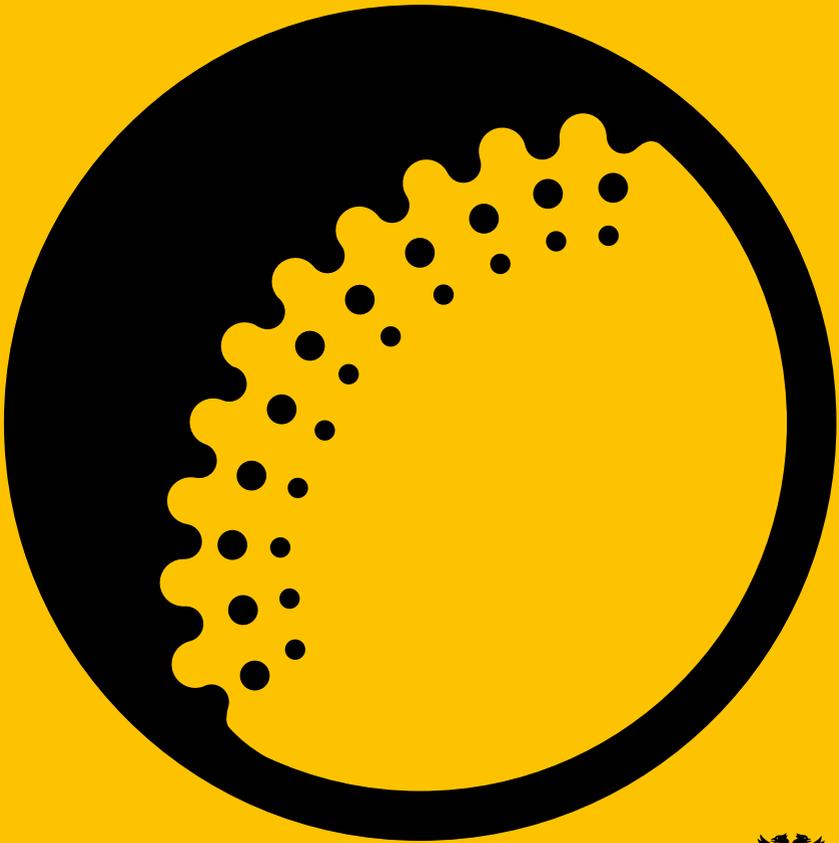


R N I B

See differently

Understanding

Retinal detachment



The ROYAL COLLEGE of
OPHTHALMOLOGISTS

Contact us

We're here to answer any questions you have about your eye condition or treatment. If you need further information about retinal detachment or on coping with changes in your vision, then our Helpline is there for you.

Just give us a call on **0303 123 9999** or email us at **helpline@rnib.org.uk** and we'll be happy to speak with you.

RNIB's Understanding series

The Understanding series is designed to help you, your friends and family understand a little bit more about your eye condition.

The series covers a range of eye conditions, and is available in audio, print and braille formats.

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What is a retinal detachment?

When your retina separates from the inside of your eye, it is known as a retinal detachment. Your retina needs to be attached inside your eye to stay healthy and work properly. If it remains detached, it will stop working.

A retinal detachment can be repaired with surgery, but it needs to be detected and in most cases treated quickly, or it can cause sight loss in the affected eye.

A retinal detachment is an emergency. It needs to be assessed as soon as possible so that your ophthalmologist (hospital eye doctor) can make decisions about your treatment.

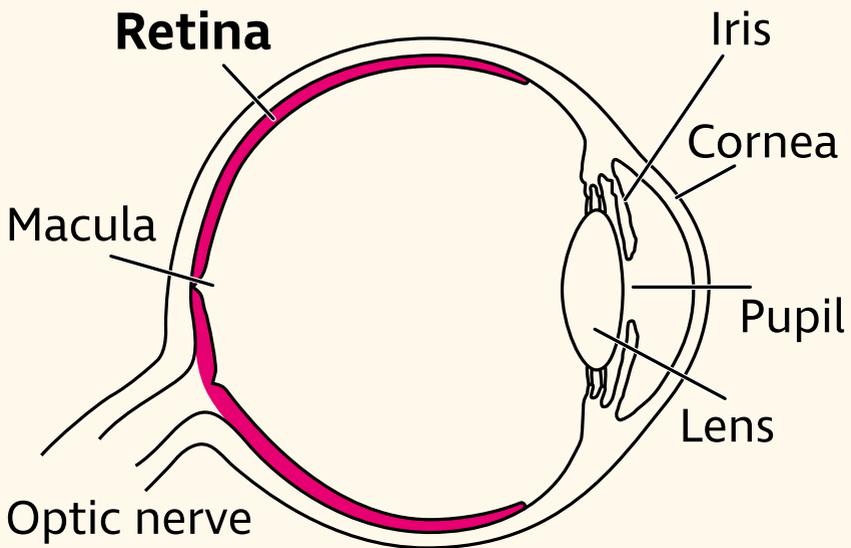
How well your sight recovers can depend on how much and in what areas your retina has detached. Most people have a good level of vision following surgery to reattach the retina.



