

Treating a tear or hole in your retina by laser

Ophthalmology Department

Information for Patients

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What is a retinal tear?

The retina is the inner lining at the back of our eyes. It detects light to form the images that we see. Sometimes this layer can get a hole or tear in it.

What causes retinal tears?

In front of the retina we have a jelly/ gel like filling in the eye called the vitreous. The vitreous is usually firmly attached to the retina at a few specific places. The vitreous jelly can become watery and can pull away. This can cause a posterior vitreous detachment (PVD). This is a perfectly natural process and mainly occurs in people over the age of 50. However, it can happen at an earlier age, if

- you are short sighted,
- have had recent cataract or lens surgery,
- have some retinal conditions (such as retinal degenerations)
- or if your eye has been injured.

If a PVD occurs and the vitreous is firmly attached at other places on the retina, the other parts of the retina can get pulled. This may cause a retinal tear or hole to occur. It occurs in about 1 in 10 people who have a PVD.

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What are the signs and symptoms of a retinal tear?

Most people notice a sudden shower of floaters and/ or flashing lights in the vision. Floaters will appear as little black or grey speckles/ cobwebs in your vision. Flashing light in the vision occurs due to the retina being pulled.

How is it diagnosed?

Firstly your vision will be measured using an eye vision chart.

You will have eye drops placed into your eyes to widen (dilate) your pupil. This is very important so that we can check the back of the eye to look for a PVD and any retinal holes or tears.

Your eyes will be examined with a 'slit lamp', a type of microscope found in eye clinics. The light from the slit lamp will not damage your eyes. It seems very bright because your pupils are bigger. They will return to their normal size after about 6 hours or overnight. You should not drive until the effects of the drops have worn off.

How are retinal tears treated?

Retinal tears need laser treatment and this procedure is called a laser retinopexy. The laser treatment aims to prevent retinal detachment (see next section). It does not get rid of floaters.

The doctor will create a seal around the retinal tear by placing laser spots around it, which then forms scar tissue, acting like a barrier to prevent the retina from detaching. It usually takes about 14 days for the scar tissue to completely develop. Or, some people may be offered freezing treatment (cryotherapy), but this is less common and usually in those people where laser treatment may not be possible.

What will happen if a retinal tear is not treated?

The main risk is that a detached retina occurs. This is where the retina pulls away from the back of the eye. This can happen because the vitreous jelly can get under the retina through the tear and push the retina away from the lining of the eye.

Although everyone and every tear is different, studies have shown that about half the people will have a retinal detachment if a retinal tear is not treated. In people who have laser treatment, this risk is reduced to less than 1 in 20 people.

How is the laser treatment done?

This is a fairly simple procedure and lasts about 20 minutes.

You will be awake and asked to sit in a chair at an instrument (slit lamp) similar to how the eye doctors examine your eyes. Anaesthetic eye drops will then be put in your eye and the doctor will place a special magnifying contact lens in front of your eye to ensure that your eye will be held open during the procedure.

You will be asked to look in a particular direction during the procedure so the doctor can target the laser at the retinal tear.

Does the laser treatment hurt?

People who have had this treatment do describe sometimes feeling a “sharp” or “aching” pain. Although these sensations can be unpleasant, they are common and most people find them to be manageable. Afterwards, you may get a headache or your eye may feel a little sore for a few hours. You can take some painkillers, such as paracetamol, if needed.

What are the risks of retinal laser treatment?

Every procedure/ treatment can have possible complications, although extreme care is taken to reduce these risks. Problems that can occur are:

- pain and bruising of the eye which usually settles.
- bleeding inside the eye (vitreous haemorrhage). This normally clears by itself over time.
- some people need more laser treatment if the tear does not seal.
- blurred/distorted vision can occur if a crinkling of the film lining forms on the retina (epiretinal membrane). This is usually mild and does not need further treatment. In more severe cases where vision is significantly reduced, you may need a further operation to remove this film.
- there is a chance you might need further surgery if you have a retinal detachment or there is a lot of epiretinal membrane affecting your sight.

What should I look out for after the laser treatment?

After the treatment, your vision may be a little blurred and your eye may be more sensitive to light and glare. These should get better over the next few days. You should not drive on the day of the laser.

The retinal laser does not get rid of the symptoms of floaters and flashing lights. It is done to reduce the risk of you having a retinal detachment and further operations in the event of a detachment.

We will arrange an appointment to assess how the treatment has worked over the next few weeks.

You should look out for sudden worsening of floaters or flashing lights floaters in your vision with a black curtain or shadow coming across part of your vision.

These symptoms indicate a possible retinal detachment or a new retinal tear and you should urgently return to the Eye Casualty Department at Leicester Royal Infirmary.

Contact details

Eye Casualty Department: **0116 258 6273**

Monday to Friday - 8.30am to 4.30pm

Saturday, Sunday and Bank Holidays - 8.30am to 12.30pm

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