Patient Information

Royal Devon University Healthcare
NHS Foundation Trust

Insight into Retinal Detachment Surgery

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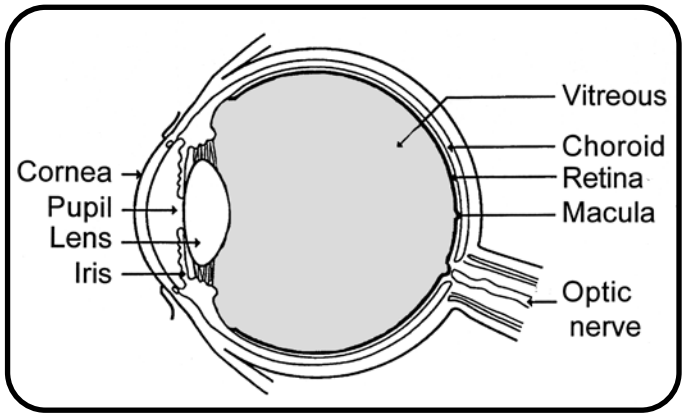
Introduction

When patients are told they have a retinal detachment, they are naturally concerned about what this may involve. Often they worry about whether they will lose their sight or, if they have lost any sight, whether they will recover it. These are normal reactions and we hope this booklet answers any questions these anxieties may raise.

The Retina

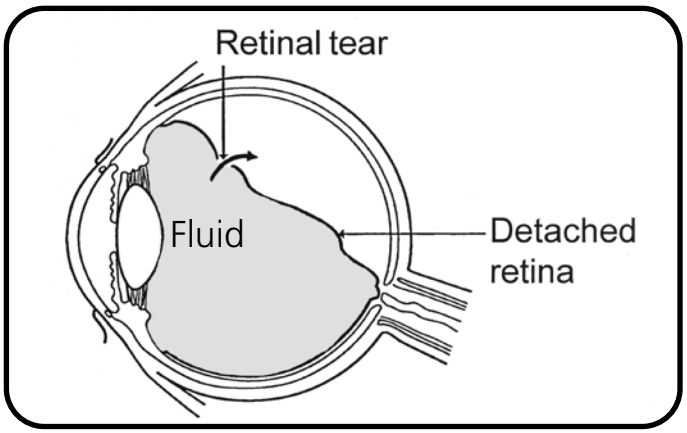
The retina is the light-sensitive tissue layer at the back of the eye which changes the focused light that falls on it into electrical impulses which are then transmitted along the optic nerve to the brain where understanding of what is seen takes place. Light rays enter the eye through the transparent (clear) cornea, then pass through the pupil in the centre of the iris (coloured part of the eye). Light must pass through the lens and vitreous (a jelly-like substance) before reaching the retina.



Retinal Detachment

What is a retinal detachment?

When a retinal detachment develops, a separation occurs between the retina and the underlying inner wall of the eye. This is similar to wallpaper peeling off a wall. The part that is detached (peeled off) will not work properly. The picture that the brain receives becomes patchy or may be lost completely. An operation is necessary to replace the detached retina into its proper position.



What are the symptoms of a retinal detachment?

People often describe seeing "something black" or "a curtain" in their vision. The sudden appearance of floaters and flashing lights requires a full eye examination to exclude the presence of retinal tears that can result in a retinal detachment if left untreated.

What causes a retinal detachment?

Nearly all retinal detachments develop because of a hole or tear in the retina. This usually occurs when the retina becomes "thin", especially in short-sighted people and if the vitreous pulls on the retina to create a tear. Other eye or health problems such as diabetes, cataract surgery and injury such as a blow to the eye, can occasionally be the cause of a retinal detachment.

If I have a detached retina in one eye, will I get it in the other?

For some people with a retinal detachment in one eye there is a greater possibility of this happening in the other eye. Any symptoms demand a prompt eye examination by an ophthalmologist (eye doctor). Both eyes will be examined and preventative treatment may be recommended.

Eye drops are put into both your eyes to make the pupils bigger. This helps the ophthalmologist to examine the back of the eye fully. The effect of these drops will wear off after a few hours, but your vision will be blurred temporarily, preventing you from reading and driving. Avoid driving yourself to hospital or to the local railway station whenever you come to have your retinae examined because your pupils will always need to be dilated.

