

Professor Timothy L Jackson

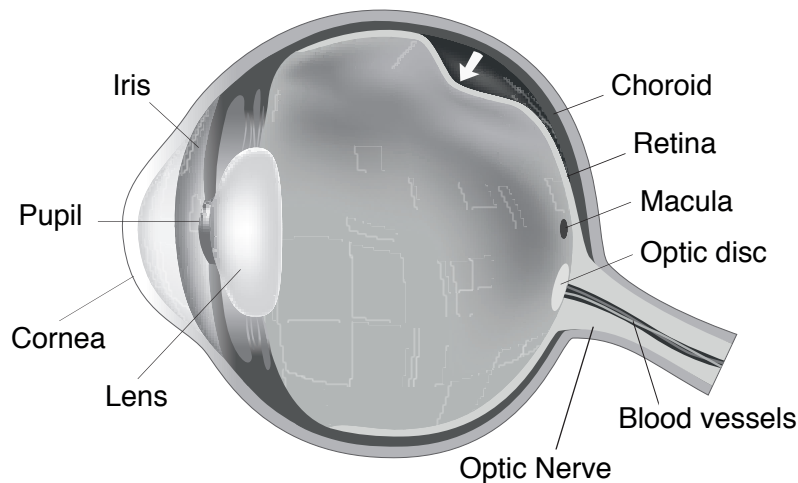
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Patient Information: Retinal Detachment

What is the retina?

The retina lines the inside of the back of the eye. It works a bit like the film in the back of a camera, absorbing light to form an image of the outside world. The most important part of the retina is the macula - this is the part of the retina that the light is focused on. The macula gives the central vision that is important for fine visual tasks such as reading and driving.



What is a retinal detachment?

A retinal detachment occurs when the retina peels away from the back of the eye. The detached retina does not see normally, producing an area of missing or reduced vision.

It is a serious eye emergency and without treatment it can cause blindness in the affected eye.

If you are diagnosed with a retinal detachment it is important that you see an eye doctor who specialises in retinal detachment surgery (a vitreoretinal surgeon) as soon as possible.

What causes retinal detachment?

Retinal detachment usually follows posterior vitreous detachment. Posterior vitreous detachment occurs when the vitreous gel that fills the cavity of the eye collapses in on itself, as part of the normal ageing process. Usually the collapsing vitreous pulls away from the retina uneventfully, but in a minority of people it pulls a break in the retina. Vitreous fluid then passes through the retina, allowing the retina to peel away from the back of the eye.

Most people develop a retinal detachment spontaneously, that is, it is not caused by anything they have done. It is more common in people who are shortsighted (myopic). Occasionally retinal detachment is caused by eye trauma or some rare eye diseases.

What are the symptoms of retinal detachment?

The key symptoms of retinal detachment are:

- Flashing lights in your vision
- Floaters in your vision
- Bits 'missing' from your vision
- A dark 'curtain' or 'veil' coming over your vision

As the retina detaches it causes an enlarging blind spot that may progress to involve the macula. When this occurs the central vision is much reduced (called a macular-off detachment).

Some small retinal detachments that have not affected the macula (macular-on detachments) may go unnoticed and be picked up during a routine eye examination by an optician.

Do I need surgery?

Most patients with retinal detachments are advised to undergo prompt surgery as retinal detachments seldom go away and, untreated, many progress to cause severe or total loss of vision in the affected eye.

Very occasionally, longstanding detachments are kept under regular review or walled off with laser to stop them spreading.

What does surgery involve?

Patients usually require one of two types of operation: either vitrectomy or less commonly, cryobuckle surgery. A third option, pneumatic retinopexy, is occasionally used.

Vitreotomy involves operating inside the eye using three very small openings made through the white of the eye. The clear gel (vitreous) that fills the cavity of the eye is removed. The vitreous is 99% water and the water component will reform over time. The retina is pushed back into position with a bubble of gas, or sometimes liquid silicone oil, and the hole is sealed with a laser or freezing probe (cryotherapy). The gas leaves the eye in the weeks after surgery. If silicone oil is used this is usually removed in a future operation. Vitrectomy is the treatment of choice for most patients.

