



East Suffolk and  
North Essex  
NHS Foundation Trust

# Macular hole surgery and aftercare

***Colchester Eye Centre  
Colchester Primary Care Centre  
Tel: 07780 005814  
Monday to Friday, 9 am–5 pm***

(DPS: 05731-21)



This booklet is designed to help you understand what a macular hole is, what the surgery for it entails and explain the necessary aftercare. This will help you to decide whether to proceed. You may also wish to discuss it with a relative or carer. You will be asked to sign a consent form before your operation, so it is important that you understand this booklet before you decide to go ahead with the surgery.

## **What is a macular hole?**

A macular hole is a problem that affects the macula, which is the area at the very centre of the retina.


The retina is a layer of fine tissue that lines the inside of the eye and senses light. If you were to compare the eye to an old style camera then the retina would be comparable to the film in the camera. The macula is a small area of the retina at the centre, which is responsible for the clear detailed vision you use for activities such as reading and recognising faces. Unfortunately, a hole has developed in this very sensitive area of your eye.

Your symptoms may have started with blurred or distorted vision which caused you to visit your optician or GP.

Alternatively, the macular hole may have been a chance finding during an eye examination undertaken for other reasons. The hole itself is usually not much larger than a pinhead but the effect on vision is significant.

## **What causes the macular hole?**

It is normally a result of the normal aging process but can be caused by an injury to the eye.

The vitreous gel (a jelly-like fluid) inside the eye is firmly attached to the macula. With age, the vitreous gel becomes 

thinner and separates from the retina but in doing so it, sometimes creates traction on the macula and pulls a small piece of retina away, causing a hole to form. It is more common in women than men. In one in five cases the macular hole occurs in both eyes.

## **What can be done to help?**

An operation called a vitrectomy can be performed to prevent your vision worsening and it can sometimes improve your vision.

## **What does a vitrectomy involve?**

A vitrectomy involves your surgeon using tiny instruments to remove vitreous gel from the centre of your eye. Adults do not need vitreous gel inside their eye and natural fluids produced inside your eye will eventually refill the cavity.

The final part of the operation involves injecting a gas bubble into the centre of your eye which, when it comes into contact with your macula, presses on the edges of the hole and helps to close and heal it. This can be achieved only by 'posturing'\*. After your operation you will be asked to posture face-down for 1–4 days so that the bubble can press on the hole.

\* Posturing is explained later in this leaflet.

This bubble will remain in the eye for 2–12 weeks, depending on the type of medical gas used.

## **What happens if I don't have the operation?**

Untreated macular holes do not lead to complete blindness because peripheral vision is preserved. Your ability to see fine detail in the affected eye will not change. This will probably worsen slightly over the following couple of years.



## **How successful is the operation?**

Currently we have a 90% success rate in closing a macular hole but this applies only if you adhere to strict face-down posturing for the first night and three days after surgery.

Maximum visual recovery may take 3–6 months after surgery and in some cases up to a year. Your vision will not return to how it used to be before the problem started. The distortion should disappear and your vision will stabilise.

10% of macular holes will not respond to surgery and remain open. In these cases we may try again. Your surgeon will discuss this with you.

## **What happens next?**

If you wish to proceed with surgery you will be given a date for your operation. You will need to have a pre-assessment before coming in for surgery, which will include taking note of any medications and questions about your general health, to determine if you are fit enough for the operation.

It is important at this stage to determine the following:

- that you will be able to lie flat on your back for the operation, which usually lasts 60 minutes
- that you will be able to put in eye drops after surgery for approximately one month, or have someone available to help you
- that you will be able to arrange transport to and from the hospital for your operation and follow-up appointments.

It is important to know these details now so that other arrangements can be made if necessary.



The pre-assessment nurse will also explain what you need to do before and after the operation and answer any questions you may have.

Your operation will be carried out under local anaesthetic as a day case at Colchester Eye Centre. This means that you can eat and drink on the day of your operation and you will spend only 4–6 hours in hospital.

If you cannot attend on the date of your operation or if you have a cold, flu or an infection, please contact the Eye Admissions Office straight away, so that your appointment can be re-arranged (the phone number will be on your letter).

