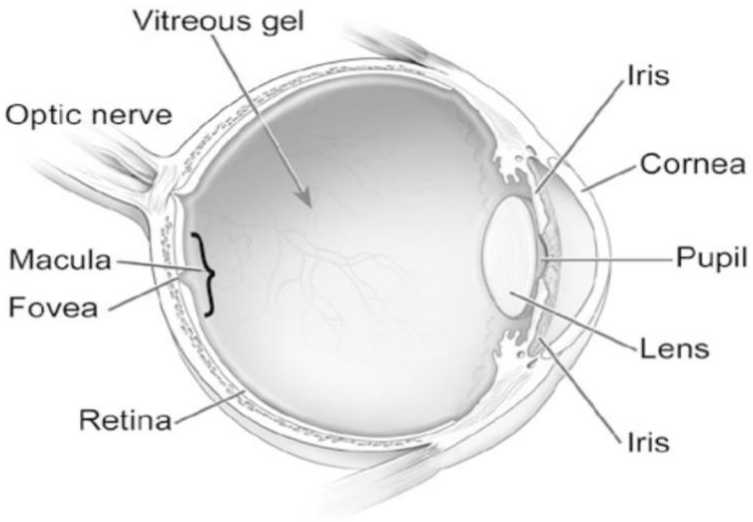
Macular Hole patient information leaflet

I have told you that you have a Macular Hole and this is bothering you because of reduced central vision and distortion. This leaflet will help to explain this condition and the 'pros and cons' of going ahead with surgery.

What is a Macular Hole?

The retina lines the back of the eye and acts like the film in a camera (For those of you that remember these!) The very central part of the retina is the only part that sees fine detail and it is this part that has the problem, it is known as the macula. This is NOT macular degeneration.

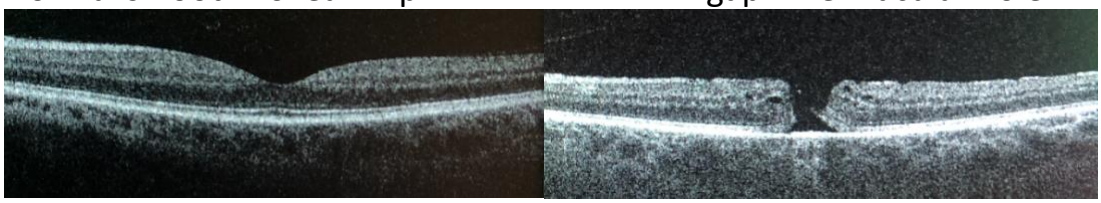


The normal anatomy of the eye
Image courtesy of the National Eye Institute

A macular Hole is a small hole that opens up at the very centre of your retina (The fovea). This is a very important part of the retina because it is in only in this region that we have the ability to see fine detail. With a Hole at the centre you may see bits are missing in the centre of your vision or there is distortion- often described as 'seeing people's head squashed on their shoulders'.

Below is a side view (Cross section) of the retina at the centre (The macula). On the left you can see the healthy smooth dip at the centre (The fovea) and on the right you can see a small gap has opened up (Macular hole), this gap is usually much less than half a millimetre in width.

Normal smooth Foveal 'Dip' A gap- The macular hole



How common are Macular holes?

Surgery for macular holes is one of the most common non-emergency procedures retinal surgeons carry out and Macular holes affect around 1 in ten thousand people. They are more common in women (2-3 x) and more common in the sixth decade of life.

Why do I have a Macular Hole?

The Jelly of the eye naturally separates from the retina over time. This separation happens first around the centre of the retina in the macula often with attachment remaining at the very centre (The fovea). This attachment can pull causing a condition called Vitreo-macular traction (VMT) and with further force, can result in the central retina and supporting structures being pulled out of the retina resulting in a small hole. This hole then enlarges over time. Rarer causes included severe trauma to the eye, swelling of the retina or high levels of shortsight.

How is it treated?

The operation for Macular Hole is done under a local anaesthetic as day case surgery and usually takes around 30 minutes to complete. Your eye will be numbed with anaesthetic such that you will be unable to move your eye and you may find the vision becomes dull as a result of the anaesthetic. You may elect to have a small 'G and T' (Sedation) in the vein which will relax you but not put you to sleep! You will not see instruments coming towards your eye and you will feel nothing in fact most of what you are afraid of happening will