What is the retina?

The retina is a thin tissue, made up of a number of different layers, which lines the back of the inside of your eye. A network of blood vessels under the retina supplies its blood. Your retina is in contact with the vitreous, the clear gel that fills the inside of your eye.

The retina processes the light that enters your eyes into signals which are interpreted by your brain to enable you to see things.



Your retina is responsible for your full field of vision, which is made up of your peripheral vision (also known as side vision), and your central vision (what you see directly in front of you). In the centre of your retina is the macula, which, as well as giving you central vision, enables you to see detail and colour.

What causes retinal detachment?

There are three main causes of retinal detachment.

Retinal holes and tears

Most retinal detachments happen because a tear or hole in the retina allows fluid to leak between the retinal layers, causing the retina to detach.

Holes in the retina tend to be caused by age-related changes to your eye. Tears happen because the retina has been pulled and torn. The most common cause of a retinal tear is the vitreous gel – which fills your eye and helps it maintain a round shape – coming away from the retina (known as acute posterior vitreous detachment or PVD).

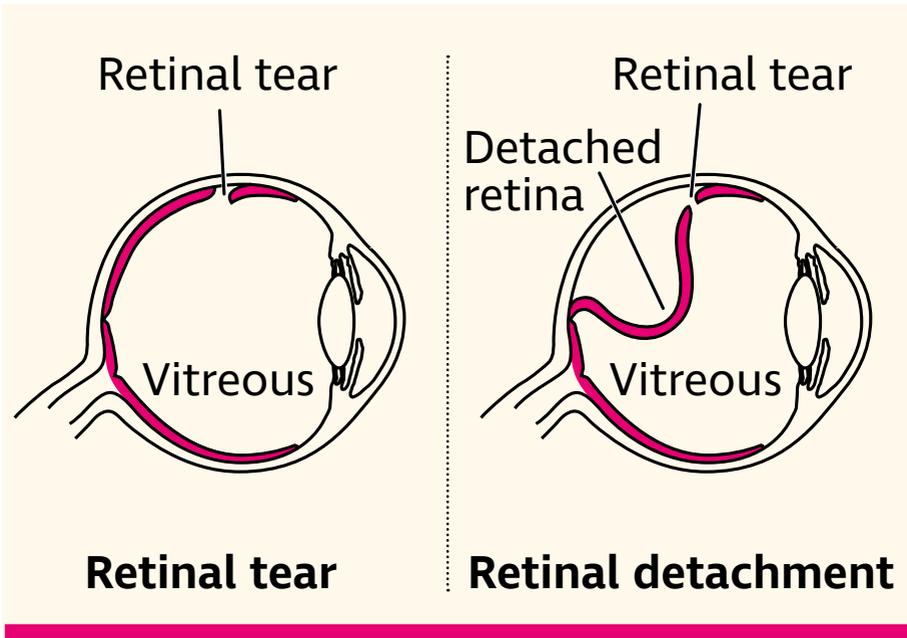
The symptoms of a PVD and retinal detachment are very similar. Although many people have PVD without developing a retinal detachment, it is always important to have your eye examined if you experience any of the symptoms listed in the next section. A bang or blow to the head cannot cause retinal detachment, but a direct blow to the eye may do.

Scar tissue

Eye conditions such as diabetic retinopathy can result in scar tissue forming on the surface of the retina and inside your vitreous. This scar tissue can then lead to traction (pulling on the retina), causing a detachment.

Fluid

A rare type of retinal detachment happens when fluid from the blood vessels behind the retina leaks between the retinal layers without there being a hole or tear present. This type of detachment happens because of conditions which cause inflammation or tumours.



What are the symptoms of a retinal detachment?

There are four main symptoms that can be the first signs of a retinal detachment:

- floaters
- flashing lights
- a dark shadow in your vision
- blurred vision.

You may have these symptoms but not develop a retinal detachment, but there isn't a way to tell what is causing these symptoms unless your eye is examined.

