**Manchester Royal Eye Hospital at Altrincham**
**Vitreoretinal Services**

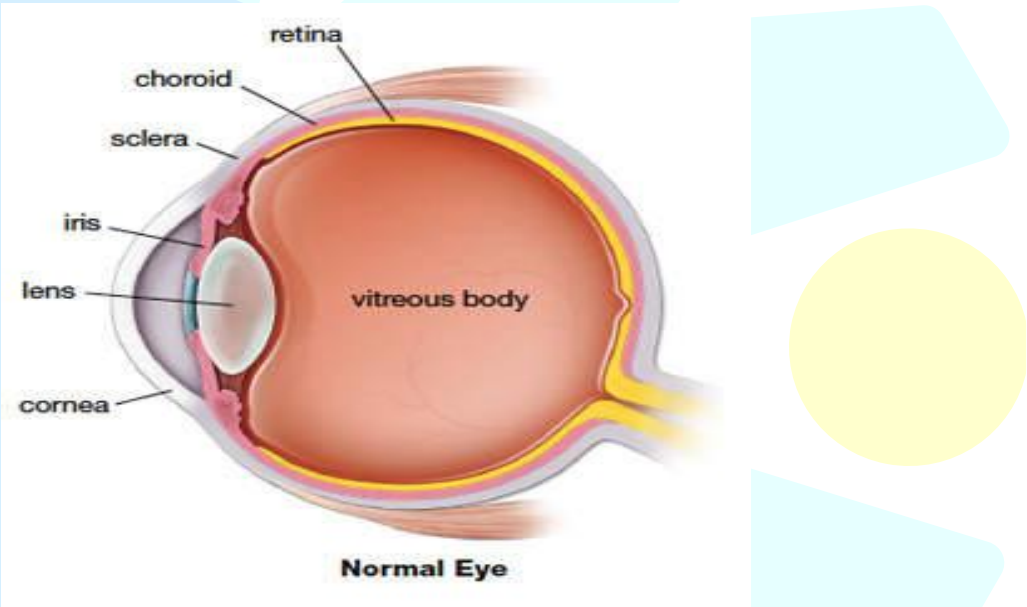
**Information for Patients**

# Retinal Detachment

Your eye doctor has told you that you have a retinal detachment. This leaflet will help you understand your condition and the treatment options. You might want to discuss this information with a relative or carer. If you have any questions, you could write them down to help you remember to ask one of the hospital staff at your next visit.

## What is the retina?

The retina is a light sensitive tissue that coats the inside of the eye. Light is focused onto a tiny area of the retina called the macula, which is responsible for our sharp, detailed, central vision and gives us much of our ability to see colours. The rest of the retina gives side vision (peripheral vision). The retina converts the light into electrical signals that travel along the optic nerve to your brain. In front of the retina the eye is filled with a clear substance called the vitreous.



Normal Eye

## What is a retinal detachment?

A retinal detachment is a separation of the retina from its attachment to the wall of the eye. Most retinal detachments are a result of a retinal break, hole, or tear. These retinal breaks can occur when the vitreous gel pulls on the retina. Once the retina has torn, liquid from the vitreous gel can then pass through the tear and build up behind the retina. The build-up of fluid behind the retina separates (detaches) the retina from the back of the eye. The retinal detachment can progress and involve the entire retina.

Another type of retinal detachment is called tractional detachment, which develops when scar tissue grows on the surface of the retina pulling the retinal layer off the back of the eye. Tractional detachment usually occurs in diabetic patients and does not require a hole in the retina to occur.

## What are retinal detachment symptoms?

The most common symptoms are floaters (often described as black spots), flashing lights, blurry vision and a shadow or veil moving across your vision. These symptoms are never painful. Surgical treatment can often preserve or reduce the damage to your eyesight. Without treatment this condition usually becomes in-operable resulting in blindness of the affected eye.