## **The day of the operation**

On the day of your operation you should report to the Eye Theatres Admissions Unit, which is located on the first floor of the Primary Care Centre. It is well signposted from the main entrance.

On arrival, show your appointment letter to the clerk or nursing staff. You will then be directed to a seating area. You do not need to get undressed for vitreoretinal surgery but we suggest you wear loose fitting, comfortable clothes. Do not bring valuables with you. It may be useful to bring something to eat.

The nurse will carry out a few preliminary checks, including blood pressure and pulse. You will also be given eye drops to enlarge the pupils of the eyes, up to one hour before your operation. A member of the surgical team will examine your eye and discuss the risks and benefits of surgery before asking you to sign a consent form, unless you have already done this in clinic.



## Surgery

Surgery is performed under a local anaesthetic, which means you will be awake during the operation. A local anaesthetic involves introducing solution into the tissues surrounding the eye to numb the area. The operation will take about 60 minutes. A nurse will hold your hand throughout, so if you need to move or feel any discomfort, you can let them know by squeezing their hand.

You will need to lie flat and it is important you keep still during the operation. Your head will be covered so you will not be able to see what is happening but you may be aware of a bright light. At the end of the operation, small dissolvable stitches may be put in the eye (this varies from patient to patient) and an eye pad dressing applied.

## Posturing

'Posturing' is a term used to describe the position your head has to adopt after surgery because a bubble of gas or air was injected into your eye during the operation. The bubble of gas must continue to push against the area where the macular hole had been in order for the hole to seal.

Posturing face down commences immediately following macular hole surgery. The posturing time varies depending on the actual size of the macular hole but only if the hole is smaller than 400 microns. Otherwise the routine is normally:

- face down day and night of operation day, for 45–50 minutes of every daytime hour, then
- face down during the daytime for three days
- the following nights you will be asked to lie on the opposite side to the affected eye and continue at night time sleeping on that side until the gas bubble has disappeared.



The nurse will explain how to posture at your pre-assessment and give you verbal and written instructions before you are discharged.

After your operation, the surgeon will explain the exact details specific to you, if necessary.

Some points to remember about the bubble:

- initially the bubble is large enough to make your vision worse, because the gas makes everything out of focus. This will last up to 2–3 weeks
- as the bubble reduces in size it will appear as a fluid level (like a spirit level). You will be able to see above this line. This is where the gas meets the fluid, which gradually replaces the gas bubble. The line will move in your vision with head movements and over time you will see more
- the bubble will disappear by itself between two and 12 weeks, depending on the type of medical gas used, eventually breaking up into smaller bubbles and disappearing completely from vision
- as long as there is gas in your eye, you must not fly in a plane, because changes in air pressure will cause the bubble to expand, which will result in pain and can lead to loss of sight
- to a lesser extent, the same thing happens with changes in atmospheric pressure, so no bungee jumping or scuba diving!
- if you need to have a general anaesthetic, please tell the anaesthetist you have a gas bubble in order to avoid the use of nitrous oxide, which can cause a dangerous rise in eye pressure
- do not lie on your back until the bubble disappears completely.



## Discharge

You will return to the admissions and discharge unit to recover and, unless otherwise advised, may leave 30 minutes after your surgery.

Before you go home, we will give you verbal and written information on aftercare and a minimum of three different eye drops. These drops are used to prevent infection and to help make the eye feel more comfortable. If your eye is difficult to open, you may find it easier if your partner/friend helps you. Drops are continued for one month. The nurses in the admission and discharge unit will discuss how and when to put in your drops.

We strongly recommend that you arrange for a relative or friend to take you home. You may prefer someone to stay with you overnight. This is especially important if you cannot rely on the other eye for good vision or 'posturing' following insertion of a gas bubble.

## Recovery

It is unusual to experience severe pain after this type of operation, although you may be aware of mild discomfort or a scratching sensation.

If you have discomfort, we suggest you take pain relief such as paracetamol every 4–6 hours (maximum of eight tablets in 24 hours) but not aspirin, which can cause bleeding.

The eye may be red and feel 'gritty' or even itchy after surgery and this may last for 7–14 days. Please do not rub the eye and ensure that you wash your hands thoroughly before and after using eye drops. Fingernails should be kept short and clean.





