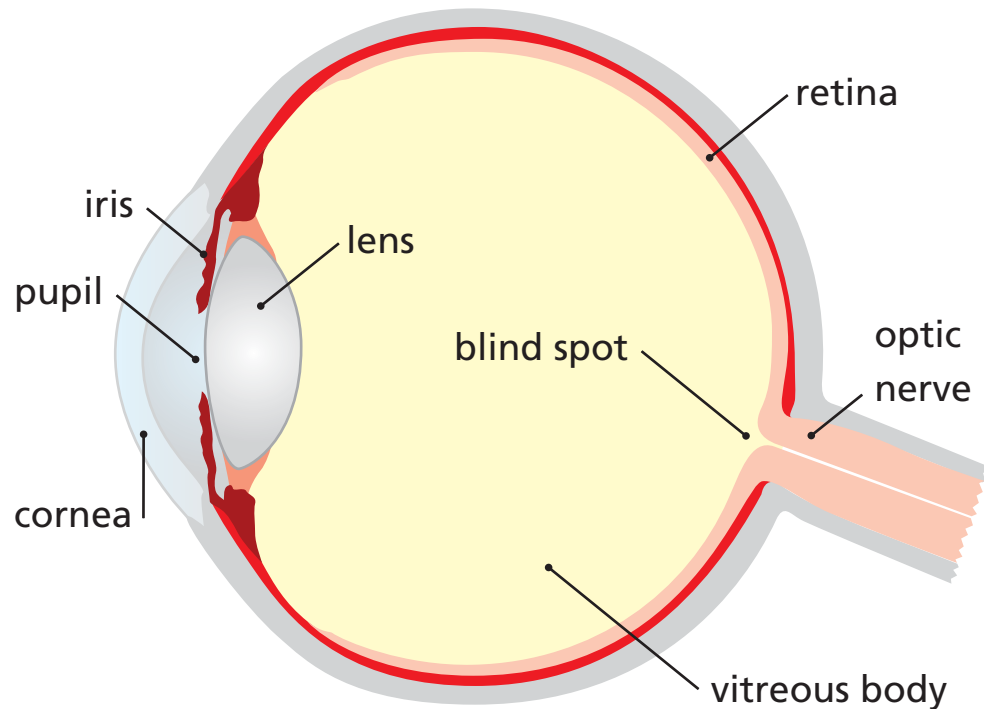




Retinal Detachment Surgery

Your eye specialist has advised you to have retinal detachment surgery. This leaflet gives you information that will help you decide what to do. You might want to discuss the information with a relative or carer. Before you have the operation, we will ask you to sign a consent form, so it is important that you understand the information in this leaflet before you agree to go ahead with surgery. If you have any questions, you may want to write them down so you will remember to ask one of the hospital staff.



Anatomy of the normal eye

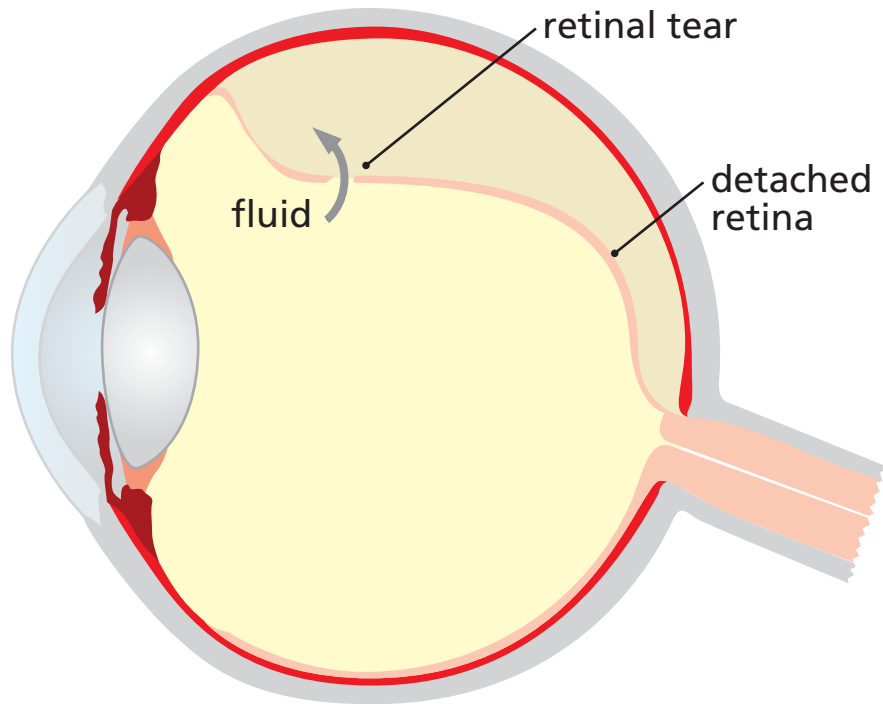
What is retinal detachment?

