

Understanding retinal detachment



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Understanding Charles Bonnet syndrome

Understanding dry eye

Understanding eye conditions related to diabetes

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Understanding nystagmus

Understanding posterior vitreous detachment

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About retinal detachment

This leaflet provides the information you need to help you understand retinal detachment, how it is treated and how it may affect your vision.

A retinal detachment is, in many cases, a medical emergency and needs to be assessed as soon as possible so that your ophthalmologist (eye doctor) is able to make decisions about any treatment you may need.

Retinal detachment occurs when the retina separates from the back of the inside of the eye, rather like wallpaper peeling off a damp wall. The retina needs to be attached to the back of the eye to survive and work properly, so if a retinal detachment is not detected and treated quickly it may result in the loss of some or all the vision in your eye.

Figure 1

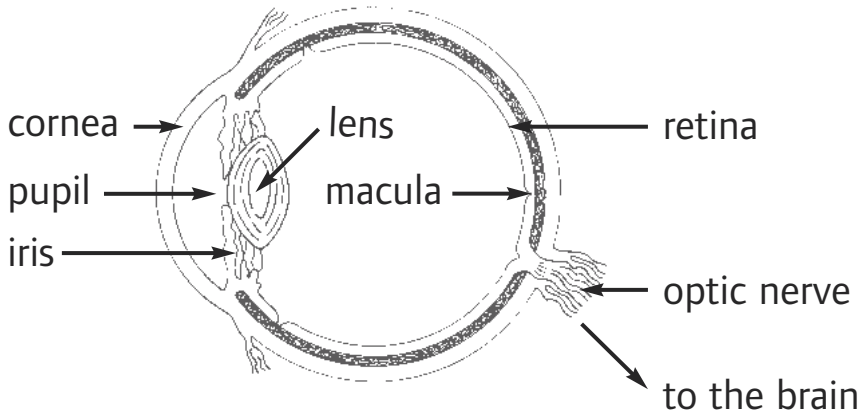
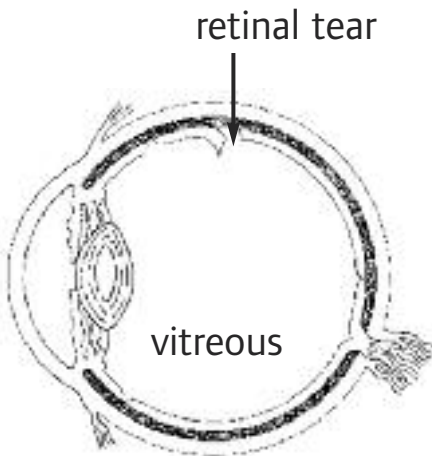
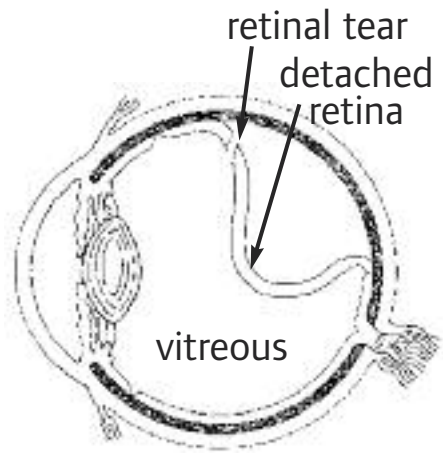


Figure 2



Retinal tear

Figure 3



Retinal detachment

How your eye works

When you look at something, light passes through the front of your eye, and is focused by the lens onto your retina. The retina is a delicate tissue that coats the inside of your eye. The retina converts the light into electrical signals that travel along the optic nerve to your brain. The brain interprets these signals to “see” the world around you. The retina is also supplied with blood by a delicate network of blood vessels on its surface.

Light is focused onto a tiny area of the retina called the macula, which is about the size of a pinhead. This highly specialised part of the retina is vital, because it enables you to see fine detail when you are looking directly at something such as words, photos or the television. Your macula also gives you much of your ability to see colours. The rest of the retina gives you side vision (peripheral vision). The eye is filled with a clear substance called the vitreous gel. Light passes through the gel to focus on the macula.

Causes

Most retinal detachments happen because a tear or hole in the retina allows fluid to leak between the retinal layers and this then causes the retina to detach. Holes in the retina can occur because of changes that happen as you age, whereas tears happen because the retina has been pulled and torn. Tears mostly occur when the vitreous gel suddenly becomes detached from the retina (known as acute posterior vitreous detachment or PVD). Most gradual PVD does not result in retinal detachment. A blow to the head cannot cause retinal detachment, though a direct blow to the eye may do so.