You may need prompt treatment if you experience any of the following symptoms:

- severe pain
- loss of vision (if a gas bubble is inserted your vision will be affected by its presence in the eye)
- nausea, headache or intolerance of lights
- increased redness.

**Please contact us urgently on one of the numbers on the back of this booklet, or on your post-operative information leaflet, if affected.**

## **Appointments after surgery**

- The day after surgery a nurse will telephone you.
- 7–10 days after surgery you will see the consultant or one of his team, who will check that your eye is healing well. You will be advised which, if any, of the drops you can stop.
- One month after surgery you should have finished all your drops. We will be able to scan your retina to see how well the macula is healing. A further appointment will be scheduled for 2–3 months later.

## **Risk of complications**

- One of the most common side effects is the formation of a cataract. Approximately 70–90% of patients develop a cataract in the first year after surgery. If the cataract is significant, you may need an operation. This surgery is far less complicated and requires no posturing afterwards.
- 10% of patients may experience increased pressure, which can be treated with eye drops



- There is a 4–5% risk of a retinal tear, which would need treatment that includes a gas bubble. This may alter your posturing positions but clear instructions will be given.
- There is a 1% chance of developing a retinal detachment after surgery, which would require another operation to correct.
- There is a less than 1 in 1,000 chance of developing a serious infection or haemorrhage in the eye, which could result in total blindness.

## **What are the signs of infection or increased pressure?**

- nausea / headache / severe pain / intolerance of lights
- painful, red sore eye
- sticky discharge
- any deterioration in vision.

## **What are the signs of a retinal detachment?**

- light 'flashes'
- the presence of a shadow which partly obscures vision, which may spread over time
- large 'floaters' or spots.

**If you experience any worrying symptoms, please contact us on one of the numbers on the back of this booklet.**



# Frequently asked questions

## **I live on my own. How am I going to cope?**

We recommend you arrange for someone to help at home for at least a week while you are posturing. Ask your family or friends to help for two weeks, especially with shopping. Before coming to hospital, stock up with ready-meals to pop in the oven or microwave.

## **How do I wash my face?**

You can apply a shield and wash your face with a flannel, and shave. If your eye needs bathing, use warm boiled water. Gently clean your eye using some cotton wool, while keeping your eye closed. Do not press down on the eyeball. Wipe gently from the nose outwards and discard the cotton wool after each wipe. Repeat until the lids appear clean. Avoid rubbing your eye and avoid smoky or dusty environments.

## **When can I go back to work?**

You will not be able to return to work while you are still posturing. It also depends on what you do and whether the gas bubble is disturbing your vision, which may interfere with your work. Work can usually be resumed within a month but heavy manual work may require a longer convalescence period. We can discuss this with you when you attend for your follow-up appointment.

## **When can I drive?**

You should not drive until after your doctor at the hospital advises it is safe to do so.



### **Can I watch TV and read books?**

Yes, you will not damage your eye. If your eyes begin to feel tired, stop and rest for a while.

### **Can I do the gardening?**

Do not do any gardening until we have checked your eye(s) first. When you resume gardening, it is best to start with light gardening, such as potting plants etc.

Wear either your glasses or protective eyewear. Wait at least two months before lifting heavy compost bags or undertaking any heavy manual work. It will depend on how your eye is settling down and we will be able to advise you.

### **Can I cook and do the housework?**

Light housework, such as washing-up and vacuuming, may be carried out in your 10–15 minutes breaks. Have quick meals to put in the microwave.

### **Can I go shopping?**

Ask someone else to do the shopping until you have stopped posturing. After that you may shop, as long as you do not strain to pick up heavy bags, because it is best to refrain from heavy lifting for up to two months.

### **Can I travel?**

You can travel as long as you keep your head in the desired position. You must not fly until we have checked that all the gas has gone, however. After you have stopped posturing, you can travel on the bus, train etc.



**I enjoy walking, jogging, swimming and going to the gym.**

**When can I start again?**

When you are posturing, you have 10–15 minutes free in every hour to go for a short walk. After six weeks, gentle jogging or lifting light weights at the gym or exercise classes may be resumed. Contact sports, such as rugby or heading a football, should be avoided for a longer period of time. Swimming may be resumed once you have completed the eye-drops and your eyes feel comfortable with no irritation, but it is best to check with us first.