Cryobuckle surgery involves putting a flexible silicone splint (called a 'buckle' or 'explant') onto the outside of the eye to push the outside layers of the eye back into contact with the detached retina. The buckle is not normally visible as it is hidden under the skin of the eye (conjunctiva), and the eyelids. The retinal break is then sealed with a laser or freezing probe (cryotherapy).

Pneumatic retinopexy involves cryotherapy and/or laser, plus a gas injection. It does not entail vitrectomy or silicone buckle. It is only suitable for a small minority of retinal detachments.

Surgery can be undertaken under a local anaesthetic (awake but with an injection to numb the eye), or general anaesthetic (asleep), and takes from about 30 minutes up to 2 hours, but typically about an hour.

Professor Jackson may also advise you to have laser or cryotherapy to any weak areas in the other, unaffected eye, to reduce the risk of retinal detachment.

What are the benefits of retinal detachment surgery?

This depends on the type of retinal detachment. If the macula is still attached (macular-on retinal detachment), the aim is to prevent severe, central, vision loss. If the macula has already become detached (macular-off retinal detachment) then surgery aims to improve vision, but it seldom improves back to normal.

What are the risks of retinal detachment surgery?

All eye operations carry the risk of further surgery and loss of vision, and this is also true of retinal detachment surgery.

The most common problem is that the retinal detachment persists, or recurs, and further surgery is required to re-attach the retina. This is not uncommon, with about 10% of patients requiring more than one operation to attach the retina. Even if you require more than one operation, the good news is that most retinas (more than 95%) can be attached.

Risks of vitrectomy:

Patients who require vitrectomy will usually go on to develop cataract (an opacity in the natural lens of the eye). Cataract surgery is usually required within a few years,

sometimes within a few months. If you have already had cataract surgery this will not apply. For further information on cataract is available in a separate information leaflet, on request.

Complications during surgery occur in about 5% of operations. The most common is probably further tears in the retina, but these can be treated as part of the operation and tend not to affect the outcome. However, some breaks can lead to a recurrent retinal detachment.

Severe sight-threatening complications such as haemorrhage or infection inside the eye are thankfully very rare (about 1 in 500 operations).

Eye pressure is often a bit high or low after surgery, but this is normal. Low pressure usually resolves without treatment within a few days. Likewise, high eye pressure usually resolves over time, but it may require some extra eye drops to control the pressure, typically for a few days or weeks.

Risks of cryobuckle:

Cryobuckle surgery tends not to cause cataract and does not usually utilise a gas bubble in the eye (although sometimes it does). Those who have cryobuckle surgery may get double vision, but this usually settles with time. The eye is often quite red and inflamed after cryobuckle surgery.

Occasionally, the buckle can compromise the blood supply to the front of the eye, leading to pain and loss of vision.

If the position of the buckle is not satisfactory further surgery may be required to reposition it.

The buckle will usually change your spectacle prescription, so you may need new spectacles.

Sometimes it is necessary to drain fluid from under the retina and this can be associated with haemorrhage inside the eye, or damage to the retina.

Sometimes the skin of the eye (conjunctiva) can become thinned overlying the silicone explant. If the explant becomes exposed then it may need to be removed via a relatively simple operation.

Sometimes, a buckle is combined with vitrectomy.

Risks of pneumatic retinopexy:

The risks of pneumatic retinopexy are similar to vitrectomy, although most risks are lower as it is a smaller operation. The main exception is high eye pressure, which is more common than with vitrectomy. The gas bubble can cause new retinal breaks that can in turn cause a further retinal detachment, even if the original retinal detachment has responded to treatment.

How do I prepare for surgery?

If you take medications to thin your blood such as warfarin, clopidogrel, aspirin or rivaroxaban please tell Professor Jackson in advance of surgery. Sometimes (though not usually) you may need to stop these medications, or reduce the dose, before your eye operation.

You should continue all other medications as normal, including on the day of surgery. If you take regular eye drops these should usually continue before and after surgery, including on the day of surgery, but please check with Professor Jackson. Avoid eye makeup on the day of surgery.

If you are having the operation under local anaesthetic you can eat and drink normally, however please avoid alcohol or heavy foods. If you are having a general anaesthetic *you need to stop eating and drinking 6 hours before surgery, with the exception of still water which you can drink until 2 hours before surgery.*

How long will I be in hospital?

