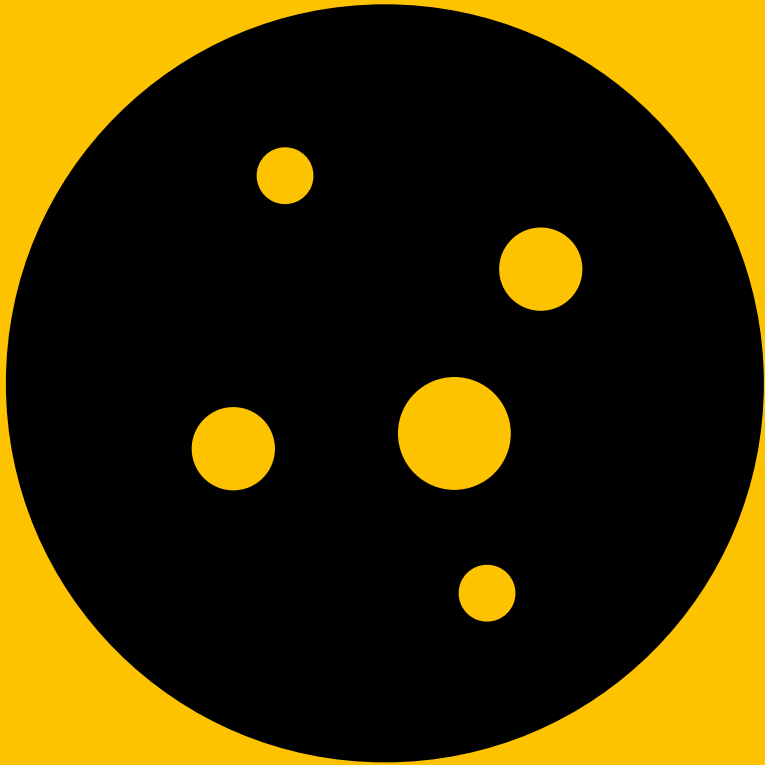


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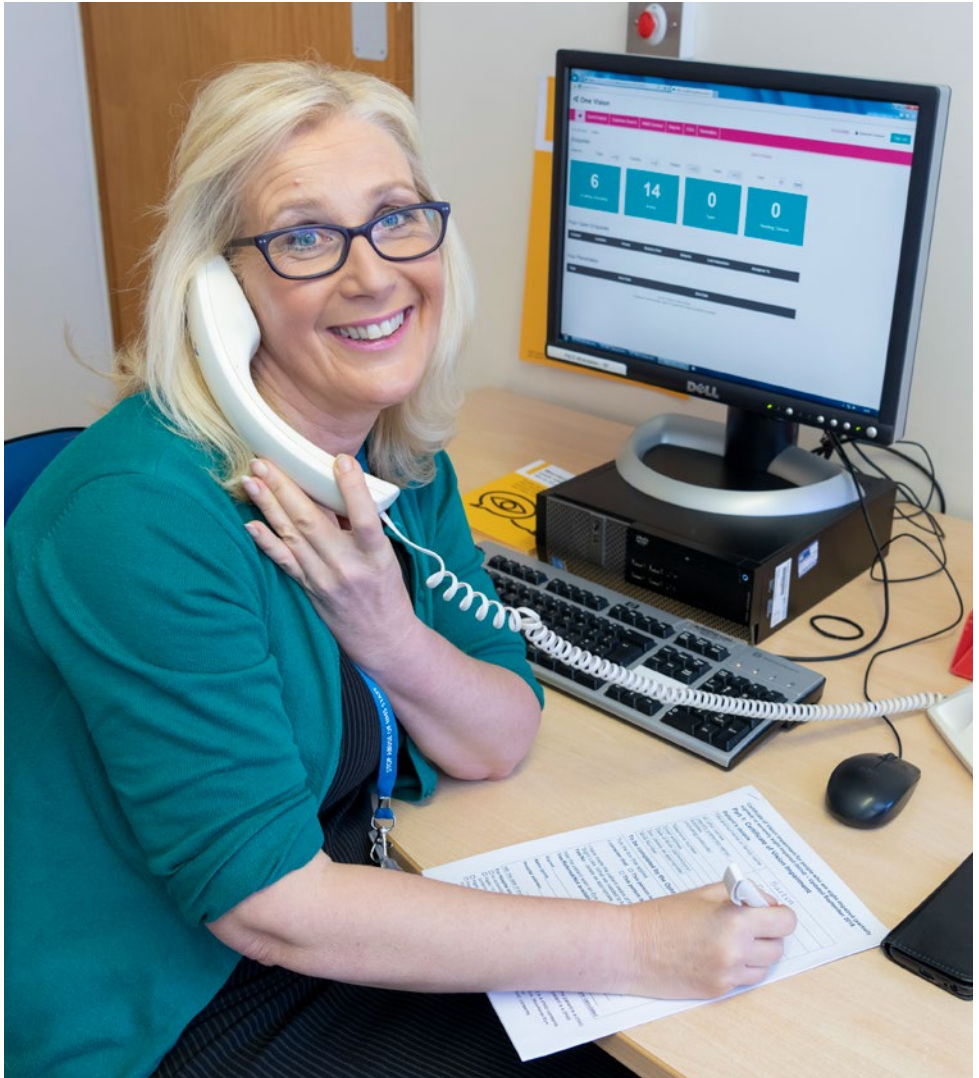
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RNIB's Understanding series