not happen. I will talk to you throughout the procedure, we will have music in the background and it should be a relaxed event. The surgery involves removing the jelly from the centre of your eye (Vitrectomy) and usually early cataract is removed at the same time to reduce your hospital visits and improve your recovery time as cataracts usually develop quickly in older people following this type of surgery, usually within 6 to 12 months. The jelly is removed with a tiny instrument that cuts and sucks it from the eye and then the surface layer of tissue is gently peeled off the surface of the retina with tiny tweezers. Finally, a gas bubble is placed into the eye and this gets absorbed over a period of two weeks (most commonly) but longer acting gases are sometimes used when the holes are large and these can last up to two months. You can watch the surgery in fast motion here: http://www.stephenlasheyesurgery.com/macular-hole.php. You cannot see or fly with gas in the eye. The gas bubble gets smaller, rounder and lower with sight restored from the top. Following surgery, you may rarely require tiny stitches in the eye that will dissolve over a few weeks and can be a little gritty. You will have an eye pad and shield to wear the first night and drops for one month. It is important to keep the eye clean for the first week. On day one, many people find that if they hold their head down towards the floor and bring a reading book up very close to the eye, they can read clearly. This is a good sign the hole has already closed. You will be reviewed around two weeks after surgery. Many surgeons (myself included) no longer posture after surgery which involves looking eyes down for 45 minutes in every hour for a week or so. I will just ask you to avoid laying on your back for one week. Success rates with modern surgery are excellent and we can expect to close holes in over 90 patients per 100.

What if I choose not to have it treated?

Without surgery small macular holes will enlarge and the vision will usually fall to the largest letter on the test chart and then remain stable. There is increasing evidence that small holes enlarge quickly. Rarely a small hole can close on its own without treatment. The risk to the other eye is around 1 in 10 however if the Jelly has detached in the fellow eye a hole is extremely unlikely.

Will my vision return to normal if I have the operation?

The hole will close in over 90 patients per 100 and vision improves on average, 3-4 lines down the test chart. The operation will not restore ‘normal vision’ in most people but without surgery the vision usually gets worse. Some people

see slight distortion although this usually settles over time and vision continues to improve out to one year after surgery.

What are the risks of having surgery?

The main risks of surgery are:

1. Failure to close the hole (up to 10 per 100 patients). If the hole does not close repeat surgery can be offered often with the use of oil rather than gas. You can fly with oil in the eye, vision is very blurred but you can navigate and further surgery is required to remove the oil.
2. Retinal detachment at around 1-2 patients in 100.
3. The most common complication during surgery is a small tear on the retina in around 3 in 100 patients and this will be treated at the time of surgery.
4. The risk of serious complication and loss of sight is around 1 in 1000 people, usually due to infection or severe bleeding in the wall of the eye.
5. Raised pressure can occur after surgery but in most cases this settles with drops short term and does not damage the nerve of vision (glaucoma). However around 1 in 100 may require long term treatment for this.
6. If your cataract is not removed at the time of surgery then this is likely to develop over the first year after surgery.

What happens after surgery?

You will be given an eye pad to wear the first night and drops 4 times a day for one month and some tablets for the first three days for the pressure. I will see you two weeks after surgery. The eye is usually very comfortable after surgery and simple painkillers usually suffice if you have discomfort. **If you have significant pain, especially a severe ache in the eye you should contact us.** The bubble will get smaller and rounder and lower. At around one week you will feel like a spirit level with vision back at the top and the bubble at the bottom. **No new shadows should appear above the bubble and if they do you should contact us.**

What should I avoid?

DO NOT FLY with gas in the eye, it can result in permanent loss of vision. If you need **a GENERAL ANAESTHETIC** please tell the doctor you have gas in your eye- we usually give you a bracelet to wear warning that you have gas in the eye.

When can I get new spectacles?

You can see your optometrist for new spectacles from around one month after the gas bubble has gone.

When can I work/Drive?

I will usually give you two weeks off work but you can go back sooner depending on what you do, just keep the eye clean for the first week. In terms of driving, you are able to drive if you can meet the standards of vision with both eyes (a car number plate at 20m) but also be comfortable the eyes are working well together and you can judge speed and distance. You should not drive with the gas bubble in the eye, it will be very distracting. Full details can be found: https://www.gov.uk/driving-eyesight-rules

Where can I find more information?

The RNIB have further information on macular holes, especially some practical advice: Helpline 0303 123 9999; internet www.rnib.org.uk; email helpline@rnib.org.uk

The Macular Disease Society: Helpline 0845 241 2041; internet www.maculardisease.org; email**:** info@maculardisease.org

BEAVRS

https://beavrs.org/macular-hole

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Population Based Incidence of Macular Holes

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Five-year cumulative incidence and progression of epiretinal membranes: The Blue Mountains Eye Study☆

Author links open overlay panelSamanthaFraser-BellMBBS[1]MagdalenaGuzowskiMBBS[1]ElenaRochtchinaMAppl Stat[1]Jie JinWangMMed, PhD[1]PaulMitchellMD, PhD[1]

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The Visual Outcomes of Macular Hole Surgery: A Registry-Based Study by the Australian and New Zealand Society of Retinal Specialists

- Rohan W. Essex, MBBS, MBiostat
- Alex P. Hunyor, MBBS
- Margarita Moreno-Betancur, PhD
- John T.O. Yek, MBBS
- Zabrina S. Kingston, BBioMedSc, MBBS
- William G. Campbell, MBChB
- Paul P. Connell, MBBCHBAO, MD
- Ian L. McAllister, MBBS, DM
- for the

  Australian and New Zealand Society of Retinal Specialists Macular Hole Study Group *

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