



# Macular Hole

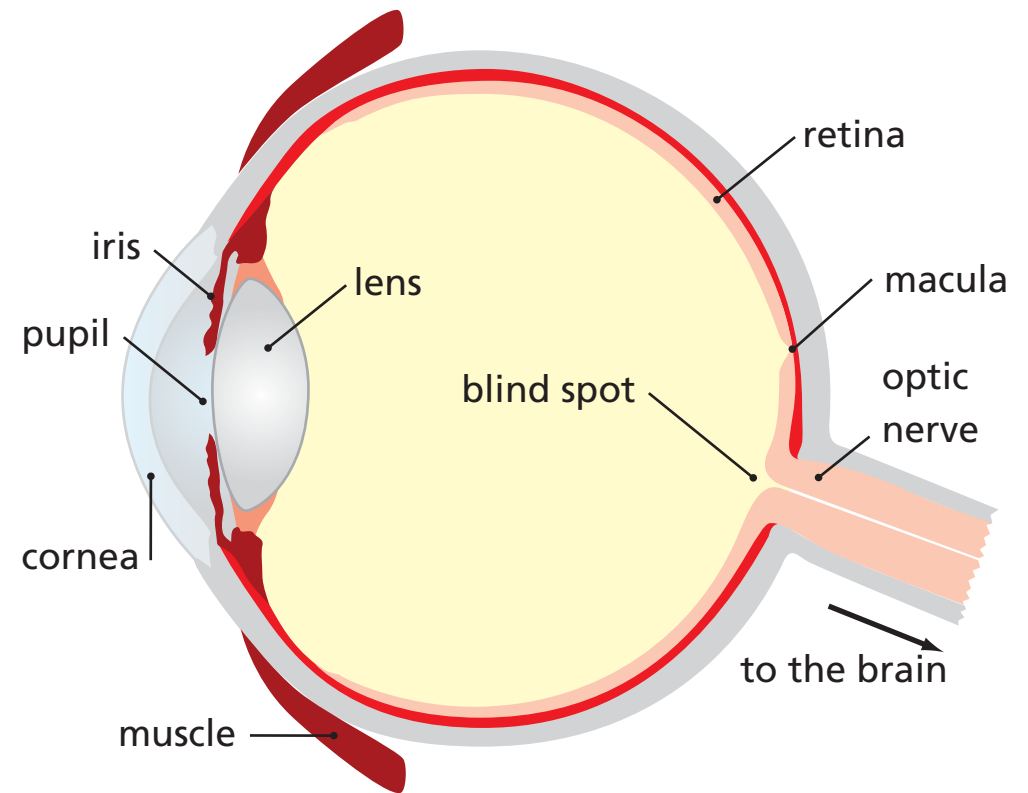
## Macular Hole

Your eye specialist 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 may want to write them down to help you remember to ask one of the hospital staff.

## What is a macular hole?

If you think of your eye as a camera, the retina is like the photographic film. It is a very thin layer of tissue, which is sensitive to the image focussed on it, and sends the information to the brain.

At the very centre of the retina is the macula. This is a very special area of the retina, which we use for reading and recognising complex shapes. Sometimes a hole forms at the macula. If this happens the macula cannot work normally. This affects the vision, particularly for reading and other visually demanding tasks. However, it does not cause total blindness.



*Anatomy of the normal eye*

## Treatment of Macular Hole

The only way to treat a macular hole is an operation. Eye drops or glasses are ineffective.

Some patients decide not to have an operation 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.

## The anaesthetic: Local

If you decide to have a local anaesthetic, you will be awake during the operation. You will not be able to see what is happening, but you may be aware of a bright light. Before the operation, we will give you eye drops to enlarge your pupil. After this, we will give you an anaesthetic to numb your eye. This involves injecting local anaesthetic solution into the area around your eye.

During the operation we will ask you to lie as flat as possible and keep your head still.

The operation normally takes about an hour, but may sometimes take a little longer.