Other eye conditions such as diabetic retinopathy can result in fibrous scar tissue forming inside the vitreous and on the surface of the retina. This scar tissue can then pull on the retina (traction) causing a detachment. This type of traction on the retina can also pull the retina away from the back of the eye.

A rare type of retinal detachment can occur when fluid from the vessels behind the retina leaks between the retinal layers without there being a hole or tear present. This type of detachment happens because of another condition such as an inflammation or tumour.

Who is at risk?

Retinal detachment is rare. It only occurs in about 1 in 10,000 people each year. Retinal detachment can happen to someone of any age but is very rare under the age of 16 and most commonly happens to people aged between 60 and 70 years. This is because changes to the vitreous gel are very common in older people, occurring in 60 per cent of people over 70 years of age. For the vast majority of people these changes do not result in any serious complications. For more information, see our leaflet on “Understanding posterior vitreous detachment”.

Another group – of younger people who are short sighted – are also at risk because their vitreous gel, which is not as firm as it should be, detaches from the back of the eye earlier.

You have an increased risk of retinal detachment if you:

- are very short sighted (more than minus 6.00 D)
- have had trauma (injury or blow) directly to the eye
- have already had a detachment in one eye, then there is an increased likelihood of a detachment in the other eye. Between 2 and 10 per cent of detachments occur in both eyes
- have a family history of retinal detachment.

Symptoms that warn of a retinal detachment

Floater

Floater are caused by bits of debris in the vitreous gel casting a shadow on the retina. The brain then sees this as an object floating around in front of your vision. Floater are very common and most people can all expect to have a few as they get older. People who are short sighted or have had eye operations in the past often have more floaters. Floater can take many shapes being described as rings, spiders' legs or cobwebs. They are not in themselves a cause for concern especially if they have been present for months or years.

However, if you experience a recent dramatic increase in the number of floaters or notice showers of dust-like floaters, this could be a sign that changes are happening at the back of your eye.

If you experience a recent onset of floaters or change to the nature or numbers of your floaters, you should have your eyes examined by an optometrist (optician) or by an ophthalmologist as soon as possible usually within 24 hours. If you see an optometrist and they suspect, or find or can't rule out a tear in your retina then they will refer you urgently to an ophthalmologist.

Flashing lights

Many people experience flashing lights, most commonly around the edges of their vision. Flashing lights occur when the retina is stimulated by something within the eye rather than by the light entering the eye. They are often caused by the vitreous gel inside the eye moving and pulling on the retina.

In many cases flashing lights are caused by a gradual vitreous detachment and in most cases this doesn't cause any long-term problems with your vision. However, flashing lights can indicate that there is a tear in the retina. There is no way you can tell whether your flashing lights are caused by your vitreous or by a retinal tear. If you suddenly experience new flashing lights you should have your eye examined by an optometrist as soon as possible, especially if you also have new floaters.

Dark shadow

If your retina does detach then it can't work properly anymore. You will see this as a solid dark shadow coming in from the edge of your vision which you cannot see round or through. If more of your retina detaches then the shadow will keep moving towards the centre of your vision.

If you experience a dark shadow moving up, down or across your vision you need to attend your local hospital eye clinic as soon as possible within the same day or within 24 hours.

Blurring of vision

Your vision can gradually become blurred for many reasons and a visit to the optometrist will help you find out why. If your vision suddenly becomes blurred, especially if any of the other symptoms of flashing lights, floaters or a shadow are present, then this is more serious and you need to consult your optometrist as soon as possible and usually within 24 hours.

Dealing with symptoms

Many people have flashes and floaters and this is normal for their eye. Not every person with flashes and floaters will develop a retinal detachment. However, if you do experience flashes or floaters for the first time, or your usual flashes and floaters change, then you should have your eyes examined.

If you have been checked for retinal detachment in the past you should have been given clear instructions on what to do if you have further symptoms and you should

follow these. This usually involves contacting the hospital eye clinic if you have any concerns.

Prevention

If you have a healthy retina then there is no treatment that can reduce the risk of a detachment. Regular eye tests are an important way to make sure your eyes are healthy and you have no signs of any eye conditions. Most people should have their eyes tested every two years. However, some people may need more regular tests. Your optometrist will be able to recommend how often you need to have your eyes tested.

One of the causes of retinal detachment is trauma to the eye. Wearing eye protection for DIY, gardening or sport is something you can do to reduce the risk of an eye injury. Retinal detachment does not happen as a result of straining your eyes, bending or heavy lifting.

If you do experience symptoms of flashes and floaters and the eye clinic detects a hole or tear in your retina then this may be treated to reduce the risk of a retinal detachment developing. Not all tears or holes need treating. The treatment for retinal tears and holes is

preventative – it stops the retinal tear or hole turning into a full detachment.

