CONDITION

Trachoma

Trachoma is a bacterial eye condition that can cause eyelid scarring and sight loss after repeated infections.

WHAT IT IS
Repeated bacterial eye infection causing conjunctival scarring

BODY SYSTEM
Eyes and eyelids

MAIN SYMPTOMS
Redness, discharge, eyelash rubbing, light sensitivity

WHAT CAUSES IT
Infection with Chlamydia trachomatis bacteria

HOW IT IS DIAGNOSED
Eyelid examination; eye swab testing when needed

MAIN TREATMENT
Antibiotics, eyelid surgery, and community infection control

CAN IT BE CURED?
Sometimes - infection clears, but scarring may remain

IS IT AN EMERGENCY?
Sometimes - sudden vision loss or severe eye pain

LONG-TERM OUTLOOK
Early disease treatable; advanced scarring may permanently reduce sight

Overview

Trachoma is an eye condition caused by certain strains of the bacterium Chlamydia trachomatis . It mainly occurs in communities where access to clean water, sanitation, and health care is limited.

A single infection usually does not cause blindness. The main risk comes from repeated infections over months or years. Each episode can inflame the conjunctiva, the thin tissue covering the white of the eye and the inside of the eyelids.

Repeated inflammation may scar the inner upper eyelid. As the scar tissue tightens, the eyelid can turn inward. This makes the eyelashes scrape the front of the eye. The condition is called trachomatous trichiasis.

Without treatment, ongoing rubbing can damage the clear front surface of the eye, called the cornea. Corneal scarring may reduce sight permanently. Early detection, antibiotics like amoxicillin or doxycycline , community control measures, and eyelid surgery can prevent much of this damage.

Symptoms

Early or active trachoma is most common in children. It may cause mild symptoms or no noticeable symptoms at all.

Possible symptoms include:

With repeated infections, scarring can develop slowly. Later symptoms may include eyelashes touching the eye, pain when blinking, persistent watering, blurred vision, or a feeling that something is trapped in the eye.

The changes often affect both eyes, although one may be worse. Children may continue playing and attending school despite active infection, which can make the condition difficult to notice without an eyelid examination.

Other common eye conditions can cause similar symptoms. Redness or discharge does not necessarily mean you have trachoma.

- Red or irritated eyes
- Watery eyes or a sticky discharge
- Swollen eyelids
- Itching or a gritty feeling
- Sensitivity to bright light

Causes and risk factors

Trachoma is caused by strains of Chlamydia trachomatis that infect the eyes. These are different from the strains most often linked to sexually transmitted chlamydia.

The bacteria spread through contact with eye or nose secretions from an infected person. This may happen through hands, shared towels or cloths, bedding, or flies that have contacted these secretions.

Repeated transmission is more likely where people have limited access to water for washing, inadequate sanitation, crowded living conditions, or difficulty reaching health services. Flies

that breed around exposed human waste can also help carry infected secretions between people.

Young children often carry active infection. People who regularly care for children may have greater exposure over time. Women in affected communities may therefore face a higher risk of the later scarring complications.

Trachoma is not inherited. It is also not caused by reading, screen use, poor eyesight, or ordinary dust exposure. Dust and smoke may irritate the eyes, but they do not create the bacterial infection.

Diagnosis

A trained health professional can usually diagnose trachoma by examining the eyes and eyelids. The upper eyelid may be gently turned outward so its inner surface can be checked.

During the examination, they look for characteristic changes such as small pale swellings called follicles, marked inflammation, eyelid scarring, inward-turning lashes, or clouding of the cornea.

In some situations, a swab may be taken from the inside of the eyelid. A laboratory test, usually a nucleic acid amplification test such as PCR, can look for genetic material from Chlamydia trachomatis . Testing can show a current infection, but it does not measure how much permanent scarring has already occurred.

Laboratory testing is not always needed. Community trachoma programs often use standard clinical examinations to assess individuals and decide whether wider treatment is needed.

A vision test and a detailed corneal examination may be performed if eyelashes are rubbing the eye or sight has changed.

Treatment and management

Treatment depends on whether there is an active infection, eyelid scarring, or damage to the cornea.

Antibiotics can clear a current bacterial infection. Oral azithromycin is widely used in trachoma programs, while tetracycline eye ointment may be used in some settings. The choice is based on local programs, medicine availability, and individual health factors. Antibiotics do not reverse established eyelid or corneal scarring.

In communities where trachoma remains common, public health programs may offer

antibiotics to everyone in an affected area. This is called mass drug administration. It aims to reduce infection across the whole community rather than treating only people with visible symptoms.

If the eyelid has turned inward and lashes are touching the eye, eyelid surgery can rotate the lid and move the lashes away from the cornea. Surgery is intended to protect the eye from further injury. Follow-up remains important because lashes can sometimes begin rubbing again.