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.

Contact us

We're here to answer any questions you have about your eye condition or treatment. If you need further information about how diabetes can affect your eyes or if you have questions about coping with changes in your vision, then our Helpline is there for you.

RNIB Helpline

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helpline@rnib.org.uk

Or say, **"Alexa, call RNIB Helpline"**
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What is posterior vitreous detachment?

Posterior vitreous detachment (PVD) is a condition where your vitreous gel comes away from the retina at the back of your eye. This detachment is caused by changes in your vitreous gel. PVD isn't painful and it doesn't cause sight loss, but you may have symptoms such as seeing floaters (small, dark spots or shapes) and flashing lights.

These symptoms will calm down with time and as your brain learns to ignore them. With time, you should be able to see just as well as you could before your PVD started.

The symptoms of PVD are very similar to those of a different eye condition called retinal detachment, which needs prompt treatment to stop you losing part or all of the sight in your eye. Because of this, it's important to have your eyes examined by an ophthalmologist (hospital eye doctor) or an optometrist (also known as an optician) within 24 hours of noticing any new symptoms. So that an accurate diagnosis can be made. You can do this by visiting your optometrist or attending A&E or eye casualty.

You can also call 111 for advice about where to go to get your eyes checked.

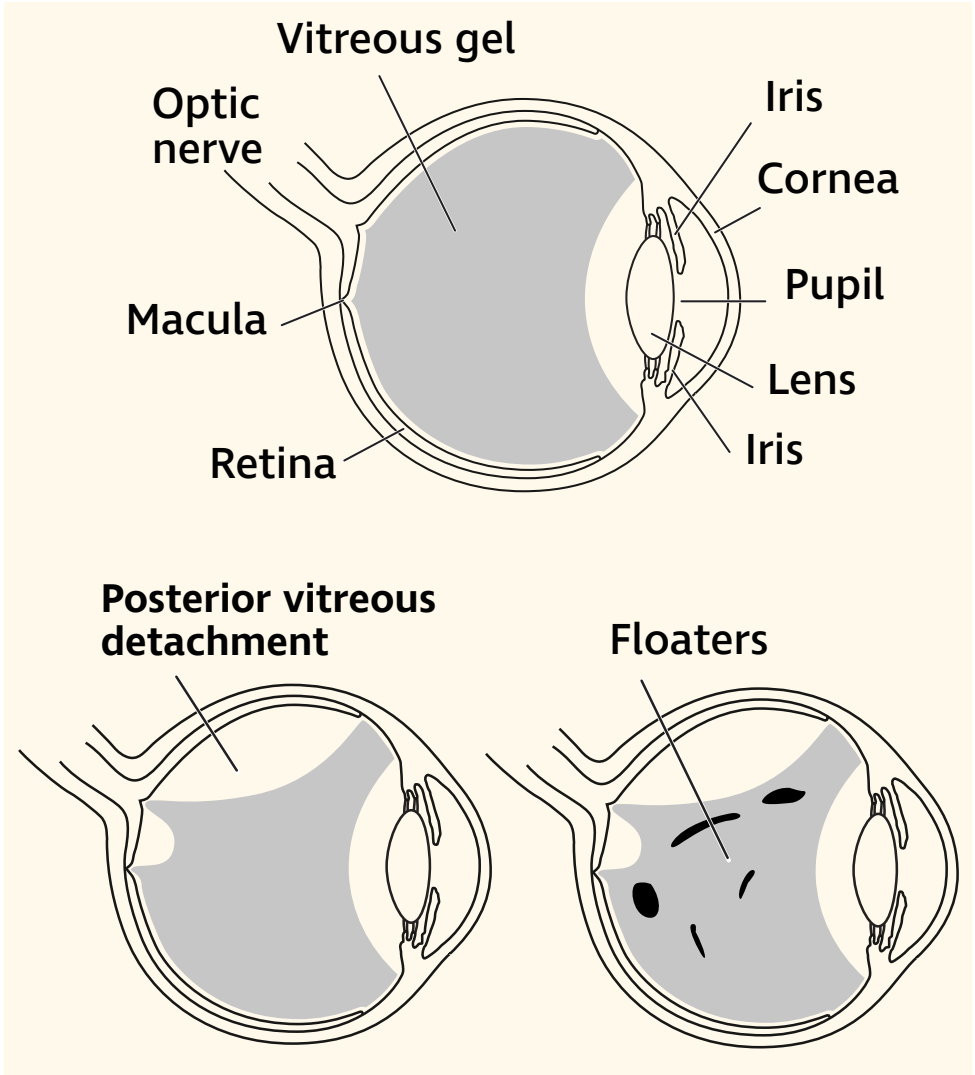
About 10 – 15 percent of people with PVD develop a retinal tear, which, if left untreated can develop into a retinal detachment. A retinal tear or detachment can be successfully treated if diagnosed early.

Most people diagnosed with PVD will not develop a retinal tear or detachment.



