CONDITION

Retinal detachment

Retinal detachment happens when the light-sensing retina separates from the back of the eye and needs urgent treatment to protect sight.

WHAT IT IS
Separation of the light-sensing retina from the eye

BODY SYSTEM
Eyes and vision

MAIN SYMPTOMS
New floaters, flashing lights, shadow, blurred vision

WHAT CAUSES IT
Retinal tear, scar-tissue pulling, or fluid leakage

HOW IT IS DIAGNOSED
Dilated eye examination, sometimes eye ultrasound

MAIN TREATMENT
Laser treatment or surgery to reattach the retina

CAN IT BE CURED?
Sometimes - surgery can reattach the retina

IS IT AN EMERGENCY?
Yes - new flashes, floaters, or a shadow

LONG-TERM OUTLOOK
Earlier repair usually offers a better chance of useful vision

Overview

The retina is a thin layer of light-sensitive tissue lining the back of your eye. It changes light into electrical signals that travel to your brain, allowing you to see.

A retinal detachment happens when part or all of the retina separates from the layer beneath it. Once detached, the retina cannot work normally and may lose its blood and oxygen supply. Treatment is usually needed quickly to protect as much sight as possible.

Retinal detachment is generally painless. Warning signs often include sudden flashes of light, new floaters, or a dark curtain or shadow moving across your vision. These symptoms need urgent assessment even if they affect only a small area or seem to improve.

There are three main forms:

- Rhegmatogenous detachment: Fluid passes through a tear or hole in the retina. This is the most common form.
- Tractional detachment: Scar tissue pulls the retina away from the back of the eye, often because of advanced diabetic eye damage.
- Exudative detachment: Fluid collects beneath the retina without a tear, sometimes because of inflammation, abnormal blood vessels, or a growth inside the eye.

Symptoms

Symptoms usually begin in one eye, although both eyes can be at risk. A detached retina does not normally cause pain.

Possible warning signs include:

A few stable floaters can be common, especially with age. The important warning is a new shower of floaters, particularly when it occurs with flashes or a shadow.

If the central part of the retina, called the macula , detaches, fine central vision may become blurred or lost. The macula is responsible for detailed tasks such as reading, recognising faces, and driving.

Symptoms may be less obvious when traction or fluid leakage causes the detachment gradually. Any unexplained change in vision still needs an eye examination.

- A sudden increase in floaters, which may look like dots, threads, cobwebs, or small dark shapes
- Brief flashes of light, often at the edge of vision
- A dark curtain, veil, or shadow spreading across part of your sight
- New blurred, distorted, or reduced vision
- Loss of side vision

Causes and risk factors

Most retinal detachments happen after a tear develops in the retina. The clear gel filling the eye, called the vitreous , becomes more liquid and shrinks with age. As it pulls away from the retina, it can occasionally create a tear. Fluid can then pass through the tear and lift the retina.

This age-related change is known as posterior vitreous detachment . It is common and usually does not cause retinal detachment, but new symptoms must be checked because it can

sometimes tear the retina.

Factors that increase risk include:

Tractional detachment can happen when scar tissue grows on the retina and contracts. A major cause is advanced diabetic retinopathy, in which long-term damage to retinal blood vessels leads to bleeding and scarring.

Exudative detachment results from fluid leaking beneath the retina. Possible causes include inflammation inside the eye, abnormal blood vessels, and, less commonly, a tumour. The underlying cause needs separate investigation and treatment.

- Increasing age
- Severe short-sightedness, also called high myopia
- Previous cataract or other eye surgery
- A serious eye injury
- A previous retinal tear or detachment in either eye
- A close family history of retinal detachment
- Thin or abnormal areas of retina, such as lattice degeneration

Diagnosis

An eye specialist usually confirms retinal detachment by examining the inside of your eye through a widened, or dilated, pupil. Eye drops are used to enlarge the pupil so the retina can be inspected, including its outer edges. The examination may be bright and temporarily uncomfortable, but it should not be painful.

If blood, a dense cataract, or another problem blocks the view, an eye ultrasound can show whether the retina is detached. Optical coherence tomography, or OCT , may be used to create detailed images of the retina and check whether the macula is involved.

Your pupils may remain enlarged for several hours after the examination. Vision can be blurred and unusually sensitive to light, so you may need someone else to take you home.

Treatment and management

Treatment depends on the type, size, and position of the detachment, whether the macula is involved, and the general health of the eye. An ophthalmologist, a doctor specialising in eye care, will explain the suitable options.

A retinal tear found before the retina detaches may be sealed with laser treatment or freezing treatment, called cryotherapy. These treatments create a scar around the tear, helping prevent fluid from passing underneath it.

A detached retina usually requires an operation. Common procedures include:

More than one procedure may be used. Silicone oil sometimes needs to be removed during a later operation.

If a gas or air bubble is placed in your eye, you may need to keep your head in a particular position for part of the day. Follow the positioning instructions given by the surgical team.

You must not fly or travel to high altitude while a gas bubble remains in the eye because lower air pressure can make the bubble expand. Nitrous oxide, sometimes called gas and air, can have the same effect. Tell every healthcare professional and anaesthetist about the bubble before any procedure.

After treatment, eye drops and follow-up examinations help manage inflammation, eye pressure, and healing. Avoid rubbing the eye and follow the surgical team's advice about washing, lifting, exercise, work, and driving.