**Will I damage my eye if I move my head quickly / sneeze hard / cough or bend down to lift something?**

You must not strain to lift anything very heavy as you may add pressure to the eye and make your eye sore. Sneezing and coughing and moving quickly will not damage your eye.

**When can I stop being careful?**

The first three months is a crucial period for the eye to settle down. During this time you must not over exert yourself. Take things easy. In the long term, you must avoid any trauma to the head or eye, such as falling and banging your head, which may disrupt the retina and macula.

**Will I need glasses?**

If you wear glasses already, the lens over the operated eye may need changing a couple of months after your operation. If you did not wear glasses before, it may be necessary to wear them in order to obtain the best possible vision.



## Can I wear contact lenses?

If you already wear prescriptive or cosmetic contact lenses you should stop wearing them for at least six weeks after your operation because you are using eye drops. Once you have finished the drops, we will assess the eye's suitability for contact lens wear.

Please note these time limits above are just a guide, as it will depend on individual cases. Always check with the ophthalmologist first.

## Contact details

If you are worried or unsure about your individual circumstances please telephone **07780 005814**, Monday to Friday, 9 am–5 pm.

**Out of hours** – Weekdays 5 pm–7 pm and weekends and bank holidays, 11 am–4 pm, please telephone **01206 286882**, or contact your GP, or go to a walk-in centre or the nearest accident and emergency department.



## Your experience matters

We value your feedback. Please help us improve our services by answering a simple question, in our online survey – “Overall, how was your experience of our services?”

This survey is known as “The Friends and Family Test”.

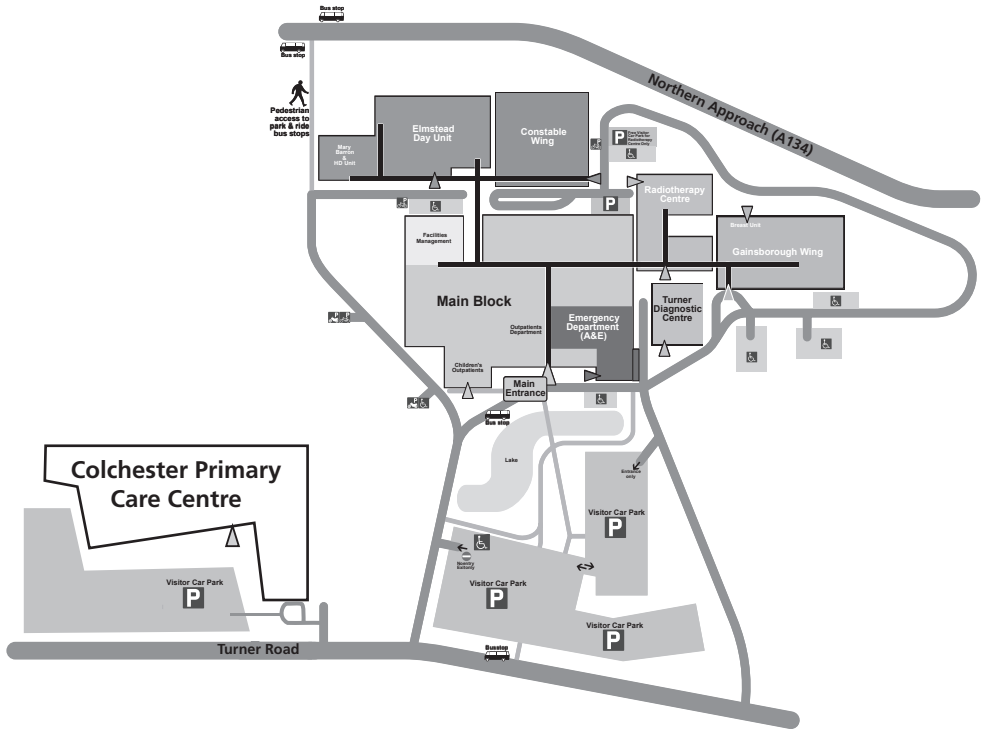
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Thank you very much.

# How to find Colchester Primary Care Centre



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need this leaflet in  
an alternative format

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