## The anaesthetic: General

If you decided to have a general anaesthetic, we will ask you not to eat or drink for 6 hours before your surgery, although you may drink sips of water up to 2 hours before the operation. Prior to surgery an anaesthetist will speak to you and examine you on the ward. The nursing staff will give you eye drops to enlarge your pupil. When you arrive in the theatre’s anaesthetic room, the anaesthetist will give you an injection in your hand or arm. You will then stay asleep for the whole operation. The anaesthetist will monitor your heart rate, breathing, blood oxygen and blood pressure while you are under the anaesthetic. You may feel tired and sleepy for about 6 to 12 hours after the operation.

## The Surgery

The operation will be performed by an experienced surgeon. A more junior surgeon may perform some, or all, of your operation under the supervision of an experienced surgeon.

You will need an operation called a “vitrectomy” to repair the macular hole. This involves making tiny cuts in the eye and removing the vitreous from inside. Then your eye is filled with a bubble of special gas. The gas dissolves in about 6-12 weeks. It is replaced by the eye’s own aqueous fluid. While the eye is full of gas it cannot see clearly.

We usually put small stitches in the eye. These dissolve naturally over about 4-6 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.

Following the surgery you must *posture*, that is lie or sit in a position that keeps the face down for 10 days. This position allows the gas bubble to press against the macula and seal the hole.

## After the operation:

- The eye will feel uncomfortable, gritty, and itchy. It may appear red or bruised. This is normal for 7-14 days.
- Take paracetamol for pain relief every 4-6 hours.
- The eye takes 2-6 weeks to heal, but the vision may continue to improve for several months.
- **The vision will be very poor with the gas in your eye.**
- As the gas disperses, 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 one day it too will disappear.
- It takes the gas 6 -12 weeks to disperse completely.
- You will be reviewed in clinic about two weeks after the operation
- We will give you eye drops to reduce any inflammation, to rest the eye and to prevent infection. We will explain how and when you should use them. Please don't rub your eye.

While a certain amount of discomfort is normal after the surgery, you should contact the hospital immediately if you have any of the following symptoms:

- A lot of pain
- Loss of vision
- Increasing redness of the eye



## The Gas

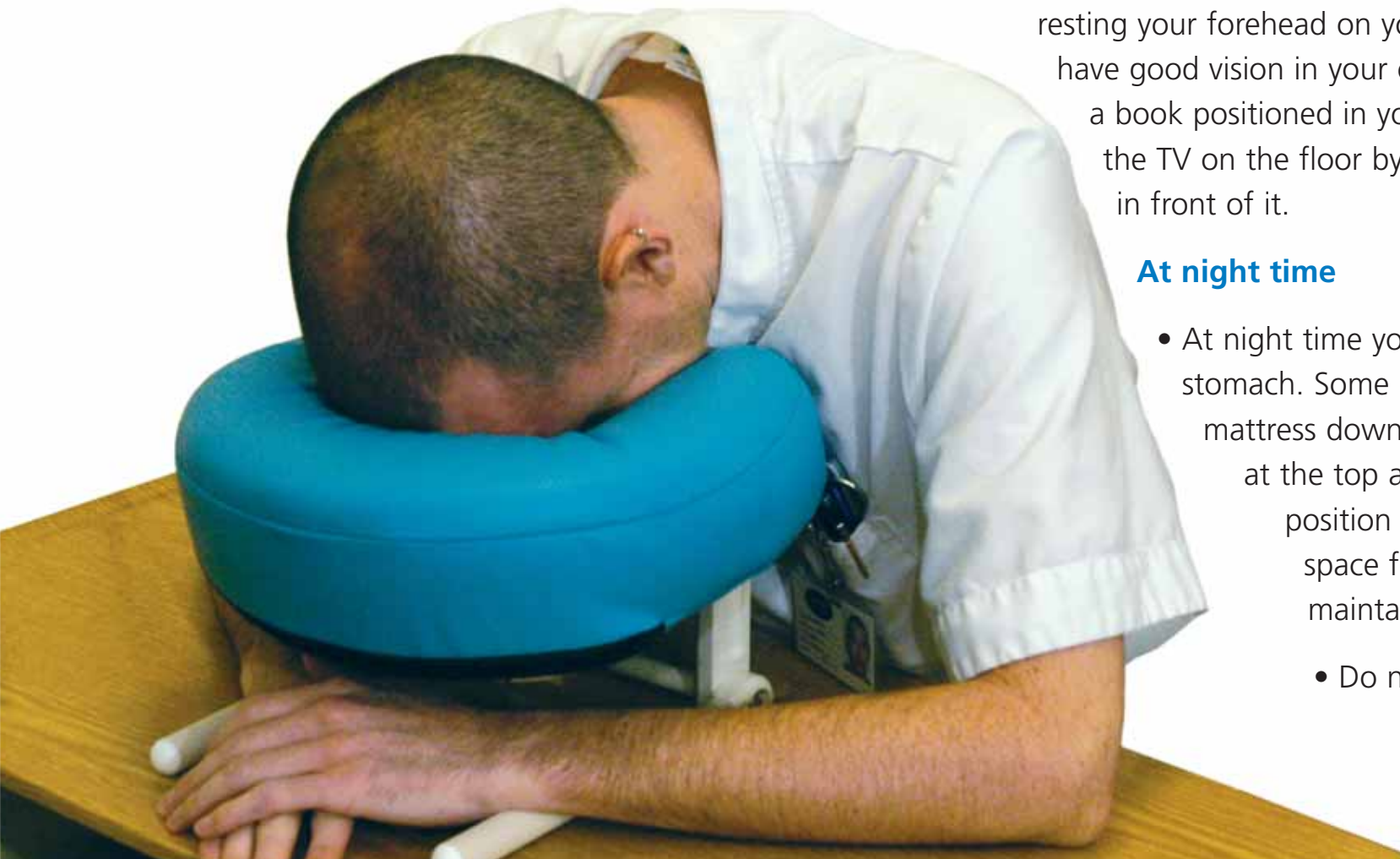
The gas used is called C3F8, which can stay in the eye for 2-3 months.

- **You must not fly while there is gas in your eye.**
- You must inform the anaesthetist if you need a general anaesthetic before the gas has completely gone from your eye, as he/she cannot use nitrous oxide gas in your anaesthetic.

## Posturing

This is the hardest part of the recovery following your surgery but the most important.

We are going to ask you to posture face down. This position allows the gas bubble to float up against the macula providing support while the macular hole heals – a bit like a splint on a broken bone. You must maintain a face down position for 10 days and 10 nights following



the surgery to keep the gas bubble in contact with the macula. The success of your operation depends on how well this positioning is maintained.

## Instructions for face down posturing

### During the day

- Your face and eyes must be looking down as though you are reading a book positioned in your lap. During the day try sitting in a comfortable chair, leaning over a table and resting your forehead on your arms or a pillow. If you have good vision in your other eye it is possible to read a book positioned in your lap or watch TV by placing the TV on the floor by your feet and putting a mirror in front of it.