What causes PVD?

Your eye is filled with a clear gel called the vitreous. The vitreous helps to keep your eye's shape. It is made up mainly of water and a protein called collagen.



When you look at something, light passes through the front of your eye, through the vitreous and is focused onto the retina at the back of your eye. Your retina converts light into electrical signals which are then sent to your brain. Your brain interprets these signals to see the world around you.

As you age, it is common for the vitreous to become more watery and less like a gel. When the vitreous gets too soft, it loses its shape and comes away from the retina and shrinks in towards the centre of your eye. Once the vitreous detaches, it doesn't reattach again. This is not a problem as we don't need the vitreous attached to the retina to see well. PVD is a natural change in the eye and is not a sign of another eye health problem.

The most common cause of PVD is age. Most people with PVD are over the age of 50 but you can have a PVD in your 40s, particularly if you're short-sighted or if your eye has been injured or you've had previous eye surgery. It's normal to get PVD in both eyes, although often it will occur in one eye at a time. Usually people get PVD in their other eye between six months to a couple of years after the first eye. As PVD is a natural change, there is no way to prevent a PVD from happening.

What are the symptoms of PVD?

PVD can cause several symptoms:

- floaters for the first time or more floaters than you had before. The new floaters are usually noticed suddenly. There may be lots of new floaters or commonly a large cobweb-like floater
- flashes of light in your vision, usually like brief 'streaks' of light in your peripheral (side) vision
- blurred vision.

As your PVD develops, you may have some or all of these symptoms. You might be very aware of them or not bothered much by them. Some people may not notice any symptoms at all from their PVD.

