

Macular Hole Surgery and Aftercare

Introduction:

This leaflet is designed to help you understand what a macular hole is and what the surgery for it entails and explain the necessary aftercare. This will help you to decide whether to proceed and you might want to discuss it with a relative or carer. Before your operation you will be asked to sign a consent form so it is important that you understand this leaflet before you decide to go ahead with 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 that is responsible for clear detailed vision which you would 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 very 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 macula 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 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 therefore helping to close and heal it.

This can be achieved only by posturing (see separate leaflet). This bubble will remain in the eye for up to 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 next couple of years.

How successful is the operation?

Currently we have a 90% success rate in closing a macula 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.

Surgery

The operation will take about 60 minutes. 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 stitches may be put in the eye (this varies from patient to patient) and an eye pad dressing applied.

Discharge

Before you leave hospital we will give you verbal and written information on aftercare and eye drops. Drops are continued for at least one month. The nurses in the daycare 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 and perhaps 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 (see separate information sheet on posturing and gas bubble).

Recovery:

It is unusual to experience severe pain after this type of operation although you may be aware of mild discomfort or scratching sensation. If you have discomfort we suggest you take pain relief such as paracetamol every 4-6 hours (maximum of 8 tablets in 24 hours) but not aspirin which can cause bleeding. The eye may be red and gritty or even itchy after the surgery, this may last 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 then vision will be affected by its physical presence in the eye)
- nausea, headache, intolerance to lights
- increased redness. If this occurs please us urgently on the number below

Appointments following surgery

- within 7 days after surgery to check the eye is healing well
- one month after surgery you should have finished all your drops. We will be able to do a scan of your retina to see how well the macula is healing

Risk of complications

- one of the most common side effects is the formation of a cataract. Approximately 70-90% of our patients go on to develop a cataract in the first year following surgery. If the cataract is significant enough you may need further surgery for this. This surgery is far less complicated and requires no posturing afterwards
- 10% of patients may experience raised pressure. This can be treated with eye drops
- 4-5% risk of a retinal tear which will need treatment that includes a gas bubble. If a gas bubble is needed then we shall ask you to posture. If this is necessary clear instructions will be given
- 1% chance of developing a retinal detachment following surgery. This will require further surgery to correct
- less than 1:1000 chance of developing a serious infection or haemorrhage in the eye which can result in losing vision completely

What are the signs of infection or raised pressure?

- Nausea, headache, severe pain, intolerance to 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 partly obscuring vision that may spread with time
- large “floaters” or spots. If you experience any worrying symptoms please contact us on one of the numbers on the front of this booklet

Posturing

Posturing is a term used to describe the position your head has to adopt following your surgery because a bubble of gas was injected into your eye during the operation. In order for the bubble to work it must be pushing against the area where the macula hole is in your retina to keep the retina flat and help the macula hole to seal. Posturing face down commences immediately following macula hole surgery, the surgeon will explain the exact details specific to you if necessary. You will also receive a separate information sheet about this.

Some points to remember about the gas 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 between 2 and 12 weeks by itself 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 an plane because changes in air pressure will cause the bubble to expand resulting in pain and can lead to loss of sight
- too a lesser extent, the same thing can happen 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

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 the shopping. Before your admission to hospital stock up with ready meals to heat 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/dusty environments.

When can I go back to work?

It depends on what you do. Usually you within a month but heavy manual work may require a longer convalescence period.

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 when you are mowing the lawn to prevent anything from getting inside your

eyes. 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 accordingly.

Can I cook and do the housework?

For the first two weeks take plenty of rest. You may cook light meals and resume some household chores as long as it does not involve anything too strenuous.

Can I go shopping?

Yes, whenever you feel up to it and your vision allows but avoid lifting heavy bags for at least a month.

Can I travel?

You can travel as long as you feel up to it. However, you must not fly in an aeroplane whilst a gas bubble is present and until after we have checked that all the gas has gone.

I enjoy walking, jogging, swimming and going to the gym. When can I start again?

You can go for a walk whenever you feel up to it. Gentle jogging or light weights at the gym/exercise classes can possibly be resumed six weeks after surgery. Contact sports, eg rugby or heading a football should be avoided for longer. Swimming may be resumed once you have stopped using the drops and your eyes feel comfortable with no irritation but it is best to check with us first.

Please note these time limits are just a guide. It will depend on individual cases before decisions can be made. Always check with the ophthalmologist 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 and slow. In the long term you must avoid any trauma to the head or eye, falling and banging your head, this may cause the blood vessels to bleed again.

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 straightaway after the operation. Wear your glasses. It will be a few months before we would consider advising you to wear contact lenses again because we will need to make sure the front of the eye is suitable and you are no longer using eye drops.

This leaflet is intended to provide only general information for patients. Please do not hesitate to contact us if you are worried or unsure about your individual circumstances.