Treatment

What can be done for a retinal hole or tear?

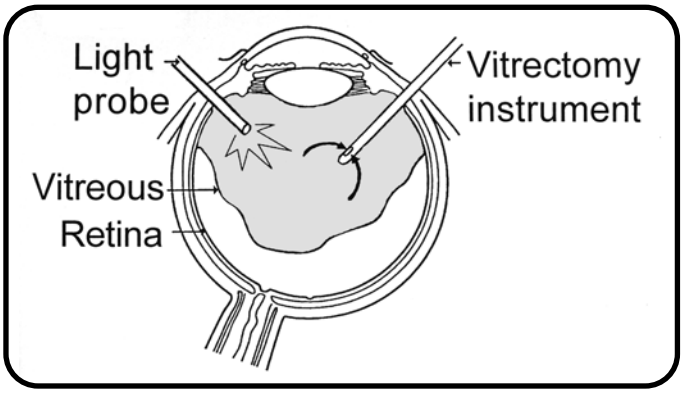
To seal the retina around the tear and prevent the retina peeling off, you may be asked to have one of the following procedures:

- **LASER -** the retinal hole can be heat sealed (like spot welding) by directing a laser beam of light through the pupil of the eye. The scar produced seals the hole.
- **CRYOTHERAPY -** is freezing treatment applied by a pen-shaped probe to the outside of the eye. This freezes through to the retinal hole and, as with laser treatment, promotes scar tissue as a seal. These procedures may be a little uncomfortable but not painful. Laser can be performed in out-patients but cryotherapy is performed in theatre. They are only effective for retinal holes.

Operation

What is done if the retina is detached?

The retina is usually re-attached from the inside by a procedure called a vitrectomy. This operation involves removing the vitreous jelly that has pulled the retina to cause the tear and then replacing it with either gas or silicone oil. This closes off and seals the break in the retina from the inside. The vitreous is cut and sucked out by using fine instruments passed into the eye through very small incisions and viewed with an operating microscope. The wounds are small and seal themselves so fine dissolving stitches are only rarely needed. The eye is never removed and replaced when operations are carried out. Rarely the retina is re-attached from the outside with small pieces of plastic stitched to the white of the eye to press in and seal the tear.



Will I have to stay in hospital a long time?

This operation is usually performed as a day case under local anaesthetic and occasionally under general anaesthetic also as a day case procedure.

Will I have any special tests carried out?

Most surgery is carried out under local anaesthetic and does not require specific tests but if your doctor feels you need a general anaesthetic you may have blood tests and an electrocardiograph (ECG) to check you are in good health.

You may require an ultrasound scan: a probe is placed on the eye after anaesthetic drops have been given to produce an image of your eye. This test is painless.

What happens when I arrive at the hospital or clinic and who will I meet?

You will meet the ward nurse who will admit you and show you around the ward.

Will I be asked to sign a consent form?

Yes, like any other surgical procedure, the doctor will ask you to sign a consent form.

How long does the operation last?

It is variable depending on the type of retinal detachment but is usually between 30 minutes to one and a half hours.

What does it feel like?

The local anaesthetic can sting a little but it is often given with sedation to relax you. After the anaesthetic has been given you should not feel anything during the procedure.

Will my eyes be covered after the operation and will I have any pain?

Your operated eye will be covered with an eye pad after the operation and is usually kept on for 12 to 24 hours. The eye can ache a little after the local anaesthetic has worn off but it should not be very painful and usually simple pain killers like regular paracetamol is all that is needed for the first few days after surgery.

I have not heard of "posturing", what is this?

This is positioning your head to get the gas or silicone oil to press up against the tear to help seal it. For the first few days, you must posture as directed day and night with only 10 minutes break each hour for meals and hygiene purposes. Later you will be able to reduce posturing time as advised by your ophthalmologist. The duration and position of posture depends on the size and position of the tears in your eye

What happens when the eye pad is removed?

You are usually reviewed the day after surgery. Your eye pad will be removed and your eye may be red and swollen.

The ophthalmologist will examine your eye and prescribe drops. The eye is then usually left uncovered to promote healing. You may have a shield applied for protection at night.

Going home - do I need someone with me or any special equipment?

You will need someone to put in your eye drops, if you are unable to do this yourself.

You don't need special equipment* but to continue the posturing position as instructed.

