results from an eye infection, but severe dry eye or other eye disorders can cause it.



Eye anatomy

What are the symptoms of corneal ulcer?

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

See your ophthalmologist immediately if you think you have a corneal ulcer or have any eye symptoms that concern you. Corneal ulcers can badly and permanently damage your vision and even cause blindness if they are not treated.

Eye Words to Know

Cornea: Clear, dome-shaped window of the front of your eye. It focuses light into your eye.

Iris: The colored part of your eye.

Pupil: The opening at the center of the iris that allows light to enter the eye.

Who is at risk for corneal ulcer?

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 eye drops
- people with dry eye
- people with eyelid disorders that prevent proper functioning of the eyelid
- people who injure or burn their 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. It is important to learn how to take care of your contact lenses.

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What causes corneal ulcers?

You can prevent many causes of corneal ulcers. 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 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.

Viral infections. The virus that causes cold sores (the herpes simplex virus) may cause recurring attacks. These attacks 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 eye drops 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 a bad 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 can become infected by bacteria and lead to corneal ulcers. These injuries can happen from fingernail scratches, paper cuts, makeup brushes and tree branches. Burns caused by corrosive 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, and an ulcer can develop.

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How is corneal ulcer diagnosed?

Your ophthalmologist will use a special dye called fluorescein (pronounced FLOR-uh-seen) to light up any damage to your cornea. They will 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 ophthalmologist thinks that an infection has caused your corneal ulcer, they may take a tiny tissue sample. Examination of this sample helps identify and properly treat the infection.

How is a corneal ulcer treated?

Antibiotic, antifungal or antiviral eye drops are the treatments of choice. Sometimes your ophthalmologist will prescribe antifungal tablets. In other cases, they will treat you with an injection of medication near the eye.

Your ophthalmologist may prescribe steroid or anti-inflammatory eye drops after your infection has improved or is gone. This should reduce swelling and help prevent scarring. Steroid eye drop use is controversial for corneal ulcer. You should only use them under close supervision by your ophthalmologist. It is possible that steroid eye drops may worsen an infection.

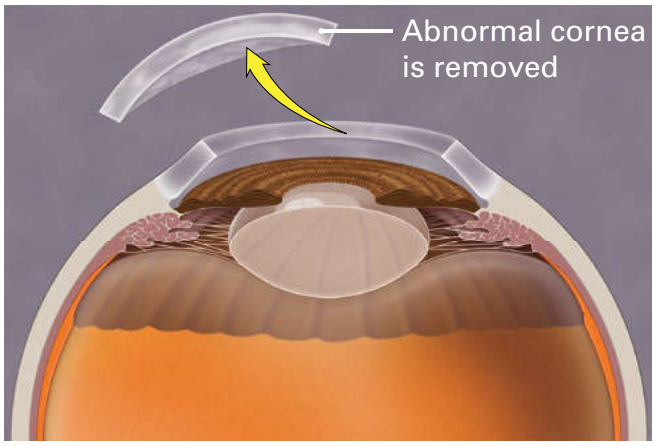
Your ophthalmologist may prescribe pain medication to take by mouth to reduce pain.

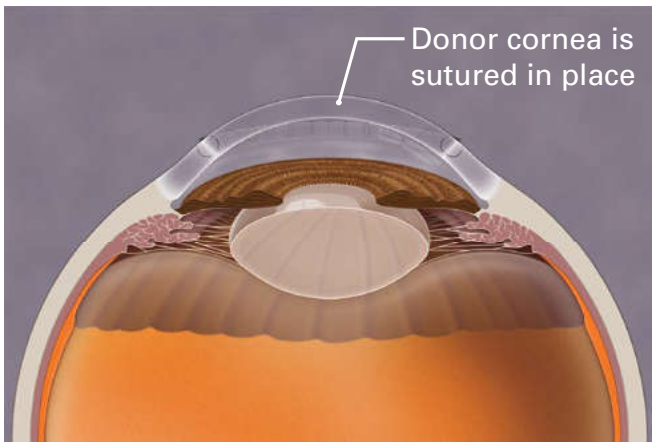
If your symptoms suddenly change or get worse during treatment, then let your ophthalmologist know right away.

Symptoms to look for include:

- pain and redness of the eye
- tearing and discharge from the eye
- blurry vision

Surgical treatment. A corneal transplant can replace your damaged cornea with a healthy donor cornea to restore vision. When the infection is gone and the ulcer is healed after treatment with medication, sometimes a significant scar remains. In this case, a transplant may be done to improve vision. And if corneal ulcers cannot be treated with medication, you may also need corneal transplant surgery to keep your vision.





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Summary

A corneal ulcer is an open sore on the cornea. It usually results from an eye infection. See your ophthalmologist immediately if you think you have a corneal ulcer. They can permanently damage your vision and even cause blindness if they are not treated. Eye drops are usually the treatment of choice. If you cannot be treated with medication, a corneal transplant can restore vision. A corneal transplant may also be needed if a scar remains after treatment with medicine.

Get more information about corneal ulcer from EyeSmart—provided by the American Academy of Ophthalmology—at **aao.org/corneal-ulcer-link**.

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