Your eye doctor has diagnosed a retinal detachment in your eye. Without treatment, this condition usually leads to blindness in the affected eye. The retina is a thin layer of nerve cells that lines the inside of the eye. It is sensitive to light (like the film in a camera) and you need it to be able to see properly. Your retina is detached because it has one or more holes in it and so is allowing fluid to pass underneath it. This fluid causes the retina to become separated from the supporting and nourishing tissues underneath it. Small blood vessels may also be bleeding into the vitreous (the jelly substance in the center of the eye), which may cause further clouding of your vision.

Most retinal detachments occur as a natural ageing process in the eye. It is unlikely that it would be caused by anything that you have done. Anyone can develop a retinal detachment at any time, but certain people are at higher risk than others. These include people who are short sighted, those who have had cataract surgery in the past, and those who have recently suffered a severe direct blow to the eye. Some types of retinal detachments can run in families, but these are rare.

Treatment of retinal detachment

The treatment involves surgery. During the operation, your eye doctor will seal the retinal holes and reattach your retina. An experienced eye surgeon will carry out the operation and may supervise a trainee doctor who may also perform part or all of the operation.



Retinal Detachment

The anaesthetic: Local

If you decide to have a local anaesthetic, you will be awake during the operation. You will not be able to see what is happening, but you may be aware of a bright light. Before the operation, we will give you eye drops to enlarge your pupil. (The pupil is the black circle at the front of your eye). After this, we will give you an anaesthetic to numb your eye. This involves injecting local anaesthetic solution into the area around your eye.

During the operation we will ask you to lie as flat as possible and keep your head still. The operation normally takes about an hour, but may sometimes take a little longer.