The treatment can be done two different ways, either using a laser which causes very small burns in the area around your retinal hole or tear which act to “weld” your retina more firmly to the back of your eye, or by using a cryoprobe which freezes the tiny area of the retina around your retinal tear or hole from the outside of the eye. The retinal tear or hole is surrounded by the treatments and this prevents fluid passing through the hole to cause a detachment.

You can have this type of treatment as an outpatient using a local anaesthetic. Your vision is not usually affected by this type of treatment because only a very small localised area of the retina is treated.

Treatment

Retinal detachment can be treated. The treatment involves an operation to reposition the retina against the back of the eye. The sooner treatment is carried out, the better the results are likely to be. If retinal detachment is not treated then you are likely to lose all the vision in the affected eye over time.

Surgery for retinal detachment is complicated and very individual to each case. The type of treatment needed depends on the type of detachment and any complicating factors, such as any other eye conditions you may have.

After an initial assessment, the specialist eye surgeon (ophthalmologist) will decide how quickly surgery needs to be carried out – this maybe within 24 hours or within a few days. Usually, only one operation is needed and the types of surgery described below may be combined. Most people will have a local anaesthetic, meaning that you will be awake but feel nothing in your eye. Some people, in particular children, will have a general anaesthetic, which means they are unconscious (asleep) for the operation. You and your ophthalmologist will decide which type of anaesthetic will be best for you. Most people go home the same day as the operation but some people may need to stay in hospital for a day or two.

Vitrectomy

Most commonly nowadays you may have a vitrectomy operation. This procedure involves removing the vitreous gel and replacing it with either a gas bubble or, occasionally, clear silicone oil. The gas bubble or silicone liquid then holds the retina in place against the inside of your eye.

Scleral buckle

In other cases a scleral buckle may be used. This involves attaching a tiny piece of silicone sponge or harder plastic to the outside of your eye. This presses on the outside of the eye, causing the inside of the eye to slightly move (buckle) inwards. This pushes the inside of the eye against the detached retina into a position which helps the retina to reattach. Cryotherapy or laser treatment will be used to seal the area around the hole. The buckle is usually not removed and is not visible once surgery is finished.

Pneumatic retinopexy (gas bubble surgery)

If your retinal detachment is small and uncomplicated a gas bubble can be injected into the vitreous of the eye.

This bubble then presses the retinal back in place, and cryotherapy or laser is applied round the hole or tear. The gas is reabsorbed over a period of weeks and the retina remains in place. Depending on the size and position of the bubble, your vision may be very blurred in the first few weeks. This type of surgery has been found to be less successful than other types and is not often done in the UK.

After your operation

After the operation your eye will feel uncomfortable. There may be some bruising and your eyelids may be sticky. You will be given eye drops to help prevent infection and to control any swelling. Your eye may be uncomfortable for a few weeks after the operation.

First few weeks after the operation

If you have had a gas bubble put into your eye, your vision will be very blurry for a while. This is only temporary. As the gas is absorbed you may see a wavy line across your vision which is the divide between the gas and liquid content of the eye. This will slowly move and then disappear over a period of 10 days up to a few weeks.

Even without a gas bubble your vision may be blurry for a number of days, possibly weeks, following the surgery. During this time although your sight will be blurry you don't have to limit how much you use your eyes, so watching TV or reading will not cause any problems.

Your ophthalmologist will tell you which activities you should avoid directly after your operation and the advice may be different depending on the type of surgery you have had. Most people will have some restriction for the first few weeks after the operation.

How long you will have these restrictions will depend on the exact procedure you have had. It also depends on whether you work and what work you do. For instance, if you drive you may find that dangerous if you have a bubble of gas in your eye. Your ophthalmologist can consider all the factors in your case and offer you the best advice about any restrictions necessary.

Once your eye has healed from the operation you can continue the sports or activities you enjoy. Again, your ophthalmologist is the best person to let you know if any of your regular activities should be avoided in the long term. Usually full contact sports which may involve a blow to the eye such as boxing, kick-boxing and martial

arts aren't recommended for someone who has had retinal reattachment surgery.

Posturing

Posturing is lying or sitting with your head in a certain position. You may be asked to do this before surgery to stop a retinal detachment spreading, or after your operation to help keep a gas bubble in place, so that it continues to put pressure on the part of the retina being reattached. You may need to do this for up to 10 days after the operation. If you need to do this the medical team will explain how to lie or sit and for how long.

