

# Treating a macular hole in your eye to improve vision

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Information for Patients

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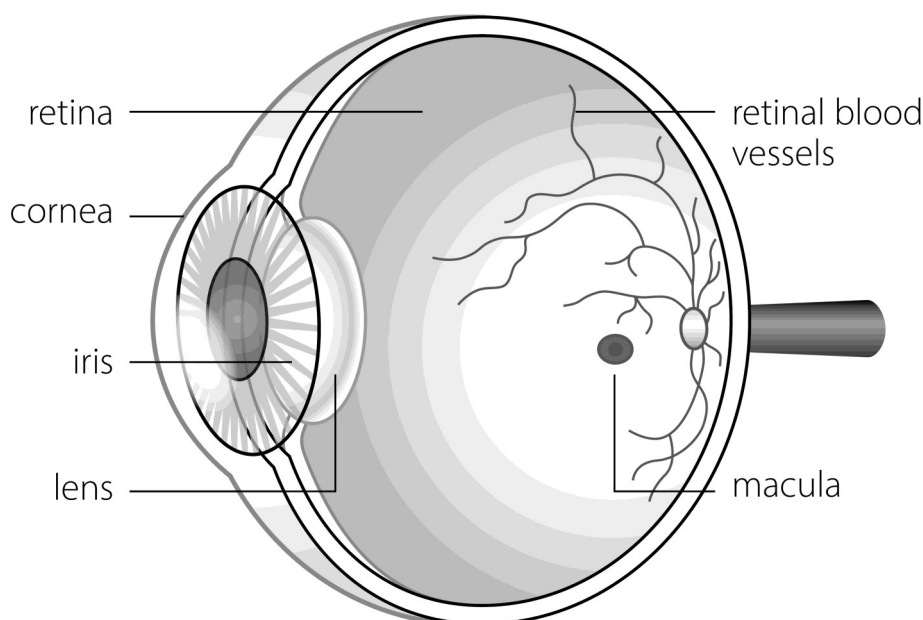
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## What is a macular hole?

A macular hole is a small break in the centre of the eye's light-sensitive tissue called the retina (the macula). The macula gives us the sharp, central vision we need for reading, driving and seeing fine detail.

A macular hole can cause blurred and distorted central vision. Macular holes are linked to ageing and usually occur in people over the age of 60.

A macular hole is also known as a macular cyst, a retinal hole, a retinal tear or a retinal perforation.



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## Is it the same as age-related macular degeneration?

No. Macular holes and age-related macular degeneration are 2 different conditions, although the symptoms are similar. Both conditions are common in people 60 years and over.

## What causes a macular hole?

Most of the inside of the eye is filled with a jelly-like substance that fills about 80% of the eye and helps the eye keep its round shape. This is called the vitreous. The vitreous contains millions of thin threads (fibres) that are attached to the surface of the retina. As we age, the vitreous slowly shrinks and pulls away from the retinal surface. The space left by the vitreous shrinking is then filled with fluid. This is normal. In most cases, there are no side effects. Some patients may get black spots appear in their vision, known as floaters.

However, if the vitreous is strongly attached to the retina when it tries to pull away, it can tear the retina and create a macular hole. Another way a macular hole can form is that after the vitreous has pulled away from the retina, some fibres can remain on the retinal surface and contract. This increases tension on the retina and can lead to a macular hole. In either case, the fluid that fills the space left by the vitreous shrinking can then move through the macular hole onto the macula and cause blurring and distorting of your central vision.

Macular holes can also occur from:

- having an eye disorder such as short-sight (high myopia), macular pucker, and retinal detachment
- having an eye disease, such as diabetic retinopathy and Best disease
- having an injury to the eye

## What are the symptoms of a macular hole?

Macular holes often start slowly. In the early stage of a macular hole, people may see a slight distortion or blurriness in their straight-ahead vision. Straight lines or objects can start to look bent or wavy. Reading and doing other everyday tasks with the affected eye can be difficult.

## Are there different types of a macular hole?

Yes. There are 3 stages to a macular hole:

- Foveal detachments (stage 1) - without treatment, about 50% of stage 1 macular holes get worse.
- Partial-thickness holes (stage 2) - without treatment, about 70% of stage 2 macular holes get worse.
- Full-thickness holes (stage 3).

The size of the hole and where it is on the retina affect how much it will affect a person's vision. When a stage 3 macular hole develops, most central and detailed vision can be lost. If left untreated, a macular hole can lead to a detached retina, a sight-threatening condition that should get medical attention straight away.

## How is a macular hole treated?

Although some macular holes can seal themselves and need no treatment, surgery is needed in many cases to help improve your vision. This surgery is called a **vitrectomy**. The vitreous is removed to stop it from pulling on the retina and replaced with a bubble containing a mixture of air and gas. The bubble acts as a bandage that holds the edge of the macular hole in place as it heals. Surgery is usually done under local anaesthesia (where you are awake for the surgery and your eye is numbed so you feel no pain) and usually you do not need to stay in the hospital overnight after your surgery.

After your surgery, you must stay in a face-down position, normally for 1 or 2 days but sometimes for as long as 2 to 3 weeks. This allows the bubble to press against the macula, sealing the hole in your eye.

Stopping in a face-down position is very important for the success of the surgery. Because this position can be difficult for many people, it is important to talk about this with your doctor before surgery.

## What are the risks of surgery?

The most common risk with having macular hole surgery is an increase risk of a cataract forming. In most patients, a cataract can form quickly, and often needs surgery to remove it. Other less common risks include:

- Infection of the eye (endophthalmitis)
- The thin layer at the back of the eye (retina) becomes loose (retinal detachment)

For a few months after surgery, you should not travel by air. Changes in air pressure may cause the bubble in your eye to expand, increasing the pressure inside your eye.

## How successful is this surgery?

This can be different for each patient. People that have had a macular hole for less than 6 months have a better chance of recovering vision than those who have had a macular hole for a longer time. Your vision may continue to get better for as long as 3 months after surgery. You should talk to your doctor about your recovery before your surgery.

## What if I cannot stay in a face-down position?

If you cannot stay in a face-down position after surgery, your vision may not improve as well as it could. People who are unable to stay in a face-down position for this length of time may not be good candidates for a vitrectomy. However, there are a number of devices that can make the face-down position easier on you. There are also some approaches that can decrease the amount of face-down time. You should talk to your doctor about these before your surgery.

## Is my other eye at risk?

If you get a macular hole in one eye, there is a 10 to 15% chance that a macular hole can happen in your other eye, over your lifetime. Your doctor can talk about this with you.

## Contact details

If you have any concerns about your eyes you should contact the Eye Casualty Department on **0116 258 6273**.

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