As the process of a PVD can last some weeks to some months, your symptoms may be ongoing for this time. Generally, your floaters and the flashes of light will gradually calm down and become less obvious to you. You might be aware of your floaters in the long term following a PVD, although they are generally not as noticeable as when they first began. As long as the symptoms are not worsening after your eyes have been checked and PVD is diagnosed, then they are not usually a cause for concern.

If you're worried about any symptoms that don't go away, speak to your optometrist or ophthalmologist about it.



What medical investigations should I have?

If you start to experience new floaters or flashes of light, it's important to have your eyes examined straight away by an optometrist or by attending A&E or eye casualty. You can also call 111 for advice about where to go to get your eyes checked.

This is because these same symptoms can be a sign of more serious conditions such as a retinal tear or detachment which need prompt treatment to prevent permanent sight loss. Very rarely, floaters or flashes of light can be a symptom of inflammation inside the eye, which also needs treating to prevent sight loss.

The optometrist or ophthalmologist will check your vision first before dilating your pupils (making them wide) with drops. The drops take about 30 minutes to work and they'll make your vision blurred as well as more sensitive to light.

Your dilated pupils will allow the optometrist or ophthalmologist to better examine your retina. They will want to check your retina to rule out any holes or tears as the cause of your symptoms. You'll be asked to look in different directions so that your retina can be fully examined using a bright light.

The light from this examination will not damage your eyes. It seems very bright because your pupils are bigger. They'll return to their normal size after about six hours or overnight. You shouldn't drive until the effects of the drops have worn off.

Many people with PVD don't usually need to be followed up after their diagnosis. However, you should be given advice about what to do if your symptoms worsen. This usually means returning to your optometrist or the eye clinic straight away if you notice any sudden worsening of your floaters or flashes of light, or any sudden changes to your vision.

Long-term PVD symptoms

Floaters

Floaters are very common and many people have them, even if they don't have PVD. They're floating clumps of cells that form in your vitreous. You can see them because they cast shadows on your retina when light comes into your eye. These floaters do not harm your eye.

Floaters can be different shapes and sizes – dots that can look like flies, threads, circles, clouds, spiders or cobwebs. You may notice that your floaters move around a lot or they may not seem to move much at all. They tend to be more obvious on a sunny day or when looking at a bright computer screen or white or lightly coloured background.

You may only have a few floaters, or you may have many of them. Floaters can appear quite suddenly, and they may be very frustrating or worrying to you. When they're at their most intense, you might think that your floaters will always interfere with your vision, but for most people, they become less obvious over time. Floaters never leave the eye but become less noticeable as the vitreous settles down and your brain learns to ignore them. It's very difficult to say how long it will take for

your floaters to improve as this is very individual; for some people it may be a few weeks and for others, several months. Some ideas for coping with floaters in the meantime are suggested in the section "How do I cope with my floaters?".

Small flashes of light

When your vitreous pulls away from your retina, your retina reacts to this stimulation by sending a signal to your brain. Your brain processes this signal as a small, short flash of light. You'll often see these more in the dark or dim lighting as they will show up more against a darker background. These flashes of light won't affect you for as long as floaters, and they will probably become a lot less frequent once the vitreous has fully come away from your retina.

How do I cope with my floaters?

If you have a large floater, moving your eyes round gently in circles may help. This moves the vitreous inside your eyes and can sometimes move the floater out of your direct line of vision so you're less aware of it.

If your optometrist has advised you to wear glasses, wearing these when you need to will help you to see what you're doing more easily. When your vision is clearer, you're more likely to be able to concentrate on the task, rather than on the floaters.

Wearing sunglasses in bright conditions will make your floaters less noticeable. The tinted lenses reduce the amount of light entering your eyes, meaning that your floaters cast a fainter shadow on your retina.

If your floaters are distracting you when you're using a computer or tablet, reducing the brightness of the screen may make them less noticeable.

Is there any treatment for PVD?

There isn't any medical treatment for PVD and there's no evidence that eye exercises, diet changes or vitamins can help. Given that the symptoms of PVD improve over time and that the vitreous does not need to be attached to the retina to see well. PVD does not need to be treated.