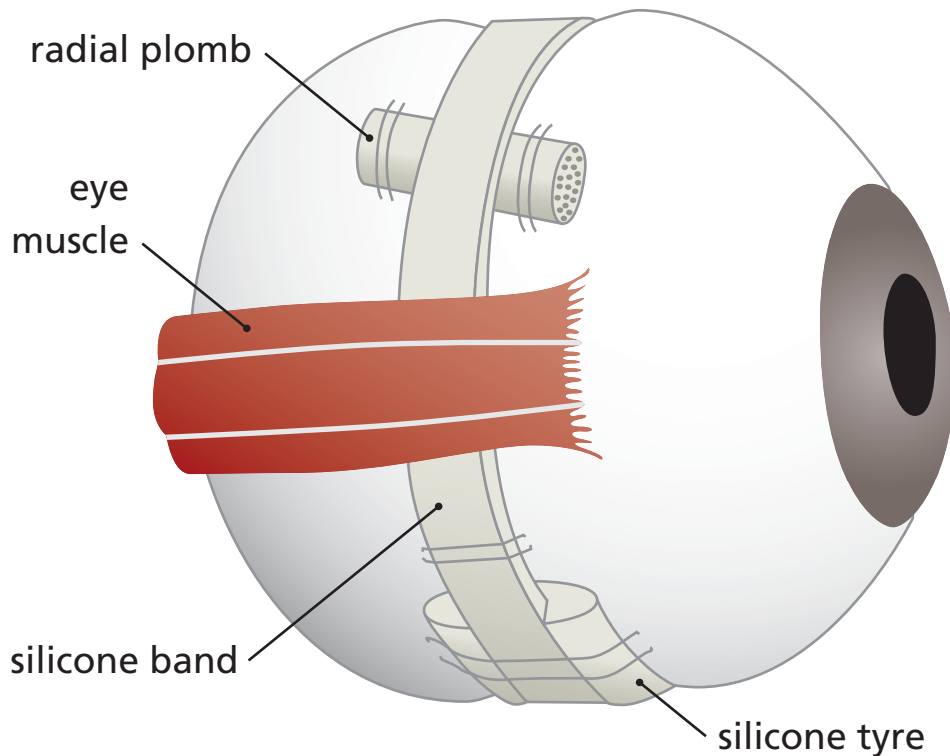
The anaesthetic: General

If you decide to have a general anaesthetic, we will ask you not to eat for six hours before we take you to the operating theatre, although you may drink sips of water up to 2 hours before the operation. Prior to surgery an anaesthetist will speak to you and examine you on the ward. The nursing staff will give you eye drops to enlarge your pupil. When you arrive in the operating theatre's anaesthetic room, the anaesthetist will give you an injection in your hand or arm. You will then stay asleep for the whole operation. The anaesthetist will monitor your heart rate, breathing, blood oxygen and blood pressure while you are under the anaesthetic. You may feel tired and sleepy for about six to 12 hours following your surgery.

The surgery

A) Cryotherapy and Sclera Buckle

We can seal retinal holes by applying 'splints' (buckle) on the wall of the eye. The buckle is made of sponge or solid silicone material. It is positioned under the skin of the eye and usually stays there permanently.

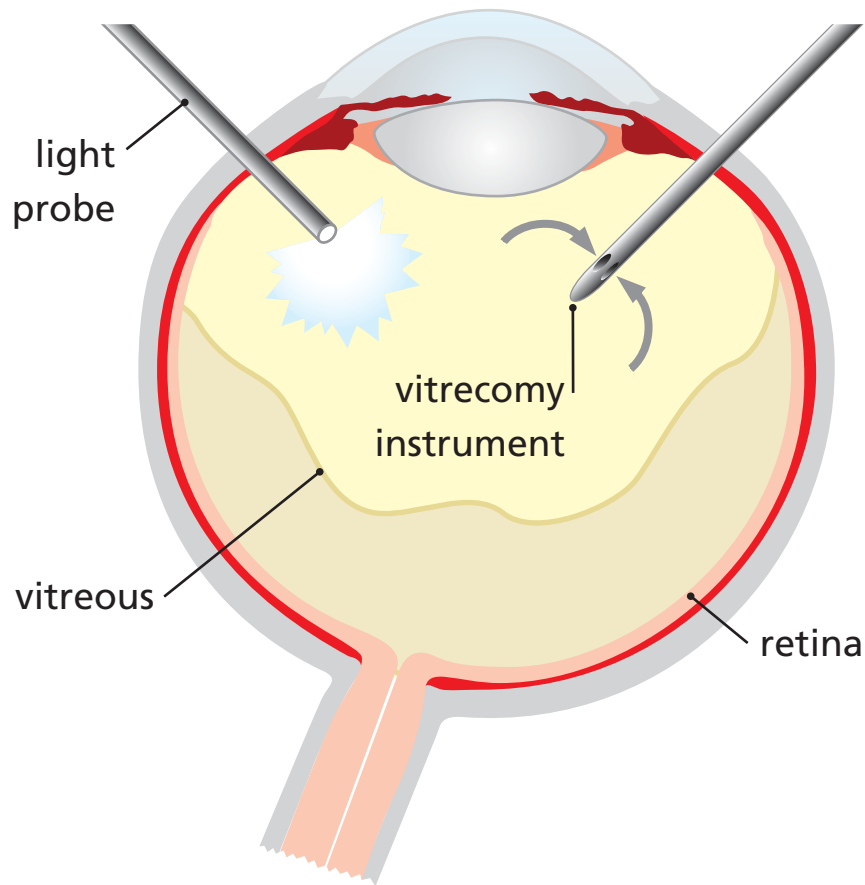


Cryotherapy and application of Buckle

B) Vitrectomy, Cryotherapy and injection of gas or silicone oil

In some cases, the jelly-like substance called the 'vitreous' is not working and this is responsible for the retina becoming detached. As part of your surgery, we remove this jelly during an operation called 'vitrectomy'. During this operation, we make tiny cuts in the eye and remove the vitreous. Next the surgeon finds the breaks in the retina and treats them with laser or cryotherapy. This causes a scar reaction, which over 10 days will seal the break. We then put a gas or silicone oil bubble in the eye. This acts as a 'splint' to hold the retina in position until the scar reaction occurs (10 days). If we used a gas bubble, your normal body fluids will replace it naturally over time. If we use silicone oil, we may need to remove this during another small operation several months after your first operation.