A retinal detachment can cause a permanent loss of vision so it's best to be cautious and have these symptoms checked, as soon as possible, within 24 hours.

Floaters

Floaters are caused by bits of debris floating in your vitreous gel which cast a shadow onto your retina. The brain then sees this as something floating around in your vision.

Floaters are very common and most people can expect to develop some as they get older. They can take many shapes, for example, black dots, rings, spiders' legs or cobwebs.

Many people naturally have some floaters in their eyes, which are nothing to worry about, but new floaters or changes to the ones you have already should be checked. People who are short-sighted, or have had eye operations in the past, often have floaters.

If you start to see floaters, or notice a change or increase in the floaters you already have, you should have your eyes examined by an optometrist (also known as an optician) or an ophthalmologist as soon as possible. If you see an optometrist and they suspect, find or can't rule out a tear in your retina, then they will refer you urgently to an ophthalmologist.

Flashing lights

Lots of people have flashing lights, most commonly around the edges of their vision. These can be normal and not something to worry about. Flashing lights happen when the retina is stimulated by something inside the eye rather than by the light entering the eye. They are often caused by the vitreous gel inside the eye moving across and pulling on the retina.

In many cases flashing lights are caused by a gradual change in your vitreous gel and they don't cause any long-term problems. However, flashing lights may be a sign of a retinal tear or the start of a retinal detachment.

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, this means that it doesn't work properly any more and you will see this as a solid dark shadow moving in from the edge of your vision. You will not be able

to see round or through this shadow. 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 must attend your local hospital Accident and Emergency (A&E) department straight away.

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 you also have any of the other symptoms of flashing lights, floaters or a shadow, then this is more serious. You should have your eyes examined straight away.

Who should check my eyes?

It's important to have someone examine your eye if you start to have any of these symptoms and in most cases it is best to have your eyes checked within 24 hours.

Sometimes it is easier get an appointment with an optometrist on the high street, but they may refer you straight away to your local A&E department so that you see an ophthalmologist

as soon as possible. A&E departments should have an ophthalmologist on call who can examine your eye and decide what to do next.

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. You should follow these if more symptoms develop. This usually involves contacting the hospital eye clinic if you have any concerns.



Who is at risk?

Retinal detachments are rare; only about one in 10,000 people have one each year. Retinal detachment is very rare in children under the age of 16. Changes in the vitreous gel, which often cause retinal tears, become more common as you get older, with most retinal detachments happening to people between 60 and 70 years of age.

If you are short-sighted, you may be at increased risk of developing a detachment at a younger age. This is because your vitreous gel can become less firm and detach from the back of your eye earlier, causing a tear to form.

You have an increased risk of retinal detachment if you:

- are very short-sighted (more than minus 6.00 D – your optometrist will be able to tell you how short-sighted you are)
- have had trauma (an injury or a blow) directly to your eye
- have already had a detachment in one eye (between two and 10 per cent of people have detachments in both eyes)
- have a family history of retinal detachment.

Can I prevent a retinal detachment?

If a tear or a hole in your retina is found that hasn't yet led to a retinal detachment, then it's possible to have treatment to stop the detachment from happening.

This treatment can be done two ways, either using laser, or with cryotherapy (a freezing treatment). Laser treatment uses a carefully targeted beam of light to cause very small burns around your retinal hole or tear. These small burns act to weld your retina more firmly to the back of your eye, preventing a detachment.

Cryotherapy uses very low temperatures to freeze the area of the retina around your retinal tear or hole from the outside of the eye. The retinal tear or hole is surrounded by these treatments and sealed to prevent fluid passing through to cause a detachment.

These treatments are fairly quick and use a local anaesthetic, so you won't need to stay in hospital overnight. Only a small area of your retina is treated so your vision isn't usually affected.

There is no way to prevent a tear or hole developing in the retina, but if you do notice any possible symptoms, getting these checked and, if necessary, treated quickly can reduce the risk of developing a retinal detachment.

One cause 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 which could cause a detachment. Retinal detachment does not happen as a result of straining your eyes, bending or heavy lifting.



What treatment is available for a retinal detachment?

Retinal detachment can be treated by surgery to re-attach the retina to the back of the eye. The sooner surgery is carried out the better the results are likely to be. If your retinal detachment isn't treated, then you are likely to lose all the vision in the affected eye over time.

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

Once your ophthalmologist has examined your eye, they will decide how quickly surgery needs to be done – this may be within 24 hours or within a few days. The timing of your surgery may depend on how much of your retina has become detached and whether or not your macula is involved.