You may have heard that it's possible to treat PVD or floaters either with a laser or with surgery to remove the vitreous from your eye.

Very few ophthalmologists offer laser treatment for floaters, and in the UK it's not a routine treatment. The laser may make large floaters smaller but it's still not clear if it's safe or makes your vision any better. It's very unlikely to be funded by the NHS so you'd usually have to pay for this privately. If you're considering laser treatment, make sure you ask about the risks beforehand.

There is surgery called a vitrectomy where your vitreous is removed from your eye. Although this can reduce your floaters, it's a major operation and there are risks from having this surgery. Because of this, it is necessary to discuss the operation carefully with a surgeon before considering a vitrectomy.

Are there any complications of a PVD?

In most people with PVD, the vitreous comes away gently from the retina without any problems and does not cause any long-term changes to your sight. A very small number of people may experience complications from their PVD.

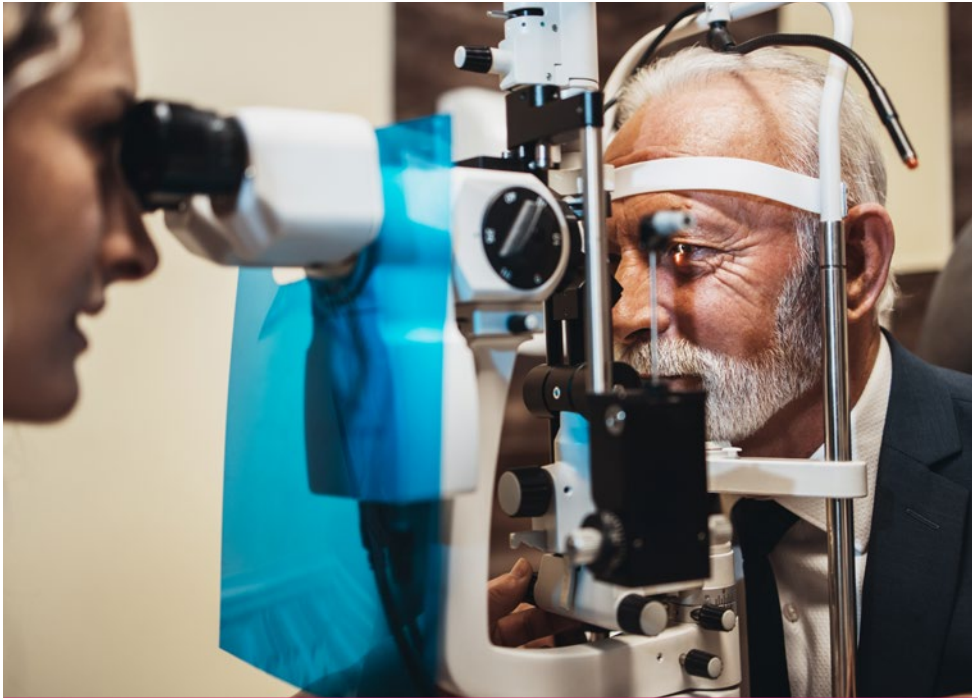
Retinal tear or detachment

In a small number of people, PVD can lead to a retinal tear. This is because the vitreous may be more firmly attached in certain places to the retina. As your vitreous moves away from your retina in PVD, it can pull on your retina, causing it to tear. The risk of this happening tends to be highest when the symptoms of PVD first begin and in the first six weeks. Once the vitreous has fully detached from the retina, the risk of developing a tear from PVD goes back down.

Retinal tears can be successfully treated to prevent them from developing into a retinal detachment which can cause sight loss, but they do need to be treated promptly. Retinal tears from PVD are much rarer than PVD alone and only 10 – 15 percent of people have a retinal tear

following PVD. An even smaller number of these people go on to develop a retinal detachment.

