



# Uveitis and Ankylosing Spondylitis

(Axial Spondyloarthritis) (AS)

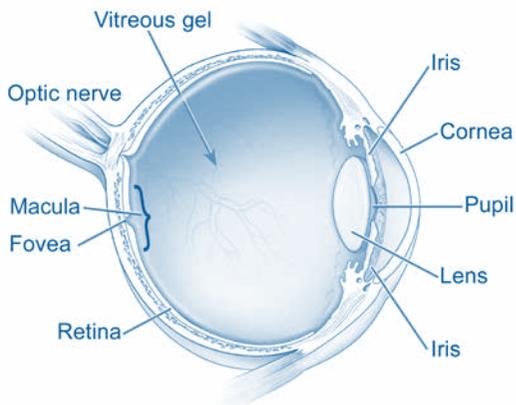
## What is uveitis?

The terms anterior uveitis, iritis and iridocyclitis all mean the same thing: inflammation in the front part of the eye, between the cornea (the clear window at the front of the eye) and the lens.

Iritis is an older term for anterior uveitis but is still in frequent use. It can specifically refer to inflammation of the iris (the coloured part of the eye).

Iridocyclitis refers to inflammation of both the iris and the ciliary body (the ring of muscle behind the iris).

## Anatomy of the eye



Source: National Eye Institute

## What are the symptoms of uveitis?

The common symptoms of acute anterior uveitis are pain in the eye and sensitivity to light (photophobia). The eye is usually red and sore. Vision may become blurred but is not usually seriously affected.

## How common is uveitis in ankylosing spondylitis (AS)?

About 30-40% of people with AS will develop uveitis. It usually comes on suddenly and is likely to recur. Repeated attacks can occur over a period of several years and can be in the same eye, the other eye or even in both eyes.

Each single attack usually lasts a few weeks, and should last no more than 3 months. The inflammation can range from mild to severe and each attack may be different, even in the same person.

Acute anterior uveitis is the most common type of uveitis.

## What should I do if I have symptoms of uveitis?

If you think you have symptoms you should see an eye doctor (ophthalmologist) as soon as possible, ideally within 24 hours, to confirm this and start you on treatment. This is because early treatment reduces the risk of long-term damage to the eye which can affect your vision.

Untreated inflammation damages the lens by causing the iris to stick to it. The inflammation can also cause cataract (a clouding of the lens of your eye leading to blurred vision) and raised pressure in the eye, which can lead to glaucoma (where the nerve in the eye is damaged by the raised pressure eventually resulting in the loss of vision if left untreated).

Some patients who experience recurrent

episodes of uveitis know the symptoms of an episode and can self-medicate before seeing a doctor. However, it is still recommended that you consult an eye doctor as soon as possible. Some of the treatments themselves can lead to complications (such as raised eye pressure) and should be supervised by an eye doctor.

### **Who diagnoses uveitis and how do they treat it?**

Only an eye doctor (ophthalmologist) should make the diagnosis. This can usually be done by asking your GP to make an urgent referral to the local ophthalmology team or you can go to your local hospital A&E department who will contact the ophthalmologist to arrange an urgent review.

Treatment usually consists of a combination of eye drops. Steroid eye drops such as dexamethasone (e.g. Maxidex) and prednisolone (e.g. Pred Forte) reduce the inflammation. 'Dilating drops' (drops that dilate the pupil) reduce the risk of the iris sticking to the lens and break any attachments that have already formed.

In some patients, the inflammation causes the eye pressure to increase, and pressure-lowering drops may be needed until the inflammation is controlled. Raised pressure can also be a side-effect of steroid drops, which also requires similar treatment.

It is important to realise that the steroid drops do not cure the inflammation:

they simply damp it down until your own body and immune system switches off the attack. They do, however, reduce the risk of damage to the eye in the meantime. Thus even if your eye feels back to normal it is very important to complete your course of drops. If you stop too soon an attack can flare up again immediately.

If the inflammation is intense steroid injections can be used around the eye to help. A small number of people will need a short course of steroid tablets or injections if the inflammation is not confined to the front of the eye, as steroid drops do not penetrate through to the back of the eye.

### **Is there anything I can do to help myself?**

- The most important advice is to see an ophthalmologist urgently (within 24 hours) to make the diagnosis and start treatment without delay
- Follow the instructions from your doctor about taking the medicine carefully
- Return for follow-up checks as arranged
- Return to the hospital quickly if your symptoms return, if you notice any further deterioration in vision or if other symptoms such as pain or redness develop
- If you are sensitive to light, dark glasses will help



- Anti-inflammatory type painkillers are useful, e.g. aspirin and ibuprofen, but always read the instructions carefully before taking any medication

### **Why do people with ankylosing spondylitis get uveitis?**

Genes contain the genetic code that enables the body to build proteins, cells, tissues and organs. Genes also control the development of the immune system and determine how the body deals with outside attack from agents such as bacteria and viruses. Possessing one such gene (called HLA B27) is very strongly linked to developing ankylosing spondylitis and anterior uveitis. However, this is not the only gene involved as only 5-7 in 100 people with the HLA B27 gene develop ankylosing spondylitis.