** Sometimes equipment can be hired to you to help with posturing at home. (Only for face down posturing.)*

You will be required to pay a deposit of £25 which will be returned to you on return of this equipment.

What care do I need at home?

You don't really need special care, what you need is to put in the eye drops as prescribed and follow the post-operative posturing instructions.

Aftercare

Is there anything that I should not do when I have had air, gas or silicone oil injected?

Yes. Initially, you should not lie on your back as the gas or oil in your eye may float to the front of your eye and away from the retina.

You should not travel by air or travel up a mountain if you have had gas injected and the bubble is still present. The depressurisation will cause the gas bubble to expand and your eye to become very painful and could blind the eye. You should also be given a wrist band to wear to say that you have gas in the eye as some anaesthetic gases used to give a general anaesthetic can cause the gas in the eye to expand, again with serious consequences. If you were to require a general anaesthetic whilst the gas is still in the eye you must alert the anaesthetist.

What happens to the gas and silicone bubbles?

If gas is used, it will be absorbed and disappear. The time this takes depends on the type of gas inserted. It is replaced naturally by fluid called aqueous from within the eye. The time is usually between one week and six weeks.

If silicone oil is used, it remains in the eye until a decision is made to remove it by a small operation.

What will I see with the gas or silicone oil in my eye?

When the eye is full of gas immediately after the operation the vision is very poor as the light cannot focus on the retina. The gas will gradually disappear. Inside the eye the gas floats up towards the top of the eye but what you see is reversed and you will first notice a crescent of light at the top of the vision which will gradually move down as if the gas bubble is sinking down to the bottom of the eye. Sometimes when the bubble is quite small it may break up into several bubbles before it finally disappears.

If silicone oil is used the vision is still blurred but not as blurred as with gas. The vision with oil however will not

change with time until a decision is made by your eye doctor to remove the oil with another operation.

Will cataract develop after the operation for my retinal detachment?

Vitrectomy surgery is the most frequent and effective way of reattaching the retina. One of the consequences of this surgery is that most patients develop cataract months or years after surgery if they have not already had their cataract removed. Subsequent cataract surgery had a very high success rate and is performed under local anaesthetic as a day case procedure with an operation taking about 20 minutes.

Is there anything else I need to know to care for my eye?

The nurses will teach you how to put in eye drops which will be necessary for up to 6 weeks at home.

What follow up care is needed?

Sometimes you need to have a check-up the following day, then you need a 1 week - 2 weeks out-patient appointment.

Do I need to see my eye doctor?

Yes, you need to see your eye doctor for review.

What can go wrong?

Increased eye pressure, haemorrhage, infection, re-detachment of the retina due to new holes or scar tissue pulling the retina off again.

What do I look out for?

Increasing pain, increased redness, marked increase of swelling of the eyelids, increased shadows, significant reduction of vision not associated with a recent gas bubble.

What do I do if something goes wrong?

You should ring the **Emergency Department (01392 402399)** immediately.

For any other problems or advice, please ring Parkerswell DCU from Monday to Friday between 7.30am and 5pm on **01392 406013.**

General questions

Will I be able to see properly again?

How well an eye sees depends on getting the retina reattached quickly and successfully with vitrectomy surgery. The quality of your vision depends if the central retina or macular has detached at the time of the operation. This is the main reason for trying to operate as soon as possible. If you have a "macular off" retinal detachment at the time of surgery, you should notice an improvement in vision, but it may not be as good as before the retinal detached. If the detachment is caught early and you have a "macular on" detachment then vision may remain very good after surgery.

Will I be able to continue with my normal way of life?

Normal activities without any restrictions may be resumed soon after surgery, except initially as dictated by posturing requirements. Ask your eye doctor when you may return to work.

May I continue to drive?

The law requires you to inform the Licensing Authority (and insurance company) of any change in health or sight likely to affect the safety of your driving.

You must be able to read a number plate at 20.3 metres (25 yards) in good daylight and with spectacles if worn using both eyes. You must also have an adequate field of vision. To drive when unable to meet both these requirements is a criminal act and invalidates insurance.

Inability to meet standards requires you to notify the Licensing Authority. You should not restart driving until you have had confirmation that your vision meets the standards. A report may be requested from your ophthalmologist. Standards are more stringent for vocational drivers.

When can I start my normal activities again, e.g. driving, sports, sex or work?