## Who gets retinal detachment?

Retinal detachment can occur at any age. Retinal detachments caused by tears in the retina affect approximately 1 in 10,000 people each year. The risk factors for developing retinal detachment are short sightedness (myopia), previous cataract surgery, eye injury, previous retinal detachment in your other eye, family history of retinal detachment or weak areas in your retina that have been noted by your ophthalmologist or optician.

## What is the treatment?

Sometimes retinal tears or holes can be treated with laser therapy or cryotherapy (freezing) to prevent their progression to a retinal detachment. However, once the retina has detached, a more complex operation will be required to repair it and put the detached retina back in place. There are three types of eye surgery that are done for retinal detachment: vitrectomy, scleral buckling and pneumatic retinopexy.

## Vitrectomy

In some cases, in order to repair the retinal detachment, it is necessary to surgically remove the vitreous gel. This operation is called a Vitrectomy and is the most common way retinal surgery is performed. This procedure normally takes between one and two and a half hours. Tiny openings are made through the white scleral wall of the eye to allow placement of instruments into the eye. The vitreous gel of the eye is removed and replaced with either gas or oil to refill the eye and reposition the retina. Laser or cryotherapy (freezing) is used to treat the holes or tears that have caused the retinal detachment.

If a gas bubble is used this will be absorbed and replaced by your eye's normal fluids over a few weeks. You **must not fly** whilst you have gas in your eye, as the reduced atmospheric pressure in the aircraft can cause the bubble to expand, leading to a dangerous rise in your eye pressure. If silicone oil is used this might need to be removed surgically some months later, as it does not get absorbed. A separate leaflet on the Vitrectomy procedure is also available which contains further information in more detail.

## Scleral buckling

A scleral buckle, which is made of solid silicone, or sponge, is sewn to the outer wall of the eye (the sclera). The buckle is like a tight belt around the eye, which compresses the eye so that the hole or tear in the retina is pushed against the outer scleral wall. The hole or tear is then sealed by cryotherapy (freezing) or laser. The buckle is usually left in place permanently. It is normally not visible because it is located halfway around the back of the eye and is covered by the conjunctiva (the skin covering the eyeball).

## Pneumatic retinopexy

A gas bubble is injected directly inside the vitreous cavity of the eye to push the detached retina against the back wall of the eye. The gas bubble initially expands and then disappears over two to six weeks. The hole or tear is sealed by cryotherapy (freezing) or laser.

## Will I have an anaesthetic?

Most retinal detachment operations are performed under local anaesthetic. This is when you are fully awake and local anaesthetic is given around your eye to numb your eye during surgery. Sometimes surgery is carried out under general anaesthetic. This is when you are asleep and completely unaware of the surgery. The decision on which type of surgery and anaesthesia is most appropriate for you will be discussed with you by the surgical team.

## What are the risks of surgery?

Complications are not very common and, in most cases, they are easily treated. Very rarely complications can lead to blindness. The overall benefits of retinal detachment surgery far outweigh the risks. Your surgeon will discuss the risks and benefits with you before you sign the consent to surgery form. The important risks are:

- **Failure of surgery**

A retinal detachment can be successfully treated with one operation in 80-90% of cases. Sometimes however, the retina does not re-attach after surgery, or it can detach once again later. In these cases, further surgery is required to try and re-attach the retina. We can eventually re-attach the retina in over 95 % of cases even if it takes more than one operation.

- **Formation of a cataract**

In those who have not had previous cataract surgery a cataract will very likely develop after a vitrectomy procedure and might also develop after pneumatic retinopexy procedure. There is much less chance of developing a cataract after scleral buckling. This usually happens at an earlier age than it would if you hadn't had surgery and you might require another operation to remove the cataract in the future if it causes problems. Occasionally it can become necessary to remove the cataract during the retinal detachment surgery.

- **High or low Pressure**

Raised pressure can occur in your eye. It is usually a temporary problem occurring in the first few days after surgery. In most cases this can be successfully treated with drops or tablets. A very small proportion of patients might need a surgical procedure to treat high pressure after retinal detachment repair. Low pressure may also occur in the eye after surgery. Depending on the cause of the low pressure, some patients may require surgery to treat it.

