

# Staffordshire Eye Clinic

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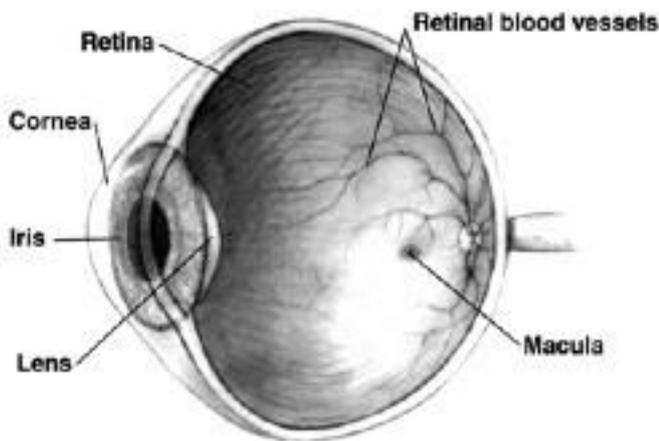
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## Diabetic eye disease – background information

Diabetes causes a high level of sugar in your blood. This damages the delicate blood vessels of your retina and can lead to two sight-threatening conditions:

- Damaged blood vessels can start to close, which leads to new blood vessels growing. This is called **proliferative retinopathy**.
- Damaged blood vessels can leak, causing **macular oedema**.

### What is proliferative retinopathy?



Because your retina's normal blood vessels have started to narrow, it becomes starved of nutrition. It will then send out signals that cause new blood vessels to branch off from the existing ones. These vessels grow on the surface of your retina, but they are fragile and can bleed (haemorrhage) into the vitreous body. This bleeding can cause scarring and eventually your retina may become detached. If it isn't treated, this proliferation can mean that you may go blind. One third of the patients who have this condition and don't have treatment will go blind in the affected eye within three years.

## **What is macular oedema?**

The macula is the part of your retina, which lets you see fine detail. You use it for reading, watching the television, driving and so on. In macular oedema, the fine blood vessels in the macula leak fluid that builds up within the retina and so damages your sight.

## **Who gets proliferative retinopathy and macular oedema?**

If you are diabetic you will probably develop some sort of eye problem, though you may not develop the more serious conditions like proliferative retinopathy or macular oedema. We expect to see early evidence of changes in the eyes after 15 years of diabetes in 95% of patients with insulin-dependent (type 1) diabetes. Changes can already be present at the time of diagnosis in those who develop diabetes (type 2) in later life. Hereditary (genetic) factors also seem to be important in deciding who develops the more severe kinds of eye disease.

Developing proliferative retinopathy and macular oedema depends on how long you have had diabetes. It also depends on how long you have had diabetes. It also depends on other important factors including smoking, blood pressure and high cholesterol. If you can control your diabetes and high blood pressure, this can slow down the progression of these two eye diseases.

Diabetic eye changes in children don't often develop before they reach puberty.

## **How will I know if I have diabetic eye disease?**

Unfortunately, diabetic eye changes can progress to a serious stage without affecting your sight, so you may not realise that you have a problem. If the blood vessels on your retina bleed into the vitreous body, you may notice lots of 'cobwebs' or 'floaters' interfering with your sight. If this interference is severe, your vision will be very blurred. Macular oedema causes gradual blurring of your vision. All these effects are painless.

## **What can I do to protect my vision?**

Because you can have sight-threatening eye changes that have not yet affected your vision, it is vital to have your eyes examined at least once a year by an ophthalmologist or a trained optician. If you can control your

diabetes and blood pressure well, it will help your sight. If you develop retinopathy or maculopathy, you will need to have your eyes examined more often by an ophthalmologist.

All people with diabetes should have their eyes checked at least once a year, including children after puberty.

### ***Can you treat my diabetic eye disease?***

The first changes in your eye (known as 'background retinopathy') do not need to be treated.

But, if you develop proliferative retinopathy or macular oedema, laser treatment or injection treatment can help to save your sight. If your eye disease is detected early enough, any changes that you or we have noticed will progress fairly slowly.

The treatment aims to:

- Reduce the risks of bleeding from new blood vessels on your retina
- Reduce the risk of your retina becoming detached from the back of the eye; and
- Clear macular oedema.

Laser treatment uses an intense beam of light that is directed in small spots onto your retina. This machine is almost the same as the one we use to examine your eyes at each clinic visit. There is another information sheet about laser treatment, so please ask for this if you want to know more.

Injection treatment with Lucentis or Avastin is sometimes helpful. There is another information sheet about injection treatment, so please ask for this if you want to know more.

Adapted from leaflet kindly supplied by Professor Simon Harding