If someone does develop a retinal tear from a PVD, it tends to occur when the PVD symptoms first begin or if the symptoms noticeably increase. Having your eyes examined on the same day or within 24 hours of the start of new or worsening symptoms, means that your ophthalmologist or optometrist can look for any signs of retinal tear or detachment. For more information about retinal detachment, read our booklet called "**Understanding retinal detachment**" which can be ordered by calling our Helpline or accessed via our website.



Vitreous haemorrhage (bleed)

A very small number of people with PVD may be told they have a bleed as a result of their PVD. It happens when the vitreous pulls on and tears a blood vessel on the retina, which can cause blood to leak out of the vessel into the vitreous gel (vitreous haemorrhage). A vitreous haemorrhage usually causes a 'shower' of tiny black floaters, due to the blood cells floating in the vitreous, and can cause blurring of your vision. These blood cells are gradually reabsorbed back into the blood vessels, so the floaters and your vision do clear over a few weeks or months.

Although these bleeds alone don't cause long term damage to sight, having a vitreous haemorrhage from a PVD does significantly increase the likelihood of a retinal tear being present. Therefore, these people will be closely examined and followed up by the hospital eye clinic.

It's important to remember that most people who have PVD do not develop any complications.

What activities can I still do with PVD?

Most people with a PVD can carry on with their normal day-to-day activities with no restrictions because there is no evidence to show that certain activities can cause complications with your PVD.

Some ophthalmologists advise that high impact or head jolting exercises should be avoided during the first six weeks after the start of a PVD, as this is when the risk of having a retinal tear or detachment is highest.

There is no evidence either way that any of the following activities will cause any problems with your PVD, but some people may be advised to or choose to avoid:

- very heavy lifting, energetic or high impact exercises, such as running or aerobics
- playing contact sports, such as rugby, martial arts or boxing
- inverted positions in activities such as yoga or pilates.

You should ask your ophthalmologist for advice about what activities you should avoid doing and for how long. The advice given may depend on whether they feel your retina may be particularly

at risk, for example if you are very short sighted or have a history of eye surgery.

If you do participate in any activities like these, you might notice your floaters a lot more. This is because these activities involve body movements that can make your floaters move around more inside your eye. Because of this, you might want to stop activities like these until your brain adapts and learns to ignore your floaters.

You can carry on with daily activities such as walking, gentle exercising, reading, watching TV, cooking and using your computer. There is no evidence to suggest that flying in an aeroplane will harm your PVD or make it worse. Wearing contact lenses or makeup will also not affect your PVD.

A PVD will not usually cause your prescription to change, and it's ok to have an eye examination for new glasses while you have a PVD. However, if you have a lot of floaters affecting your vision, you may wish to wait until these have settled before having an eye examination.

If you are a driver, you do not have to notify the DVLA that you have had a PVD. You can usually continue driving (if no other eye conditions are affecting your sight) but it's best to speak to your ophthalmologist or optometrist for advice.

Degenerative vitreous syndrome

Degenerative vitreous syndrome (DVS) is slightly different to PVD because it can cause floaters without the vitreous detaching from the retina. As the vitreous becomes more watery, DVS causes severe floaters that can be frustrating and noticeable for a long time. However, DVS can often turn into PVD when the vitreous begins to move away from the retina.



Further help and support

RNIB Helpline

If you need someone who understands sight loss, call our Helpline on **0303 123 9999**, say **“Alexa, call RNIB Helpline”** to an Alexa-enabled device, or email **helpline@rnib.org.uk**. Our opening hours are weekdays from 8am – 8pm and Saturdays from 9am – 1pm You can also get in touch by post or by visiting our website:

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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**.

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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.

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- Diabetes Related Eye Conditions including Diabetic Retinopathy
- Glaucoma
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- Retinal Detachment
- Inherited Retinal Dystrophies including Retinitis Pigmentosa
- Posterior Vitreous Detachment

For audio, print or braille versions of these booklets please contact our Helpline or visit **shop.rnib.org.uk**

For a list of information sources used in these titles and to provide feedback on the Starting Out and Confident Living Series, email **ckit@rnib.org.uk**. To provide feedback on the Understanding Series, email **eyehealth@rnib.org.uk**.