- **Infection and bleeding in the eye**

The risk of these occurring is very low, but they are serious if they occur as they can result in permanent severe visual loss.

- **Inflammation in the eye**

This is quite common and is normally treated with eye drops.

- **Problems after scleral buckling**

Scleral buckling is a very safe procedure. Very occasionally, the buckle has to be removed after the surgery if it causes problems. These include infection, double vision or if the buckle starts to come out from under the conjunctival covering and is exposed. Very rarely, double vision does not go away, even after the buckle is removed and this requires another operation to treat it

- **Sympathetic Ophthalmia**

Very rarely, after eye surgery, inflammation can develop in the other eye which can damage the vision. The chance of this happening is greater if you have multiple operations on the same eye, but it is still very rare.

- **Distortion of vision**

Some patients may develop distortion in their vision following surgery. This may or may not recover with time and further surgery may be required.

- **Retinal holes/tears**

New retinal tears or holes can sometimes happen during surgery. These can usually be treated by laser or cryotherapy during surgery.

- **Re-detachment**

The retina may still re-detach following initial success of surgery. If you suddenly develop any of the following symptoms, you must visit our Emergency Eye Department (EED) or local urgent eye centre urgently, as further treatment may be required:

1. Acute deterioration in vision
2. Significant increase in floaters
3. A shadow or dark curtain in the field of your vision
4. Loss of vision

## Do I need to stay in the hospital after my operation?

Surgery can be done as a day-case, so it is not necessary to stay in the hospital. However, you must not drive yourself home after the operation and you may wish to be accompanied by a friend or family member. A member of nursing staff will discuss this with you at your pre-assessment appointment.

## What to expect after your surgery

The most important factor determining your rate of recovery, and the final outcome, is the condition of your eye before surgery. Another important factor is your ability to comply with instructions/recommendations made following your surgery.

- Expect your vision to be blurred for several weeks after surgery.
- Expect your eye to be mildly gritty, sensitive, swollen and red due to the nature of your surgery.
- You will be prescribed a combination of eye drops to use when you are discharged home. These will help to prevent infection, reduce inflammation and rest your eye following surgery.
- If gas or oil has been inserted into your eye, you might be advised to posture your head in a certain position. This helps to ensure that the gas or oil is lying against the area of the retina that has been treated encouraging it to heal in the correct place. You will be given further information about this on discharge.
- You may feel mild discomfort and sore after surgery. You may take over-the-counter pain relief medication such as paracetamol and ibuprofen only when you require pain relief.
- You will be reviewed the next day where the doctor or nurse will examine you and discuss your progress.  Further appointments will normally be necessary.

## What will my vision be like after surgery?

Your vision will most likely be blurred for a few weeks following any retinal surgery.

If a gas bubble is used (during a vitrectomy). The gas bubble will gradually get absorbed, which will appear as a wobbly black ring in your line of vision. The bubble will move and gradually get smaller or break into smaller bubbles and eventually disappear. If an oil is used (during a vitrectomy), your vision will remain blurry whilst the oil is in your eye.

You may or may not notice a significant improvement in your vision after the operation, depending on the extent of the retinal detachment before surgery. The main aim of the operation is to prevent your vision from getting worse. Most people will notice an improvement, but it may take several months before this happens.

**Please remember that each patient is different, and the information contained in this leaflet is only a general guide.**

For more information and support please contact the Vitreoretinal Specialist Nurses on (0161) 701 4820 Monday – Friday 8.00am – 3:30pm.

If you require emergency attention, you can contact the Emergency Eye Department (EED) which is open from 8.00am to 8.00pm every day. Outside of these hours please contact Ward 55, open 24 hours every day. These departments can be contacted via the hospital switchboard on (0161) 276 1234 asking to be put through to the Emergency Eye Department or ward 55.