

Macular hole

Your eye doctor has told you that you have a macular hole. This leaflet will help you decide what to do. You might want to discuss the information with a relative or carer. If you have an operation, we will ask you to sign a consent form, so it is important that you understand the information in this leaflet before you agree to go ahead with surgery. If you have any questions, you might want to write them down to help you remember to ask one of the hospital staff.

What is a macular hole?

The retina is the thin layer of nerve tissue lining the back of the eye that detects light and sends information to the brain to allow us to see.

The macula is the central area of the retina and is used for seeing fine detail and reading. Sometimes, a hole forms in the macula, which affects your vision, particularly when reading and performing other visually demanding tasks, but it does not cause total blindness. Figure 1(A) is a cross-sectional view of the retina showing how the macular hole appears inside your eye, and figure 1(B) shows the normal retina.

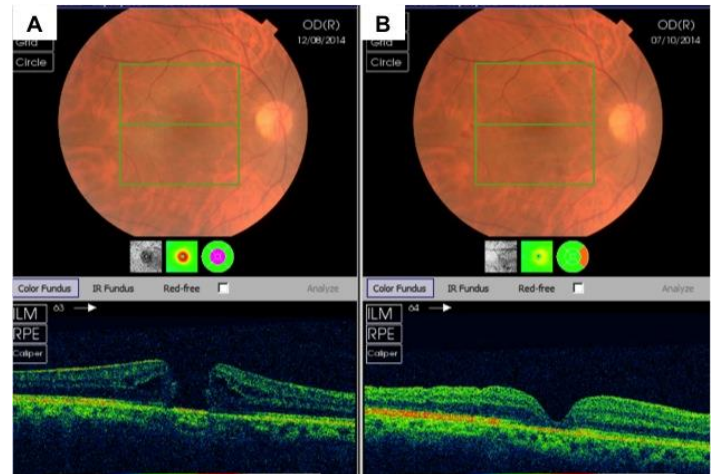


Figure 1: Optical Coherence Tomography (OCT) image of macular hole

A: Pre-operative (demonstrating macular hole).

B: Post-operative (demonstrating 'closed' macular hole)

Treatment of macular hole

The only consistently successful way to treat a macular hole (Figure 1) is an operation. Eye drops or glasses are ineffective. An alternative to surgery is a new therapy called ocriplasmin which is a drug injected into the eye. Although an initial study has shown that this treatment may be beneficial in selected cases, it is still undergoing clinical assessment. Generally, it is not as

reliable as surgery and the majority of patients treated with ocriplasmin will go on to have surgery. This option can be discussed with your consultant.

Some patients decide not to have surgery and accept the poor central vision in the affected eye. This is reasonable, especially if the vision in the other eye is not affected. There is no “right” or “wrong” decision as every person has different needs and priorities. You should discuss your reasons for wanting to proceed with an operation, or for deciding not to have surgery, with your consultant.

Risks of surgery

The success rate of macular hole surgery – a vitrectomy – depends on many factors, and you should discuss these with your eye doctor. Overall, there is about a 90% chance of “closing” the macular hole. Nevertheless, there is a small chance that your vision may not improve after surgery, even if the hole is “closed”. Surgery for macular hole repairs is generally very safe. However, there are risks and consequences.

- If you have not had cataract surgery, a macular hole operation will accelerate the development of a cataract. It is therefore likely that you will need cataract surgery in the future. The time frame for this can range from weeks to years.
- There are some possible complications following macular hole surgery such as infection, inflammation, bleeding, retinal

detachment, glaucoma and distortion or alteration of vision, but serious side effects are uncommon.

- There is a very small risk (less than one in 1,000) that you could lose the sight in the operated eye completely as a consequence of the operation.

Anaesthesia for your operation

Most operations for macular holes are performed under a local anaesthetic, which means you will be awake throughout your operation. We will inject local anaesthetic into the area around your eye to numb your eye and prevent you from feeling any pain during the operation. You will not be able to see details of what is happening, but you might be aware of the bright lights or movement in the operating theatre. During the operation, we will ask you to lie as flat as possible and keep your head still.

General anaesthesia, under which you are asleep for the whole operation, is rarely used for macular hole surgery. If you require a general anaesthetic, you will need to follow specific instructions about eating and drinking prior to your operation. Please ask for our leaflets on local and general anaesthetic if you would like more information, or refer to our website here:

<http://www.moorfields.nhs.uk/content/having-operation>



Your operation

The operation to repair your macular hole is called a vitrectomy and usually takes about an hour. The procedure will be supervised by an experienced surgeon, who will either perform the surgery themselves or oversee a more junior surgeon who might undertake part or all of the operation.