- Pneumatic retinopexy: A gas bubble is injected into the eye to press the retina back into place. Laser or freezing treatment seals the tear.
- Scleral buckle: A soft band is attached around the outside of the eye to reduce pulling and support the retinal tear.
- Vitrectomy: The vitreous gel and any tissue pulling on the retina are removed. The eye is then filled with gas, air, or silicone oil to hold the retina in place while it heals.

Complications

Without successful treatment, a retinal detachment can lead to permanent sight loss in the affected area. The likely amount of recovery is influenced by how much retina detached, how long it was detached, and whether the macula was involved.

Sometimes scar tissue develops on or beneath the retina, causing it to wrinkle or detach again. This is called proliferative vitreoretinopathy and may require further surgery.

Other possible complications of treatment include:

An operation can successfully reattach the retina without restoring all lost vision. Anatomical healing and visual recovery are related, but they are not the same thing.

- Another retinal tear or detachment

- Cataract, particularly after vitrectomy
- Raised or lowered pressure inside the eye
- Bleeding or inflammation
- Double vision or a change in glasses prescription
- Infection inside the eye, which is uncommon but serious

Prevention

Not every retinal detachment can be prevented. Age-related changes, severe short-sightedness, and inherited retinal features cannot be removed.

Prompt treatment of a retinal tear may stop it from becoming a detachment. If you have a known high risk, regular dilated eye examinations may help find changes that need monitoring or treatment.

Protective eyewear can reduce the chance of an eye injury during hazardous work or activities. Managing diabetes and attending diabetic eye screening can reduce the risk of advanced diabetic retinal damage, although it cannot remove the risk completely.

Learning the warning signs is especially important after cataract surgery, an eye injury, or a previous detachment. Symptoms can occur months or years later.

Living with it and what to expect

Recovery differs from person to person. The retina may take time to settle after surgery, and sight is often blurred at first because of swelling, eye drops, or a gas bubble. A gas bubble can appear as a moving line across your vision as it gradually becomes smaller.

Some improvement may continue over weeks or months. If the macula stayed attached, useful vision is more likely to be preserved. If it detached, central vision may remain blurred or distorted even after successful repair. Glasses can improve focusing problems but cannot restore retinal cells that have been permanently damaged.

Some people need more than one operation. Others develop a cataract or need treatment for scar tissue later. Keeping planned follow-up appointments allows the eye team to check retinal attachment, eye pressure, and healing.

Changes in depth perception or side vision may affect reading, mobility, work, and driving. Low-vision services can provide magnifiers, lighting advice, screen tools, and practical support

when sight does not fully recover.

A detachment in one eye increases the risk of a tear or detachment in the other eye. This does not mean it will happen, but new symptoms in either eye always need urgent assessment.

When to get medical help

Seek urgent, same-day eye care if you develop:

Contact an emergency eye service or emergency department if urgent specialist eye care is not otherwise available. Do not wait for a routine appointment or for symptoms to become severe. If your vision is affected, do not drive yourself.

After surgery, get urgent advice for severe or increasing eye pain, rapidly worsening vision, marked redness, pus-like discharge, nausea with eye pain, or a new curtain or shadow. Mild irritation and blurred vision may be expected during recovery, but the surgical team should explain what is normal for your procedure.

Routine follow-up is for checking healing, eye pressure, vision, and the other eye when there are no new warning symptoms. Keep these appointments even if the eye feels comfortable.

- Sudden new floaters or a rapid increase in floaters
- Flashing lights that were not present before
- A dark curtain, veil, or shadow in your vision
- Sudden loss of side or central vision
- New symptoms after an eye injury or recent eye operation

Common questions

Can a retinal detachment heal on its own?

Most retinal detachments do not reattach permanently without treatment. A small retinal tear may be sealed before detachment develops, but an established detachment usually needs an operation.

How quickly does retinal detachment need treatment?

It needs urgent specialist assessment. The timing of an operation is based on the detachment's position, progression, cause, and whether the macula is still attached. New warning symptoms should be assessed the same day rather than watched at home.

Does retinal detachment hurt?

Usually not. Flashes, floaters, shadows, and reduced vision can occur without pain or redness. The lack of pain does not make these symptoms less urgent.

Will my eyesight return after surgery?

Some people recover good useful vision, while others have lasting blur, distortion, or missing areas of sight. Recovery is generally better when treatment occurs before the macula detaches, but no operation can guarantee a particular result.

Can I fly after retinal detachment surgery?

Not if there is a gas or air bubble in your eye. Flying or going to high altitude can make the bubble expand and dangerously increase pressure inside the eye. Wait until the eye team confirms that the bubble has completely gone. This restriction does not usually apply to silicone oil, but check your specific travel plan with the surgical team.

Can retinal detachment happen again?

Yes. The treated retina can detach again, sometimes because of a new tear or scar tissue. A tear or detachment can also develop in the other eye. Attend follow-up visits and seek urgent care for any new flashes, floaters, shadows, or loss of vision.

Sources

- National Eye Institute - Retinal Detachment
- NHS - Detached retina
- American Academy of Ophthalmology - Detached Retina
- American Society of Retina Specialists - Retinal Detachment
- MedlinePlus - Retinal Detachment