There are probably a large number of genes which interact with each other and the environment to bring about inflammation in the joints and eye. Further work to identify these genes will greatly help our ability to understand and treat these conditions.

### **Doesn't uveitis typically occur in one eye? Why are both of my eyes affected?**

About 40% of patients with AS get at least one episode of acute anterior uveitis and risk is increased in patients who have significant changes of the cervical spine in the neck.

About 25% of those patients go on to develop recurrent attacks, which can alternate between the eyes. In a small

percentage of people this can become a serious eye health problem.

### **Are attacks of uveitis always short-lived?**

When an attack of anterior uveitis lasts for longer than 3 months it is regarded as chronic uveitis. In most people this takes the form of chronic anterior uveitis and treatment of this may need long-term use of steroid drops or treatment with steroid tablets or other immunosuppressive medication to suppress the immune system safely for a longer period of time.

### **What are the possible complications of uveitis?**

One of the most common causes of reduced vision is cataract, in which the lens of the eye becomes progressively cloudy. This can occur as a result of uncontrolled inflammation, recurrent inflammation and with the use of any form of steroid medication. However the risk of developing cataracts as a result of using steroid drops is small, especially when compared with the benefit in controlling the inflammation.

Cataracts often cause glare and reduced vision. They can be removed in a relatively straight-forward operation in which the cloudy lens is replaced with a clear plastic one. However, we only suggest doing this when the cataract is causing significant symptoms, such as glare with oncoming headlights or difficulty working, since there are small risks associated with any operation.

Raised intraocular (eye) pressure can lead to glaucoma and reduced vision. Glaucoma is an eye condition where there is loss of vision due to damage of the optic nerve. The optic nerve carries the sight signals from the eye to the brain and any damage to the nerve may result in damage to sight. Ophthalmologists therefore monitor your eye pressure to ensure it stays within an acceptable range and also examine the nerve at the back of the eye for signs of damage. They may also ask you to do a visual field test (which plots how sensitive the different areas in your vision are) to see whether your vision is being affected by high pressure. People in whom the eye pressure is not well controlled with drops may require surgery to help bring down the eye pressure.

Any patient with uveitis can get 'waterlogging' of the retina at the back of the eye, which is known as macular oedema. The macula is the central part of the retina and is required for crisp vision. The retina is like the film in a camera, and waterlogging with fluid distorts the image that you see. Nowadays, ophthalmologists can easily detect macular oedema with special equipment called OCT (optical coherence tomography) which doesn't cause any discomfort to the eye. The image from the OCT works rather like taking a slice out of a cake and looking through the different layers in the cake - the cake is thicker in areas where there is fluid.

Sometimes macular oedema resolves as the uveitis attack is treated with drops, but it may require additional treatment with steroid injections or tablets.

### **Does anti TNF therapy make uveitis worse or better?**

Some of you may be taking an anti TNF for your AS. The clinical trials suggest use of anti TNF:

- reduces the frequency of attacks of uveitis in those that are prone to recurrent attacks
- reduces the likelihood of getting an attack if you have never had one before

This protective effect seems to last as long as you are taking the anti TNF but there is no evidence that it cures the attacks forever.

## What do these words mean?

**Acute:** Refers to a short term illness which often comes on suddenly and is different from a chronic illness which lasts 3 months or more.

**Anterior uveitis:** Inflammation in the front part of the eye, between the cornea (the clear window at the front of the eye) and the lens.

**Cataract:** Inside the eye, behind the iris (the coloured part of the eye) is a lens. In the normal eye, the lens is clear and transparent, and helps to focus light rays on to the retina, the tissue at the back of the eye. When a cataract develops, the lens becomes cloudy and prevents the light rays passing into the retina. The picture that the retina receives becomes dull and fuzzy. Cataracts usually form slowly and people experience a gradual blurring of vision.

**Iridocyclitis:** Specifically refers to inflammation of both the iris and the ciliary body (the ring of muscle behind the iris).

**Iritis:** The older term for anterior uveitis which is still in frequent use. It can specifically refer to inflammation of the iris (the coloured part of the eye).

**Glaucoma:** Glaucoma is an eye condition in which there is progressive loss of the field of vision as a result of damage to the optic nerve which carries sight images from the eye to the brain. Usually, but not always, the damage occurs because the pressure within the eye is too high.

**Macular oedema:** Water logging of the most sensitive area of the retina used for central vision.

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