We usually put small stitches in the eye. At the end of the operation, we will put a pad and shield over your eye to protect it. The pad and shield are removed the following morning and you only have to wear the clear eye shield at night-time for three weeks after your operation.



Vitrectomy

After the operation

You will remain in hospital the night of your operation and you are discharged home the next day.

If you have discomfort, we suggest that you take a pain reliever, such as paracetamol, every four to six hours – but not aspirin as this can cause bleeding. It is normal to feel itching, sticky eyelids and mild discomfort (gritty sensation due to the stitches) in the operated eye for a five to ten days following retinal detachment surgery. It is common for some fluid to leak from around your eye. Occasionally, the area surrounding the eyes can become slightly bruised. Any discomfort should ease after one or two days. In most cases, your eye will take about two to six weeks to heal. You will see your doctor in the clinic usually within 7 to 14 days of your operation. Try to rest while your eye is healing.

We will give you eye drops to reduce any inflammation and to prevent infection. We will explain how and when you should use them. Please don't rub your eye.

Certain symptoms could mean that you need prompt treatment. Please contact the hospital immediately if you have any of the following symptoms.

- A lot of pain.
- Loss of vision.
- Increasing redness of the eye.

Posturing

This is the hardest part of the recovery following your surgery but the most important. If we put gas or silicone oil in your eye, we will usually ask you to keep your head and body in a particular position. This is called 'posturing' and aims to provide support to seal the holes in your retina.

The bubble floats inside the eye cavity and we will usually ask you to hold your head in a position so that the bubble lies against the holes. This is an important part of the treatment and the position you hold your head in will depend on where the holes are in your retina. We may also advise you to sleep in a particular position at night. By following our instructions, you will give your retina the best chance to be successfully treated. Your co-operation matters a great deal.

As the gas bubble begins to disperse you will notice a line in your vision that moves, similar to a spirit level. You will be able to see above the line but under the line the vision will be fuzzy or blurred. The gas will eventually disperse until it is only a small bubble in the bottom of your eye and then the bubble will disappear too. The length of time the gas stays in your eye depends on which gas is used.

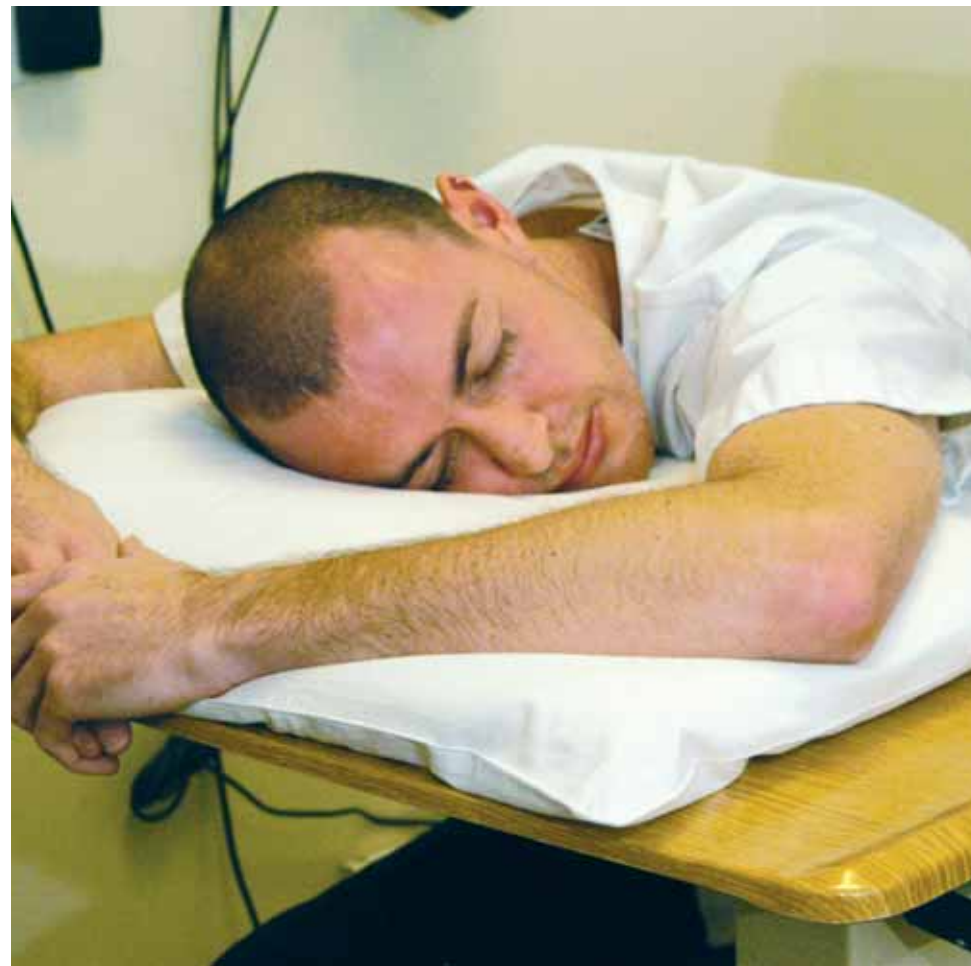
This page and the picture on page 13 demonstrate two posturing positions



