Most people do not experience any HIV-related problems affecting their sight. Taking **HIV treatment** will prevent the severe damage to the immune system that can lead to sight problems.

However, about 70% of people with HIV who have very weak immune systems develop serious eye diseases. These may lead to blindness if not treated promptly.

The most common of these conditions is HIV retinopathy. This is a condition where the retina is damaged, probably because uncontrolled HIV is damaging the blood vessels in the eye. It can eventually lead to blindness, but can be treated in the early stages. Having **diabetes** is another risk factor for retinopathy, a condition that is more common in people living with HIV, especially as they age.

Uveitis is the inflammation of an inner layer of the eye. The most common cause is a weakened immune system. It can be caused by toxoplasmosis (a parasite infection) or by the antibiotic rifabutin (used to treat other opportunistic infections), especially if you are taking other drugs that boost rifabutin levels. Like retinopathy, the sooner uveitis is treated, the less damage it will do.

The most serious eye disease is caused by cytomegalovirus (CMV). If your **CD4 count** is or has been below 50, CMV may cause retinitis – damage to the light-sensitive lining of the eye called the retina.

Other infections that can affect the eye include varicella zoster virus (VZV), **herpes simplex virus (HSV)**, toxoplasmosis and a number of **sexually transmitted infections**, including syphilis, gonorrhoea, chlamydia and candidiasis.
Symptoms of eye diseases

HIV retinopathy causes ‘cotton wool’ spots and broken blood vessels in the eye.

Uveitis causes:

- redness
- a dull pain in the eye, particularly when focusing
- sensitivity to light
- new ‘floaters’ (tiny black specks that move around in your line of sight)
- blurred vision or loss of peripheral vision (being unable to see at the sides of your field of vision).

Early symptoms of CMV retinitis can include:

- blurred vision
- new ‘floaters’
- a blind spot
- flashes of bright light.

If your CD4 count is or has been low you should take any of these symptoms seriously and consult your doctor, as the earlier CMV is treated, the less damage it is likely to do. If your CD4 count is higher, the problem is very unlikely to be CMV, but you should still tell your doctor about your symptoms. CMV can also cause a detached retina, which needs to be treated with surgery.

The central part of the retina where images are focused is known as the macula. It may only take a small area of damage to this central area to cause a substantial loss of sight. Damage to the retina outside the macula may cause no loss of sight or only the loss of some sight out of the corner of your eyes, but it will usually spread if left untreated.

“Sight problems can affect anyone, whether or not they have HIV.”

Treatment

The best way to prevent serious eye problems is to take HIV treatment to boost your immune system. In the UK, it is now recommended that people start HIV treatment as soon as they are diagnosed with HIV, whatever their CD4 cell count. However, some people only find out that they have HIV when they have a very low CD4 cell count. In these circumstances, HIV treatment can still increase CD4 cell count, protect against infections and lead to a longer and healthier life.
Sight loss due to CMV can't be corrected by glasses because the retina is permanently scarred. The aim of anti-CMV treatment is to try to prevent the damage to the retina from getting any worse. Drugs such as ganciclovir, foscarnet and cidofovir can slow down or prevent the CMV lesions from spreading. The drugs can be taken in a number of different ways, including tablets, intravenous infusions, injections into the eye and eye implants.

After CMV retinitis has been stabilised, maintenance therapy using lower doses of the same drugs or oral ganciclovir capsules has to be continued indefinitely to stop it reactivating. If you have experienced sight loss your clinic can refer you to social services that can help you adjust.

If you have a very low CD4 count or a blood test finds signs of CMV infection, you may be offered anti-CMV drugs to try to prevent CMV retinitis from developing.

If the sight problems are caused by a different infection, the appropriate treatment will be used, such as anti-viral drugs for varicella zoster virus, or antibiotics for toxoplasmosis. Uveitis is treated by stopping or reducing the dose of rifabutin, if that is the cause. The symptoms may be helped with anti-inflammatory treatments such as steroids.

**Looking after your eyes**

Sight problems can affect anyone, whether or not they have HIV. Common problems include short- and long-sightedness. It's a good idea to go for regular eye tests so that any problems can be identified early.

Many of the lifestyle changes that keep you generally healthy will help maintain the health of your eyes. Exercise, a healthy diet, and not smoking or drinking too much alcohol will all help, as will protecting your eyes from direct sunlight.

**Checks and examinations**

You can check your own eyesight for any distorted, blurred or obscured areas while reading a page of a newspaper. Eyesight can change temporarily after illness because of changes in the lens of the eye. It is recommended that all adults, whatever their HIV status, have their eyes checked at least every two years. It may be recommended you go more often, especially once you are over 40, if you have certain health conditions, or are from certain ethnic groups.

Cataracts – cloudy or blurred patches on the lens of the eye – are common in older people. There is some evidence that people with HIV are more likely to need surgery for the removal of cataracts than others. Having a regular eye test as you get older will allow cataracts to be spotted early. You can then be referred to an eye specialist to determine what treatment might be needed.

Eye examinations are usually done by optometrists, trained professionals in eye health.
They will ask detailed questions about your eyesight, lifestyle, health and any previous eye problems you or family members may have had. You should bring a list of any medication you take, along with your glasses if you use them, or a previous prescription for glasses. Then they will test what you can see, using a chart of symbols or letters.

**Your usual optometrist can examine the back of your eye, although you may need to visit a specialist if problems are found.**

They will also examine the health of your eyes, inside and out. You may be given eye drops to dilate the pupil of the eye, making it easier for the optometrist to see the interior. They may check the pressure in your eye and test your peripheral vision. They can give advice on eye health, and refer you for more specialist treatment if necessary.

### Find out more

- **GP**s and primary care Simple factsheet
- Diagnosed with HIV at a low CD4 count Simple factsheet
- Mouth problems Simple factsheet