Removing individual lashes, called epilation, may provide temporary relief when surgery is delayed, unavailable, or declined. The lashes grow back, so repeated checks are needed. Lubricating drops or ointments may reduce friction but do not correct the eyelid position.

Corneal scratches, ulcers, or other infections need separate assessment and treatment. Reduced vision may also require rehabilitation support, visual aids, or changes at home and work.

Complications

The main complications result from repeated inflammation and mechanical damage from eyelashes rubbing against the eye.

They include:

Corneal injury can become painful and may allow other bacteria to enter. Once a dense corneal scar has formed, antibiotics cannot restore the lost clarity. This is why treating active infection and correcting inward-turning lashes are important before advanced damage occurs.

- Permanent scarring inside the upper eyelid
- Inward turning of the eyelid, called entropion
- Eyelashes touching the eye, called trichiasis
- Corneal scratches or ulcers
- Corneal clouding and permanent sight loss
- Dryness, irritation, and repeated eye infections

Prevention

Trachoma can often be prevented at both household and community levels. There is no vaccine.

The World Health Organization uses the SAFE approach:

Regularly washing children's faces and hands can reduce infected secretions. Towels and face cloths should not be shared when someone has eye discharge.

Safe disposal of human waste helps limit fly breeding. Reliable access to water makes regular face and hand washing more practical. These measures work best when supported across a whole community.

If a public health program offers examination or community antibiotic treatment, taking part can help reduce reinfection. Antibiotics alone may not stop trachoma from returning if transmission continues.

- Surgery for eyelashes that are rubbing the eye
- Antibiotics to treat infection and reduce community transmission
- Facial cleanliness to remove eye and nose secretions
- Environmental improvement , including better access to water and sanitation

Living with it and what to expect

An active infection may improve after antibiotic treatment, but another infection is possible if the bacteria continue circulating in the community. Household and community prevention measures remain important after treatment.

Eyelid scarring develops gradually and usually does not disappear when the infection clears. Mild scarring may remain stable, while repeated inflammation can make it worse. Regular eye checks can find lashes touching the cornea before major damage occurs.

After eyelid surgery, many people have better comfort and protection from further scratching. The eyelid or lashes can sometimes turn inward again, so follow-up is needed even when the eye feels better.

If the cornea is already scarred, vision may not fully return. The amount of sight affected depends on the position and depth of the scar. Low-vision services, brighter lighting, magnifying devices, and practical changes at school or work may help.

Trachoma does not usually spread throughout the body. It does not shorten life directly, and many people remain active and independent. The main long-term concern is protecting sight by preventing reinfection and stopping lashes from rubbing the eye.

When to get medical help

Arrange a routine eye assessment if you or your child has persistent redness, discharge, swollen eyelids, or repeated eye irritation, especially after living in or travelling to an area where trachoma occurs.

You should also arrange an assessment if:

Seek urgent, same-day medical care for severe eye pain, marked sensitivity to light, a new white or cloudy spot on the cornea, or a rapid change in vision. These signs may indicate corneal injury or infection.

Sudden major vision loss or a serious eye injury requires emergency care. Do not wait for a routine appointment.

- Eyelashes appear to touch the eye
- An eyelid is turning inward
- Blinking causes scratching or pain
- Vision is slowly becoming blurred
- Someone in your household has been diagnosed with trachoma

Common questions

Is trachoma contagious?

Yes. The bacteria can spread through contact with eye or nose secretions, including on hands, towels, bedding, and flies. It spreads most easily where children have frequent close contact and face washing or sanitation is limited.

Can trachoma be cured completely?

A current infection can usually be cleared with antibiotics. However, antibiotics cannot remove established eyelid or corneal scars. Surgery can reposition an inward-turning eyelid, but follow-up is needed because the problem can return.

Is trachoma the same as sexually transmitted chlamydia?

No. Both are caused by Chlamydia trachomatis , but trachoma is linked to different strains that mainly infect the eyes. It spreads through contact with infected eye and nose secretions, not primarily through sexual contact.

Can I get trachoma from flies?

Flies can carry infected secretions from one person's face to another. They are one part of transmission in affected communities. Better sanitation, waste disposal, face washing, and infection treatment help reduce this risk.

Does trachoma always cause blindness?

No. Many infections are mild, and a single episode usually does not cause blindness. Sight loss is mainly linked to repeated infections, eyelid scarring, and years of eyelashes rubbing against the cornea.

Can trachoma come back after treatment?

Yes. Antibiotics treat the current infection but do not provide lasting immunity. Reinfection can occur if the bacteria are still spreading in the household or community.

Sources

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