

# Herpes Simplex Eye Infection



## **Herpes simplex infections**

There are two types of herpes simplex virus:

- Type 1 is the usual cause of cold sores around the mouth and herpes simplex infection in the eye.
- Type 2 is the usual cause of genital herpes. It rarely causes cold sores or eye infections.

### **Type 1 herpes simplex infections**

The first time you are infected is called the primary infection. Many people become infected with this virus, often during childhood. The herpes simplex virus can pass through the moist skin that lines the mouth. It is commonly passed on by close contact such as kisses from a family member who has a cold sore. In many people the primary infection does not cause any symptoms, although in some cases flu-like symptoms do occur. Following the primary infection, the virus stays with you for life. It stays inactive (dormant) in the root of a nerve in the face (the trigeminal nerve).

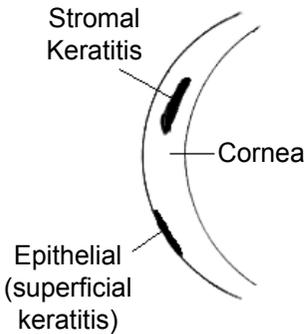
- In many people, the virus remains permanently inactive and causes no problems.
- In some people, the virus 'reactivates' and multiplies from time to time. Virus particles then travel down the nerve and can cause episodes of active infection with symptoms.

- In most of these cases, the virus travels down a branch of the nerve to the mouth to cause cold sores.
- In some of these cases, the virus travels down a branch of the nerve to the eye to cause episodes of active eye infection.

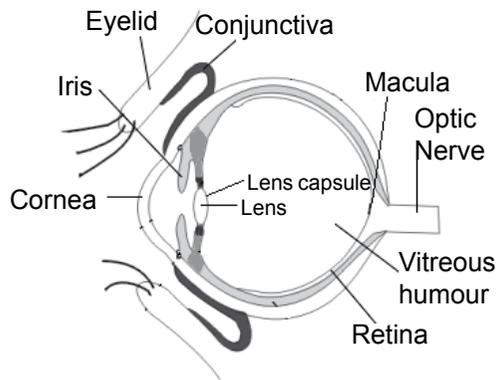
The rest of this leaflet is about herpes simplex infection of the eye.

The cornea is commonly affected. The cornea is the transparent 'window' of the eye. Infection of the cornea is called herpes simplex keratitis.

### Detail of cornea showing patches of inflammation



### Side view of eye



In most cases the infection is just in the top layer of the cornea. This is called epithelial keratitis. Less commonly the deeper layers of the cornea are involved. This is called stromal keratitis. This is more serious as it is more likely to cause scarring of the cornea.

Other parts of the eye are sometimes affected. A minor and temporary inflammation of the conjunctiva (conjunctivitis) or eyelids (blepharitis) may occur with active infection. Deeper structures such as the retina or iris can sometimes be affected.

### **Who gets herpes simplex infections of the eye?**

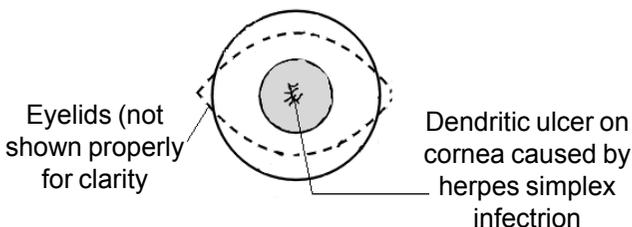
About 1-2 people in 1000 will develop at least one episode of active herpes simplex eye infection at some stage in their life. The most common age for the first episode is between 30-40 years old.

### **What are the symptoms and signs of active infection?**

Most episodes of active infection are due to a re-activation of the virus at some point often years after a primary infection. Symptoms include:

- Redness of the eye - mainly around the cornea.
- Ache or pain in the eye.
- Photophobia (discomfort when opening the eyes in bright light).
- Watering of the eye.
- Blurring of vision.

### **Eye from the front**



An eye specialist will usually examine the eye with a slit lamp magnifier. They may also put some stain on the front of the eye to show up any irregular areas on the cornea. This is to confirm the diagnosis and to determine if the infection is in the top layer of the cornea or if the deeper layers are involved.

With a herpes simplex infection they will often see a small ulcer (erosion) on the cornea.

The typical ulcer which develops is called a 'dendritic' ulcer. Dendritic means 'many fingered'. The ulcer is not round with a smooth edge but like a tree with many finger-like branches.

## **What is the treatment for herpes simplex eye infection?**

### **If the top layer is affected**

Treatment is with antiviral eye ointment (such as aciclovir ointment). This does not kill the virus but stops it from multiplying further until the infection clears. You should take the full course exactly as prescribed. This is usually several times a day for up to two weeks, sometimes more. The aim is to prevent permanent damage to the cornea. In some cases, a specialist may also gently scrape the affected part of the cornea to remove affected cells. This is not painful.

### **If the deeper layer of the cornea is affected**

Treatment is similar to the above but in addition to the antiviral eye ointment or drops your specialist may add

some steroid eye drops if appropriate. This helps to reduce inflammation. Note: steroid eye drops must only be used under close supervision of an eye specialist who will prescribe the correct strength and dose in conjunction with antiviral treatment. Antiviral tablets are used in some cases.

### **Preventing recurring infections**

Some people develop recurring episodes of active infection. As mentioned above, these occur if the virus 'reactivates' from time to time - similar to cold sores. At least half of the people who have one episode of active infection will have a recurrence within 10 years of the first. In about 1 in 10 cases, the recurrence is within a year. Recurrences occur more often in some people than others.

If the recurrences are frequent (say, once a year or more) or severe, then your eye specialist may advise that you take antiviral tablets each day to prevent episodes of active infection. Studies have shown that, on average, the number of recurrences is roughly halved in the people who take regular antiviral tablets.

Some people say that episodes of active herpes infection may be triggered by strong sunlight. Therefore wearing sunglasses may also help to prevent recurrences.

If a recurrence does occur, each episode is treated as described above.

### **What is the outlook (prognosis)?**

The main concern with corneal infection (keratitis) is that it can cause scarring. With scarring the normally clear and transparent cornea becomes like 'frosted glass'. This can affect vision.

- Epithelial keratitis tends to settle and go away in 1-2 weeks. It has a good outlook and often causes little or no scarring.
- Stromal keratitis is more likely to result in corneal scarring and loss of vision.
- Recurring episodes of active infection can make an existing scarring worse.
- Prompt treatment with antiviral eye ointment helps to minimise damage during each episode of active infection.

Overall, about 9 in 10 of 'affected eyes' maintain good vision (good enough to drive). However, severe and recurrent infections may lead to serious scarring and blindness. If blindness develops, a corneal transplant is then the only option to restore vision.

This leaflet has been reviewed by the Readers' Panel  
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This leaflet is available in audio, Braille and other languages. To request a copy, please contact the Eye Care Centre.

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