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We would also like your views on the pictures and diagrams, are they appropriate, helpful and are there places where a diagram might have helped? How could we improve it?

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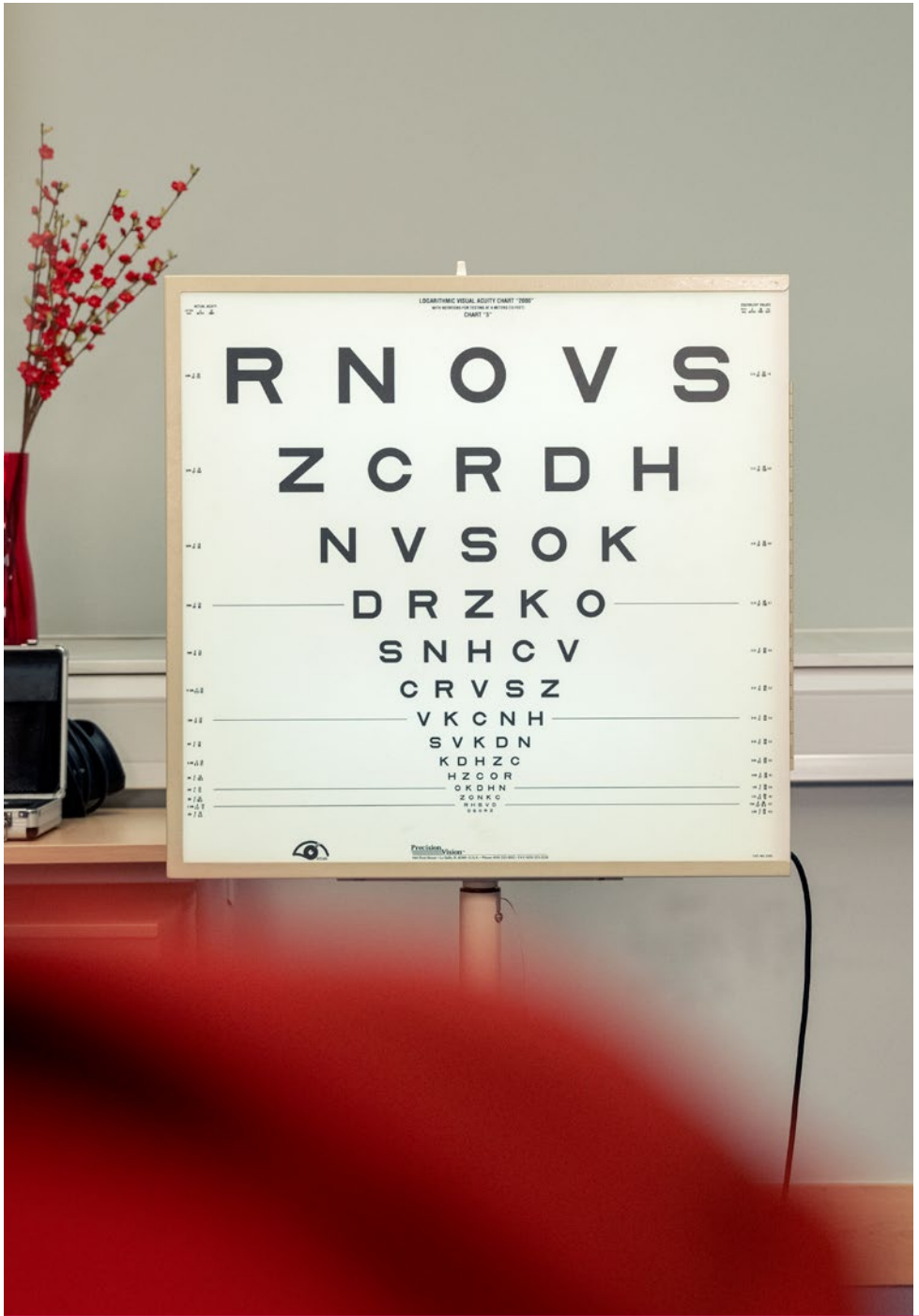
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