Whichever form of anaesthetic you chose, we will give you eye drops before your operation to enlarge your pupils. The surgeon will then make tiny openings in your eye and remove the vitreous (the jelly-like substance) from inside. Your eye is then filled with a bubble of special gas, which presses against the macula and seals the hole.

If we put a gas or air bubble in your eye **you must not fly for the periods of time specified below.** This is because the gas or air bubble will expand in size and thus can lead to raised pressure inside your eye, leading to visual loss.

We use **three types of gases:**

- C3F8 which is long acting and can stay in your eye **for up to 12 weeks.**
- SF6 which can stay in your eye **for up to four weeks.**
- C2F6 which can stay in your eye **for up to eight weeks.**
- Air – which can stay in your eye **for two weeks.**

You will be told after your surgery which type of gas bubble was used.

The surgeon might put small stitches in your eye to close up the opening. The stitches dissolve naturally over about four to six weeks. At the end of the operation, we usually put a pad and shield over your eye to protect it. These will be removed the morning after your surgery.

After your operation – how your eye will feel

Your eye will feel uncomfortable, gritty, and itchy. It might appear red or bruised and the vision is likely to be very poor at first. This is normal for seven to 14 days. We will give you eye drops to reduce inflammation and to prevent infection, and will explain how and when you should use them. You can also take paracetamol for pain relief as advised on the packet. **Please do not rub your eye.**

When to seek advice

If you experience a lot of pain, increasing loss of vision and/or have an increase of redness of the eye, you should telephone Moorfields Eye Hospital Direct for advice on 020 7566 2345 or attend your local A&E department or the Moorfields 24/7 A&E department which is open for emergency eye problems only for a further examination immediately, as you may require prompt treatment.

How long it will take for your eye to heal

Your eye will take between two and six weeks to heal, but your vision might continue to improve for several months.



Your vision

Your vision will be very poor with the gas in your eye. As the gas disperses and is replaced by your eye's natural fluid, you will begin to see a line, which wobbles in your vision, like a spirit level. You will be able to see above the line, but the vision will be fuzzy underneath. This line will continue to ease downwards until only a tiny bubble is left and finally, it too will disappear.

It is important to note that the gas can react with another gas called **nitrous oxide**, which can cause problems in your eye if any is administered. Nitrous oxide is commonly used during childbirth and in A&E as pain relief. Please tell the midwife or A&E staff treating you (or ask your family to) that you have gas in your eye and that **they should not administer any nitrous oxide**. Should you need a general anaesthetic for any reason during this time it is important that you also tell the anaesthetist that you have had surgery and gas in your eye.

Posturing

This is the hardest part of the recovery following your surgery, but the most important. If we put gas or silicone oil in your eye, we usually ask you to "posture" for up to seven days. This means lying or sitting in a position that keeps your face down (so that the bubble floats up and presses the retina into position while it is healing), Your surgeon will advise you if it is necessary for you to posture after your surgery, and will give you another

information leaflet to show you how to do this.

Further appointments

We will arrange a further appointment for you about two weeks after your operation so that we can check that everything is as it should be and to answer any queries you might have.

Other useful contacts

- Advanced nurse practitioner, vitreo-retinal service: phone 020 7253 3411, bleep 417 (Monday/Tuesday/Thursday)
- Senior staff nurse, vitreo-retinal service: phone 020 7253 3411, bleep 422 (Monday–Friday)
- Mackellar ward: phone 020 7566 2590/2589

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Moorfields Eye Hospital NHS Foundation Trust
City Road, London EC1V 2PD
Phone: 020 7253 3411
www.moorfields.nhs.uk

Moorfields Direct telephone helpline
Phone: 020 7566 2345
Monday-Friday, 8.30am-9pm
Saturday, 9am-5pm
Information and advice on eye conditions and treatments from experienced ophthalmic-trained nurses.
Patient advice and liaison service (PALS)



Phone: 020 7566 2324/ 020 7566 2325
Email: moorfields.pals@nhs.net
Moorfields' PALS team provides confidential advice and support to help you with any concerns you may have about the care we provide, guiding you through the different services available at Moorfields. The PALS team can also advise you on how to make a complaint.

Your right to treatment within 18 weeks

Under the NHS constitution, all patients have the right to begin consultant-led treatment within 18 weeks of being referred by their GP. Moorfields is committed to fulfilling this right, but if you feel that we have failed to do so, please contact our patient advice and liaison service (PALS) who will be able to advise you further (see above). For more information about your rights under the NHS constitution, visit www.nhs.uk/choiceinthenhs