There are two types of gas, a short acting gas, SF6, which will stay in the eye for two – three weeks, and a long acting gas, C3F8, which can stay in the eye for two to three months.

- **You must not fly while there is gas in your eye.**
- **You must inform the anaesthetist if you have a general anaesthetic for any operation while there is still gas in your eye, as he/she cannot use nitrous oxide gas in your anaesthetic.**

For patients who need to posture face down, there are a variety of pillows available to assist you. The Friends Of Moorfields shop sell a pillow, at a cost of £7, for you to take home to help with the posturing. There is also a pillow you can hire from Oakworks, which is similar to the pillow you will use on the ward; this is a more expensive option. The company charge £80 for a three week hire. They also deliver and collect the equipment from your home. Their telephone number is: **01454 261 900**.



The benefits of retinal detachment surgery

The most obvious benefits are preventing you from going blind. You have already lost some sight because of the detached retina. If the surgery is successful, it will usually bring back some, but not all of your sight.

The risks of retinal detachment surgery

Retinal detachment surgery is not always successful. Every patient is different and some detached retinas are more complicated to treat than others. Some patients may need more than one operation. Your surgeon will discuss with you the risks and benefits of the operation you are about to have.

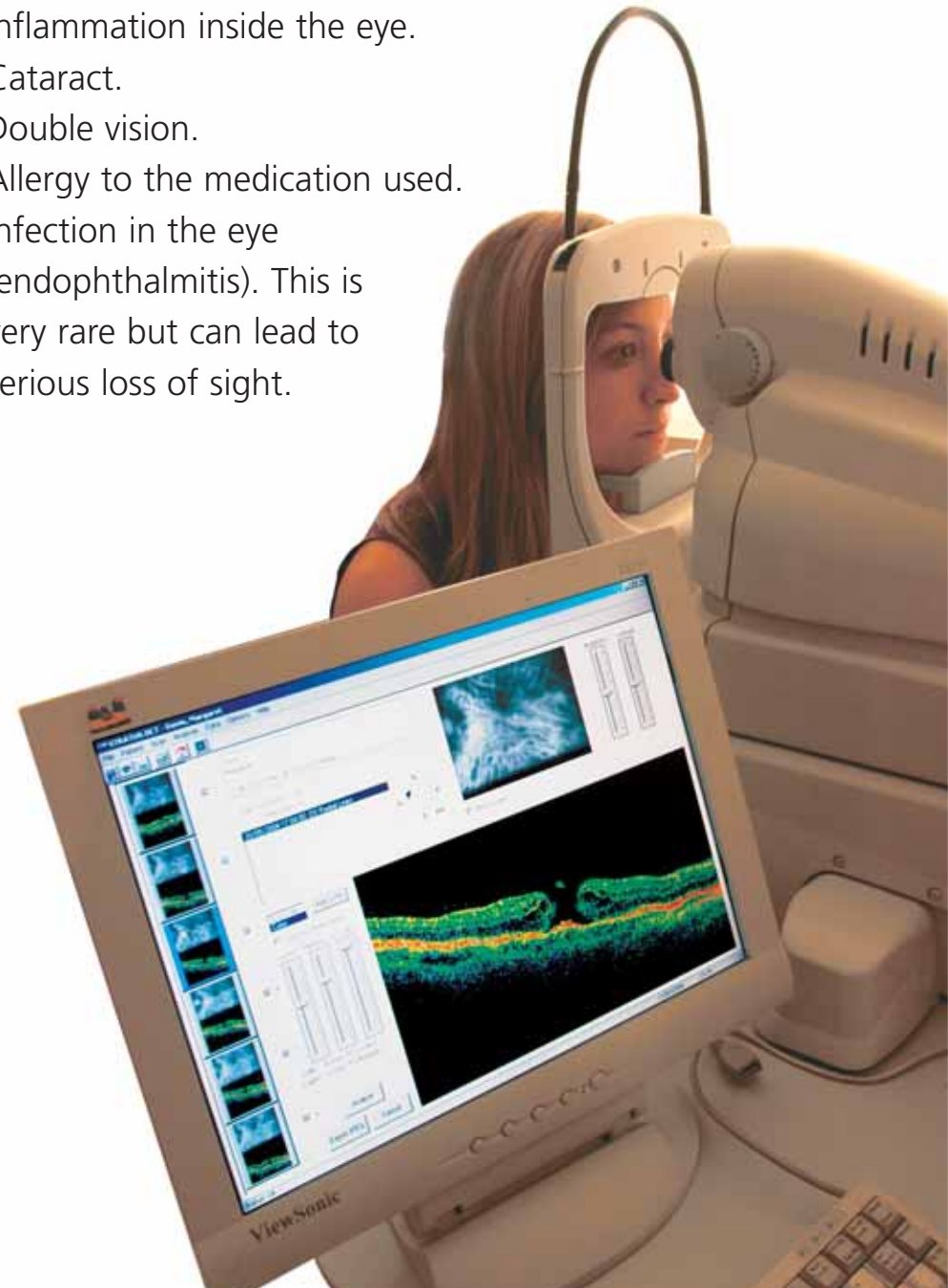
These are the risks and benefits that appear on the consent form for the operation:

- 1** There is an 85–90% success with one operation of your retina going flat and staying flat. There is a 5–10% risk that you will need further surgery due to new breaks forming in the retina or the development of scar tissue.
- 2** Due to the surgery and the insertion of gas in your eye you will develop a cataract in the operated eye. This is easily treated when the cataract matures.
- 3** Every surgical procedure carries the risk of infection and haemorrhage (bleeding). Eye surgery is no different – the risks are low, but should they occur you could have permanent visual loss.

Complications are not common and in most cases we can treat them effectively. Very rarely some complications can result in blindness.

Possible complications after the operation

- Bruising of the eye or eyelids.
- High pressure inside the eye.
- Inflammation inside the eye.
- Cataract.
- Double vision.
- Allergy to the medication used.
- Infection in the eye (endophthalmitis). This is very rare but can lead to serious loss of sight.



Further surgery

If you fall into the 5–10% who develop another retinal hole or develop scar tissue, you will need to have more operations. When a retina is detached, the eye naturally tries to heal the damage. Instead of being helpful, this healing process leads to scar tissue forming inside the eye and the retina contracting. Your doctor may refer to this as 'proliferative vitreoretinopathy' or PVR for short. PVR is associated with poorer vision and may cause the retina to become detached again after successful surgery to reattach it.

Cataracts

Like a camera, the eye has a lens, which focuses light onto the retina. When the lens of the eye becomes cloudy, this is called a cataract. You are more likely to develop a cataract; partly because of the detached retina and partly because of the surgery you received. We can treat cataracts by removing the lens and replacing it with a plastic lens.

What vision can I expect after my treatment?

After surgery, it usually takes some weeks for your vision to recover. If we used a gas bubble, your vision will be very blurred immediately after surgery. This is normal and you should not be alarmed by it. Once the retina is attached, your sight will continue to improve slowly over several months. You may be given sight tests to see if glasses would improve your vision.

Your final vision will depend on the nature of your original detached retina. If we diagnose and treat it quickly and successfully, most of your vision will be restored. If, when we diagnose a detached retina, the eye already has poor vision, we may not be able to restore some of your sight. You may not be able to read using the affected eye. From a distance, you may not recognise faces or be able to read car number plates, for example. Your side vision will usually be OK. This allows you to see people and objects approaching you from the sides. This side vision is very important for day-to-day activities such as going out and climbing stairs.

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Two centuries of vision