If possible, you may find it useful to have someone to help you at home while you are posturing, but if that is not possible and you are worried about coping, you might want to let your ophthalmologists or GP know about your circumstances as they may be able to arrange for some help.

You need to tell your clinic if you need to fly after having surgery. If a gas bubble has been used, it is not safe to fly until the gas bubble has been completely reabsorbed. If you are having any other operations, the anaesthetist needs to know that you have a gas bubble. Once any

period of posturing is finished you can resume activities, including sex, unless advised otherwise by your surgeon.

How successful is treatment?

Surgery is usually very successful at reattaching the retina. The degree to which your detailed and peripheral vision will be affected is likely to depend on how much of the retina detached, if the macula was detached, if you have another eye condition such as diabetic retinopathy and how quickly the surgery was carried out.

If your macula, which allows us to see fine detail, remained attached then results are often very good and your central vision may not be affected at all. If your macula had detached but treatment was carried out quickly then your central vision can return but it may be distorted and wavy. Many people find they adapt to this distortion with time.

If you had a shadow in your peripheral vision, this will disappear after surgery but you may have some restriction to your peripheral vision. If the macula was affected, the longer the detachment was left untreated, the worse the vision is likely to be after the operation. However, once the macula has detached, it has been

shown that a delay in treatment of up to seven days does not affect how your vision improves.

Unfortunately for some people, their operation may be successful at reattaching the retina but it may not bring back detailed central vision or areas of peripheral vision. This can happen in any circumstance but the risk is higher the longer the retina has been detached without any treatment.

What happens if the detached retina is not put back in place, or comes away again after surgery?

Most people will lose all useful vision if no operation is carried out, or if the treatment is unsuccessful. However, if the first operation does not succeed, it is usually possible to have one or more operations to try to re-attach the retina. At each stage, your surgeon will discuss with you the likelihood of success and the need to have more treatments.

What if my sight is not as good as before?

If you have lost vision in one eye due to a detachment you may still have useful vision in your remaining eye. It can sometimes take a few months to get used to seeing with only the one good eye if the other eye interferes. With time the brain learns to ignore the poorer vision in most situations.

If the affected eye was your good eye then you may be left with a sight impairment. You can receive help to see many of the things you used to see by making use of your remaining sight. Low vision services can help find the best magnifiers for you, and give advice and training about the many, often simple, ways that you can make the most of your sight. Ask your eye specialist, optometrist (ophthalmic optician), GP, social worker or local voluntary organisation about low vision services near you. RNIB can also advise on the help that is available.

Coping

Being diagnosed with an eye condition can be very upsetting. You may find that you are worried about the future and how you will manage with a change in your vision. All these feelings are natural.

Some people may want to talk over some of these feelings with someone outside their circle of friends or family. RNIB can help you with our telephone Helpline and our emotional support service. Your GP or social worker may also be able to help you find a counsellor if you think this would help you.

Help to see things better

Having retinal detachment can cause serious changes to your vision for the long term, but there are lots of things that you can do to make the most of your remaining vision and adapt to any changes. This may mean making things bigger, using brighter lighting or using colour to make things easier to see. There is more about this in our publication, "See for yourself: make the most of your sight" which is available from our Helpline on 0303 123 9999.

You can also ask your ophthalmologist, optician or GP to refer you to your local low vision service, which can provide you with magnifiers to help with reading and

advice on lighting to help make the most of your sight. Local social services should also be able to offer you information on being safe in your home and getting out and about safely. They should also be able to offer you some practical mobility training to give you more confidence when you are out.

Our Helpline can also give you information about low vision clinics and the help available from social services on 0303 123 9999. They can also offer help if you have any difficulties accessing these services. Our website rnib.org.uk offers lots of practical information about adapting to changes in your vision and products that make everyday tasks easier.

Useful contacts

Royal National Institute of Blind People

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helpline@rnib.org.uk

www.rnib.org.uk

Royal College of Ophthalmologists

17 Cornwall Terrace, London NW1 4QW

t: 020 7935 0702

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We do all we can to ensure that the information we supply is accurate, up to date and in line with the latest research and expertise.

The information used in RNIB's Understanding series of leaflets uses:

- Royal College of Ophthalmologists guidelines for treatment
- clinical research and studies obtained through literature reviews
- information published by specific support groups for individual conditions
- information from text books
- information from RNIB publications and research.

For a full list of references and information sources used in the compilation of this leaflet email publishing@rnib.org.uk

RNIB Helpline

0303 123 9999

helpline@rnib.org.uk

If you, or someone you know, is living with sight loss, we're here to help.

This leaflet has been produced jointly by the Royal College of Ophthalmologists and Royal National Institute of Blind People, a certified member of the Information Standard.

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