Generally speaking, the more your macula is at threat of becoming detached, the sooner you may need the operation. If your macula has already become detached, the timing of

your surgery may not be as urgent, as a delay in treatment of up to seven days will not affect your vision further.

There are various types of surgery used to reattach the retina and your ophthalmologist may combine different methods depending on your detachment. Most retinal detachment surgery is done under local anaesthetic, meaning that you'll be awake but feel nothing in your eye. The anaesthetic also stops your eye from moving during the surgery. During the surgery, you may notice movement and bright lights in front of your eye, but you may not have very detailed vision because your pupil will be dilated. As you are awake, you will be able to hear what is happening in the operating theatre.

Some people, in particular children, will have a general anaesthetic, which means they are unconscious for the surgery. You and your ophthalmologist will decide which type of anaesthetic will be best for you. It's more than likely you will be able to go home the same day as your surgery, but sometimes you may need to stay in hospital overnight.

Vitrectomy

The most common surgery used for a retinal detachment in the UK is a vitrectomy. During surgery your ophthalmologist reattaches the area of your retina that has become detached, removing some of the vitreous gel in your eye and replacing it with a gas bubble. The gas bubble holds your retina in place against the inside of your eye while it heals. The gas slowly disappears over about six weeks following the operation.

Depending on how your retina has detached, your ophthalmologist may chose to use clear silicone oil instead of a gas bubble. The silicone oil keeps your retina in the right place while it heals, but unlike the gas bubble you will need further surgery to remove the oil at some point in the future.

Scleral buckle

Your ophthalmologist may use a scleral buckle to treat your detachment. The sclera is the white outer layer of your eye.

A scleral buckle involves attaching a tiny piece of silicone sponge or harder plastic to the outside white of your eye. This presses on the outside of the eye, causing the inside of your eye to slightly

move inwards. This pushes the inside of the eye against the detached retina and into a position which helps the retina to reattach. Cryotherapy or laser treatment is then used to seal the area around the detachment. The buckle is usually left in place permanently and can't be seen 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, without removing any of the vitreous. This bubble then presses the retina 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.

What will my eye be like after the surgery?

After surgery, your eye may feel uncomfortable for a few weeks. 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. Taking a painkiller like paracetamol should help with any discomfort.

What will my sight be like with the gas bubble in my eye?

If you have had a gas bubble put into your eye, your vision will be very blurry for a while, but this is 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 your eye.

Above the line you may be able to see, but below the line your sight will be poor. The line will move, like a spirit level, when you move your head. As the gas disappears, the line across your vision will move downwards, until it becomes a small round dot, which will also disappear with time.

There are different gases that can be used and these are replaced by the fluid in your eye at different rates, some over two to three weeks, and others over about six to eight weeks. Your ophthalmologist will let you know which gas has been used in your surgery and how long the gas will be in your eye. While the gas is in your eye and your eye is recovering from the operation, your sight may not be good.

How quickly will my eye recover?

Even if a gas bubble wasn't used for your operation, your vision may be blurry for a number of days, possibly weeks, following the surgery. During this time you don't have to limit how much you use your eyes, so watching TV or reading will not cause any problems. It usually takes about six to eight weeks for your eye to recover from surgery and for you and your ophthalmologist to get an idea of the outcome.

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

The length of these restrictions will depend on the procedure you have had, whether you work, and what work you do. For instance, you might find driving difficult while your eye recovers or while you have a gas bubble. Your ophthalmologist can consider all the factors in your case and offer you the best advice about any necessary restrictions.



If you have had gas inserted into your eye, you should not take a flight in an aeroplane while the gas is still in place. The change in pressure in a plane may cause the gas to expand, which would be dangerous for your eye. Your ophthalmologist will be able to tell you how long it will take for the gas to disappear. They should also let you know when there is no longer gas in your eye so you can fly again with no problems. If you happen to need any other surgery, you must let your anaesthetist know that you have a gas bubble in your eye, because some common anaesthetics can interact with the injected gas. Again, this is only a problem while the gas is still in your eye.

Once your eye has healed from the operation, you can continue the sports or activities you enjoy. Your ophthalmologist is the best person to let you know if any of your regular activities should be avoided in the long term. Full contact sports which may result in a blow to the eye, such as boxing, kick-boxing and martial arts aren't recommended for someone who has had retinal reattachment surgery.

Will I need to “posture” before or after my operation?