It is important to discuss this with your eye doctor but as a general guide:

- Fitness training / Gym – 1 month
- Golf – 2 weeks
- Swimming – 6 weeks
- Gardening – 2 weeks
- Sexual intercourse – 1 week
- Return to work – 2 weeks minimum, depending on your job

A gas bubble can restrict your activities.

Please discuss any other specific activities with your eye doctor or nurse.

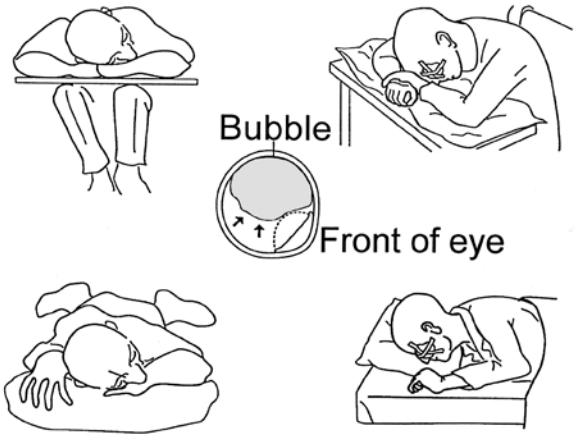
Who can I contact if I have any more questions?

You can contact the ward or the Emergency Department. (See page 6 for telephone numbers.)

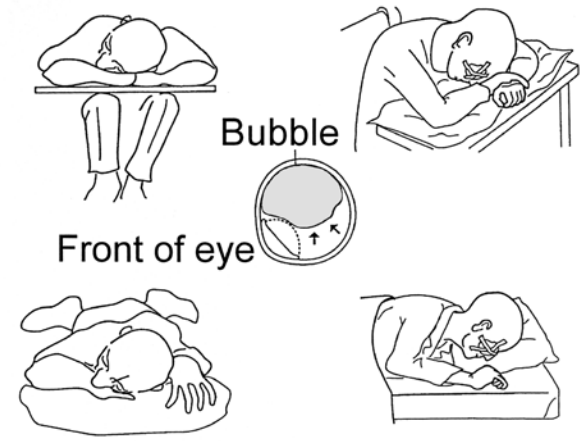
Instructions for post-operative posturing of patients

You will be advised which position will be required, according to your surgery and the position of your retinal detachment.

Face down, right cheek to pillow



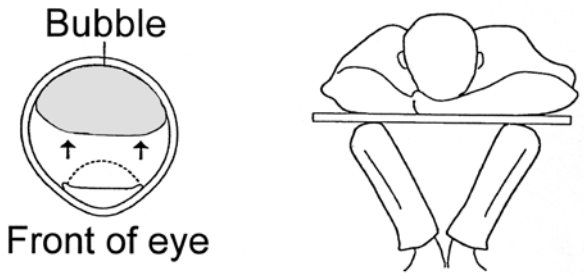
Face down, left cheek to pillow



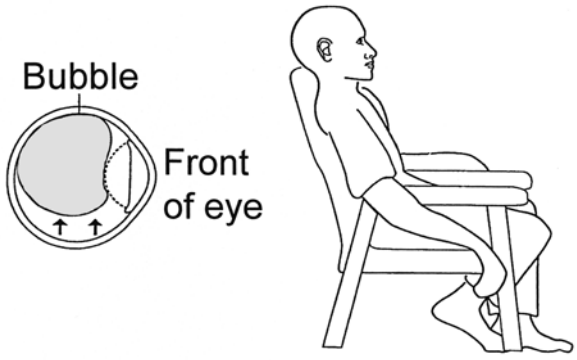
Tips for successful posturing

- You may read, providing you have good vision in your other eye
- Listening to the TV or radio
- Talking books
- Card games
- Ask friends to visit to break up the day
- Ensure you have your 10 minute break every hour and get up and move around
- Buy ready meals if you live alone
- Have plenty of drinks close to hand and use straws while you are posturing
- Keep the phone close by
- Use of a heat pad or warm wheat cushion to relieve any back or neck pain
- Ensure your back is supported with cushions when sitting
- Move your ankles around and flex your calf muscles to encourage the circulation.

Face down



Sitting upright



Posturing is necessary to ensure the gas or oil bubble is positioned against the part of the retina that requires flattening.

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