### At night time

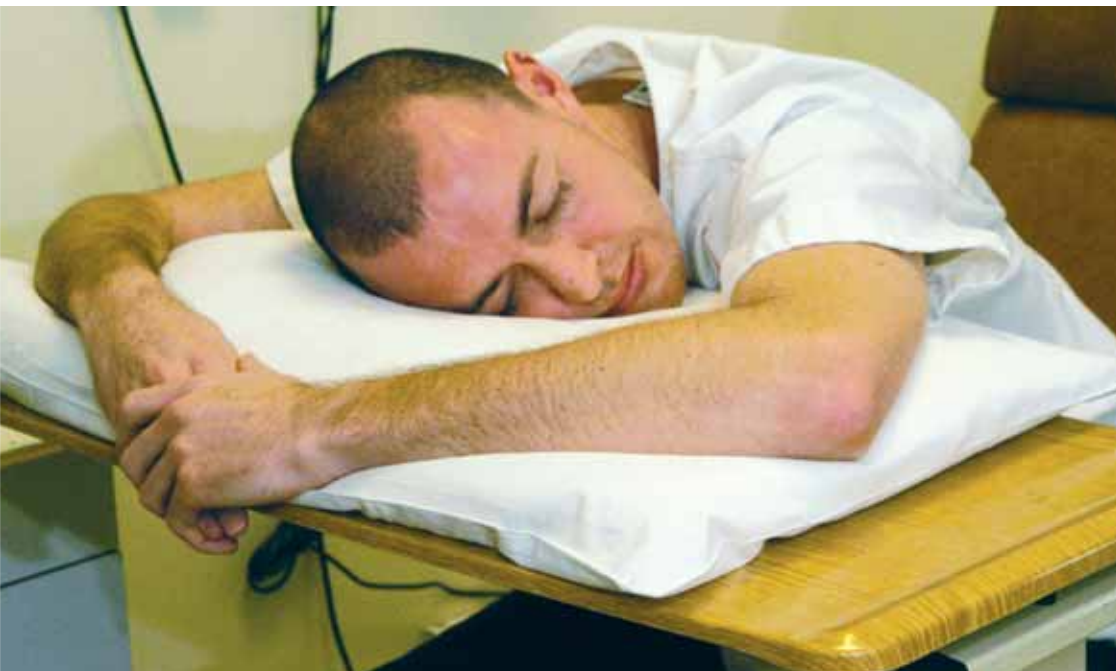
- At night time you will have to sleep on your stomach. Some patients have moved the mattress down the bed to allow a space at the top and have placed pillows in a 'v' position on the base of the bed to allow space for you to breathe while still maintaining the face down position.
  - Do not sleep on your back.

## How long must I posture for?

- This positioning must be maintained night and day.
- This positioning must be maintained for 10 days.
- You must carry out the posturing for 50 minutes out of every hour.

**Please avoid sitting or lying in bed for long periods of time without moving your legs. It is important for you to avoid prolonged immobility. When you are sitting, try moving your ankles around and going up and down on your tiptoes. During your 10 minute rest periods, you are able to walk around.**

- You cannot go out shopping, gardening and so on. You are confined to the house.



## Is there equipment available to help me?

- There is a variety of equipment available for hire to help with the posturing. Oakworks hire out a posturing pillow at a cost of £80 for 3-week hire. Tel: **01454 261 900**.
- Alternatively, the Friends of Moorfields sell a posturing pillow at a cost of £7.

## What can I not do during this period?

- **Do not fly in a plane while there is gas in your eye. When the gas has gone, then you can fly again.**
- **If you require a general anaesthetic for any operation while the gas is still present in your eye, please advise the anaesthetist not to use nitrous oxide gas in the anaesthetic and contact your ophthalmologist (eye doctor).**

**We know that posturing is very difficult, but it is necessary. Most people find the following helpful:**

- Talking books
- Radio
- Provided you have good vision in the other eye, you can read
- Watch TV by placing the TV on the floor by your feet and putting a mirror in front of it. A portable DVD player may be useful, as you can open the screen so that it lies flat.
- If you have good vision in the other eye, you can use a portable computer, with a screen that can lie flat.
- Buy ready meals if you live alone
- Posturing pillows
- Ask friends to visit to break up the day.

## Some useful contacts:

### **Vitreo-Retinal Sister**

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based at City Road site

**Ph: 0207 253 3411 Bleep 4417**

### **Moorfields Direct (Nurse Led helpline)**

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**Ph: 0207 566 2345** Monday to Friday 09:00 to 17:00

### **Mackellar Ward**

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at City Road

**Ph: 0207 566 2590**

### **Moorfields Eye Hospital NHS Foundation Trust**

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City Road, London EC1V 2PD

**Ph: 020 7253 3411**

[www.moorfields.nhs.uk](http://www.moorfields.nhs.uk)

An informative website with feedback from a patient who has had retinal surgery is: **[www.jimlawton.info/myeye](http://www.jimlawton.info/myeye)**

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