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 affecting more of your retina, or after your operation to help keep a gas bubble in place. This is so that the gas bubble continues to put pressure on the part of the retina being reattached. You may need to posture for up to 10 days after your surgery. If you need to do this, your ophthalmologist will explain how to lie or sit and for how long.

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, let your ophthalmologist or GP know, as they may be able to arrange for some help.

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, but how well your vision recovers depends on a number of things:

- how much of your retina detached
- if your macula was detached
- if you have another eye condition, such as diabetic retinopathy.

If your macula, which allows you to see fine detail, remained attached, then results are often very good and your central vision may not be affected at all.

If you had a shadow in your peripheral vision, this will disappear after surgery. You may be left with some changes in your peripheral vision, which can be picked up by an eye examination, although you may not notice these on a day-to-day basis.

If your macula detached, but surgery was carried out quickly, then your central vision can return, but it may be distorted. You will probably adapt to this distortion with time, especially if you have good vision in your other eye.

Unfortunately, for some people, surgery 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 surgery.

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 their retina has detached and no surgery is carried out. Sometimes after surgery your retina may detach again. In these cases, it is possible to have more surgery to reattach the retina. At each stage, your surgeon will discuss with you the likelihood of success and the need to have more surgery or 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 other eye. It can take a few months to get used to seeing with only your good eye, because sometimes the eye with poor vision will interfere with clear vision. With time, the brain learns to ignore the eye with poorer vision in most situations.

If the affected eye was your good eye and you have a sight problem in your unaffected eye, then you may be left with sight problems. You may need to make changes and use aids to make the most of your 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 ophthalmologist, optometrist, GP, social worker or local voluntary organisation about low vision services near you. At RNIB we can also advise on the help that is available.

Coping

It's completely natural to be upset when you've been diagnosed with a retinal detachment. Often there can be a lot of changes, including surgery, in a short space of time. 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. At RNIB, we can help you with our telephone Helpline and our Sight Loss Counselling team. Your GP or social worker may also be able to help you find a counsellor if you feel this may help.

Your eye clinic may also have a sight loss adviser (also known as an Eye Clinic Liaison Officer or ECLO), who can be on hand to provide practical and emotional support about your eye condition.

Further help and support

If your retinal detachment is detected early and treated successfully, your vision may not change too much, so you may not need help with making things easier to see.

If you do have some sight loss, there are lots of things that you can do to make the most of your vision. This may mean making things bigger, using brighter lighting or using colour to make things easier to see. We have a series of leaflets with helpful information on living with sight loss, including how to make the most of your sight. You can find out more about our range of titles by calling our Helpline.

You should also ask your ophthalmologist, optometrist or GP about low vision aids and having a low vision assessment. During this assessment, you'll be able to discuss the use of magnifiers and aids to see things more clearly.

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.

If you have questions about anything you've read in this publication, please get in touch with us.

Our Helpline is your direct line to the support, advice and services you need. Whether you want to know more about your eye condition, buy a product from our shop, join our library, find out about possible benefit entitlements, or be put in touch with a trained counsellor, we're only a call away.

It's also a way for you to join RNIB Connect, our community for anyone affected by sight loss. RNIB Connect is free to join and you'll have the chance to meet other people with similar experiences in our helpful, welcoming and supportive community.

Give us a call today to find out how we can help you.

RNIB Helpline

0303 123 9999 helpline@rnib.org.uk

We're ready to answer your call Monday to Friday 8am to 8pm and Saturday 9am to 1pm.

You can also get in touch by post or by visiting our website:

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London WC1H 9NE
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Other useful contacts

Driver and Vehicle Licensing Authority (DVLA)

Drivers' Medical Enquiries

Swansea SA99 1TU

0300 790 6806

www.dvla.gov.uk

We value your feedback

You can help us improve this publication by letting us know what you think about it. Please complete and return the form opposite to:

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Eye Health Information
105 Judd Street
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WC1H 9NE

You can also email us at
[**eyehealth@rnib.org.uk**](mailto:eyehealth@rnib.org.uk)

Please include your contact details if you're requesting information.



3. Is there any information you would have found helpful, that was missing?

4. Do you have any other comments about this publication or any aspect of your contact with RNIB?

Information sources

RNIB and The Royal College of Ophthalmologists 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.

This publication uses information from:

- The Royal College of Ophthalmologists' guidelines for treatment
- clinical research and studies obtained through literature reviews
- specific support groups for individual conditions
- medical text books
- RNIB publications and research.