Most operations occur in the early evening. The operation takes about an hour, but the whole process takes about 3-4 hours. Before surgery you will be checked-in by the nursing team, including some health checks such as blood pressure. They will instill about four sets of eye drops to dilate your pupils. After surgery the nursing team will give you time to recover, and ensure you are fit to go home.

Assuming your vision is sufficient in the unoperated eye, and you had a local anaesthetic, you can head home by yourself in a taxi, but ideally you should ask someone to collect you after surgery and escort you home. If you have had sedation or a general anaesthetic you will need someone to escort you home and you should have someone remain with you for 24 hours.

The operation does not require you to stay in hospital overnight although some patients elect to stay one night. Patients are typically seen a day or two after surgery, and then at about 1 week, and 1, 3 and 6 months after that.

What happens during surgery?

Professor Jackson will see you briefly before surgery. If you have any questions or concerns, please raise them. He will draw a small mark on your forehead above the eye that is undergoing surgery, to confirm the correct side.

If you are having a local anaesthetic, the anaesthetist, or sometimes Professor Jackson, will give you the local anaesthetic injection around your eye before surgery commences. This stings for a few seconds as the anaesthetic goes in, but thereafter your eye should be comfortable. Professor Jackson will usually warn you if anything uncomfortable is to be expected, as there are a few points in the operation when you may briefly feel some discomfort. If your eye is painful, let Professor Jackson know, as he can easily top-up the anaesthetic.

Professor Jackson will clean around your eye with iodine (if you have an iodine allergy let Professor Jackson know in advance of surgery). Don't worry if you can feel this, as the anaesthetic aims to numb the eye more than the skin around it. For surgery you will lie flat on your back with a sterile cloth draped over your face. It can feel a bit claustrophobic as the drape is initially placed over your face, but Professor Jackson will lift it off your face as much as possible. There will be oxygen pumped under the drape so even if it feels a bit stuffy, there will be plenty of air to breath.

As the eye is anaesthetised you do not need to worry keeping your eye still or blinking during surgery. However, you should try and keep you head and gaze still during the operation and try not to speak, unless you need to raise a concern. If you feel a cough or sneeze coming, let Professor Jackson know.

You will often feel water running down the side of your face and your hair may get wet during the operation. You will hear what is going on in theatre and Professor Jackson will speak to you at certain points in the operation. You may see light, but you will not see the instruments or the operation itself.

How do I care for my eye the morning after surgery?

You will have a plastic shield covering the eye, and a soft pad underneath that. You should remove both the morning after surgery. Discard the soft pad but keep the plastic shield and tape it onto the eye at night for a week, to avoid banging your eye in your sleep. Orient/position the shield as it was the night after surgery. After the first night you will not need anything covering the eye by day.

When you remove the pad and shield you may find that your eyelids are stuck together with dried bloody tears. This is normal, as are a few bloody tears escaping from under the eye pad (for this reason sleep on a pillow that you don't mind getting slightly stained with blood). If necessary, you can use some cooled boiled water and clean tissue or gauze to moisten the lids to help prise them gently apart.

You will be given eye drops to use in the operated eye for a few weeks. These will help the eye recover from surgery and reduce the risk of infection. These commence the morning after surgery, after removing the eye pad.

Most commonly, Professor Jackson prescribes Maxitrol eye drops four times daily for one week after surgery, then reducing to three times daily for one week, then twice daily for one week, then stop; and Cyclopentolate (also called Mydrilate) three times daily for 10 days.

What will my eye and vision be like immediately after surgery?

It is usual for the eye to be red after surgery. Some bruising of the skin around the eye is also common. Like all bruises, this will gradually change colour and fade over the next few days.

Your eyelid may be a bit droopy from the anaesthetic. Your eye may also be a little bit tender and gritty. If so you can take your usual pain-killers, such as paracetamol. If the pain does not settle or you have severe pain or ache inside the eye (rather than irritation on the surface of the eye) please call Professor Jackson.