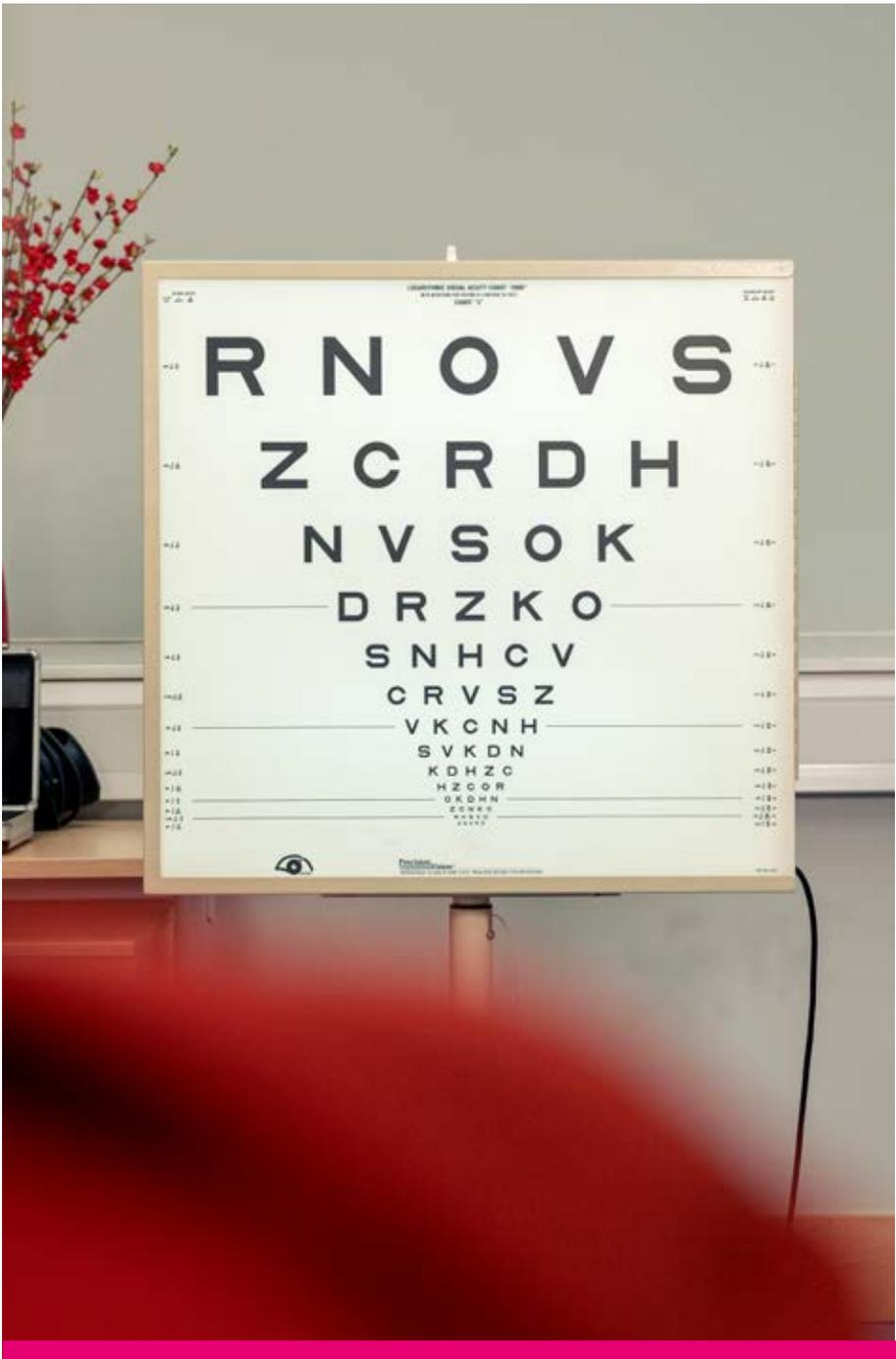
For a full list of references and information sources used in the compilation of this publication, email **eyehealth@rnib.org.uk**.

About The Royal College of Ophthalmologists

The Royal College of Ophthalmologists champions excellence in the practice of ophthalmology and is the only professional membership body for medically qualified ophthalmologists.

The College is unable to offer direct advice to patients. If you're concerned about the health of your eyes, you should seek medical advice from your GP or ophthalmologist.

rcophth.ac.uk



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

RNIB Helpline

0303 123 9999

helpline@rnib.org.uk

Ask RNIB is the simple and easy way to find the answers to your questions online – try it today at rnib.org.uk/ask

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