Cryobuckle is often more uncomfortable than vitrectomy, so you may need more painkillers. NSAID painkillers can be particularly helpful, such as ibuprofen, assuming you can tolerate them. Take any NSAIDs with food and read to insert that comes with the tablets, as they should be avoided if you have asthma, stomach ulcers, and some other conditions.

Expect your vision to be very blurred the day after surgery, particularly if you had a gas bubble. Your vision will remain blurred until the gas bubble goes, in about 2-8 weeks. You should be able to vaguely see your hand moving in front of your eye, and be able to tell light vs dark (if you cannot please let Professor Jackson know immediately), but do not expect to see much more than this. You will see the bubble of gas moving in your eye. Most patients describe it as a very strange visual experience. As the gas bubble gets smaller the area you can see increases.

If you need a silicone bubble this remains in the eye until it is removed, with a subsequent operation. Silicone oil removal may be combined with cataract surgery, if cataract surgery is needed.

Cryobuckle surgery is often associated with some double vision. Usually this settles over a few days or weeks.

If you experience any of the following you should contact Professor Jackson without delay on 020 7060 1968 (NB. Out of office hours, the voice message will give an emergency mobile phone number for you to call):

- moderate to severe, or worsening pain
- increased redness or feelings of pressure in or around the eye
- deteriorating vision

If you cannot contact Professor Jackson for any reason you should attend a walk-in eye emergency clinic, such as Moorfields Eye Hospital or the Western Eye Hospital.

Can I resume normal activities after surgery?

Gas bubble and head positioning (posturing)

If you have a gas bubble or silicone oil bubble put into your eye you will usually be advised to keep your head in a particular position for a period of time after surgery, to float the bubble onto the correct part of the retina. For example, you might be advised to posture on your left side. Professor Jackson will advise you of the particular posture that is best for your detachment.

You should posture for 50 minutes out of every hour, by day, for one week, unless advised otherwise. You might like to alter the timings, for example, be face down for

twice the time (100 minutes) and take double the break (20 minutes). You may or may not need to posture overnight, accepting that posturing overnight is generally rather hit and miss, as we naturally alter our position in our sleep.

You may find it best to mix and match how you posture during the day, to vary the position of your body. For example, if you have been advised to posture face down, you might spend some time lying face down in a bed with your head in a pillow, and some time sitting in a chair with your head on your crossed arms resting on the top of a table. Some people sit on the sofa with their head in their lap (on a pillow) and a mirror by their feet, so that they can watch television.

For the time you are not posturing try and move around a bit, as keeping still for too long may risk you developing a clot in your legs (DVT).

Flying after surgery

It is very important that you *do not fly whilst you have a bubble of gas in your eye*, as it will expand at altitude and can seriously damage your eye. Likewise, avoid high altitude (such as mountain passes) until the gas leaves the eye. If you have a general anaesthetic you should inform the anaesthetist that you have gas in your eye, as it will alter the anaesthetic gases that they can use.

Other daily activities

Aside from when you are posturing, you can do most normal daily activities although you should avoid unhygienic environments and swimming for two weeks. If you want to swim thereafter, wear swimming goggles or keep your eye out of the water for a month after surgery. You can shower and bath as usual, but avoid water going into your eye for a month. Avoid very vigorous exercise and intense straining for two weeks, but gentle exercise is allowed. Look out for injury to the eye. Also be sure to take extra care when carrying out everyday tasks, such as using steps or pouring hot drinks, as you may find it difficult to judge distances until the vision recovers. Do not drive until you are told it is safe to do so.

Most people will need about two weeks off work after surgery. The amount of time off work will depend on the kind of work you do and the kind of surgery that is done. If you want to return to work sooner it is unlikely to harm your eye, but you may not feel well enough to work for a week or two.

Any further questions?

Retinal detachment is a serious diagnosis that often comes as a shock. It seldom arrives at a convenient moment. In addition, surgery is often performed relatively urgently, so you may feel there is not much time to consider the options. For these reasons it is important to ask any questions you might have, and feel free to contact our office on 020 7060 1968 for further information.

Disclaimer

Whilst every effort has been made to ensure that the information in this leaflet is accurate and up-to-date, we cannot guarantee its completeness or correctness. It is not designed as a substitute for professional healthcare advice from a doctor.