# Large macular holes

The eye is like a camera. At the front of the eye there is a lens, which focuses light on the back of the eye. At the back of the eye there is a film called the retina, which actually senses the light information. In your eye there is a split in the retina at the back of the eye. This is called a macular hole. This is not a hole like a hole dug in the road, but rather a hole as though there were a tear or a split in a piece of fabric or rubber sheet. Because there is no material missing it is possible to try and seal the hole up again. Sealing the hole up again can improve the vision.

Your hole is at the larger end of holes we operate on. The success rates and expectations that are reasonable for the outcome of surgery are different for these large holes so I have written this specifically to address larger holes.

If we do operations and seal up these large holes we would expect about 50 to 60 in every 100 operations to work, that is to close the hole and either stabilise the vision or improve it. The vision never returns to normal, but can improve so that you can see two or three more lines on the

vision testing chart than you saw today. If we leave the eye without an operation then most likely the vision will stay as it is now. The macular hole will not close by itself. In general, the longer we leave the hole in your eye the worse it gets. However, as you already have a large hole – which usually means you have had it for quite some time – it is probably already close to as bad as it will ever get.

The way I do this surgery is to go and first of all do a cataract operation if you haven't had one done already, and then go inside the back of the eye and remove the gel that is inside the eye. This is called a vitrectomy. This allows me to place a big bubble of gas inside the back of the eye and it is the gas keeping the hole dry that allows the hole to close. If you have had cataract surgery done already then there is a small risk of certain types of cataract lens implant eventually becoming cloudy after retinal surgery. This depends on the material the lens is made out of (hydrophilic acrylic) and is more common with multifocal lenses. The lenses I use are hydrophobic acrylic and have not been reported to have this problem.

Why do I do cataract surgery first? It makes the view

I have of the back of the eye clearer, and so makes the operation safer. Also, it allows me to use more gas, and the more gas I use the less careful you have to be with positioning afterwards (some doctors use less gas but you would then have to lie face down most of the time for the first week or two – I do not ask you to lie face down). Finally, doing the vitrectomy will give you a cataract, so that about 90 in every 100 people would need cataract surgery within the first year after their vitrectomy. This seems a bit silly, so I do it all at once.

There are some restrictions when you have gas in your eye. Because the gas may expand you may not fly until the gas has gone. You should not lie flat on your back for long periods until the gas has gone. You should not have a general anaesthetic unless special precautions are taken until the gas has gone. It can take up to 12 weeks for the gas to go away. Once the gas has gone away there are no restrictions on activities whatsoever.

When you have gas in your eye you will see light and dark but few details the day after the operation. This is normal. Usually if you bend forward so you can look at your feet,

and bring your hand or fingers to within a couple of inches of the eye, you will see some details. This is a useful check to make sure things are working as planned.

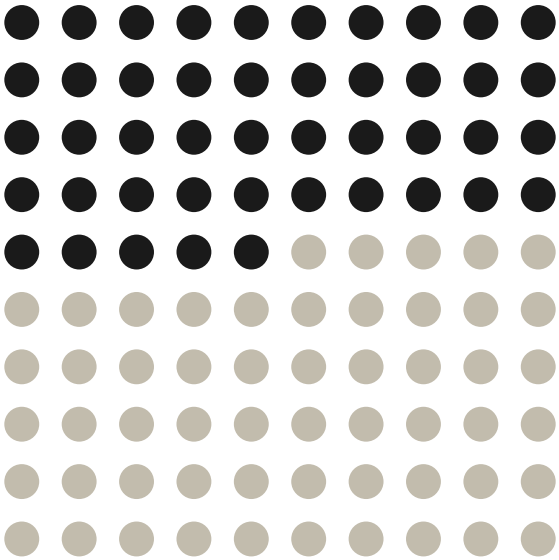
As with any surgery or medical intervention things can go wrong. It is not uncommon for a tear to occur in the retina. This happens in about 5 in every 100 operations. If this happens it is normally treated at the time of surgery and you would be unlikely even to notice that this had occurred. However, if a hole appears after the end of surgery or if a hole appears, which is not found at the time of surgery then the retina can detach. If this happens you would need a further procedure. This happens in around 2 to 4 in every 100 operations. Other less common complications may occur including infection inside the eye and bleeding inside the eye. Together these probably happen no more than 1 in every 1,000 operations. However, if they do occur they can be devastating, leading to loss of vision or even the eye.

With any eye operation including cataract surgery, there is always a risk to the other eye of causing inflammation. This is called sympathetic ophthalmia. This condition is un-

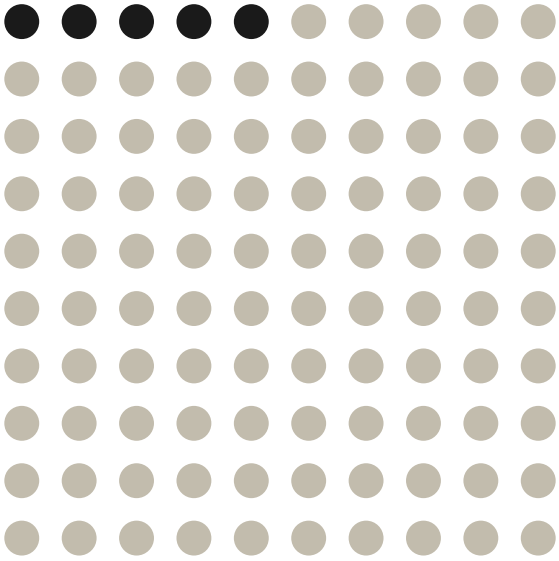
usual and can usually be treated with drops or sometimes tablets.

## The main risks at a glance

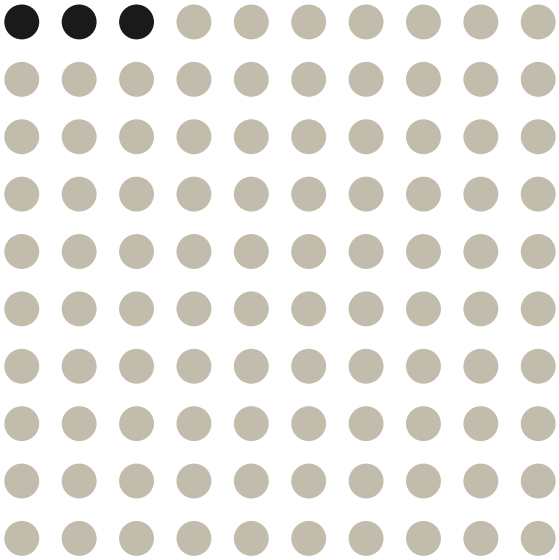
Each grid below is 100 people who have the operation; the shaded dots are those affected.



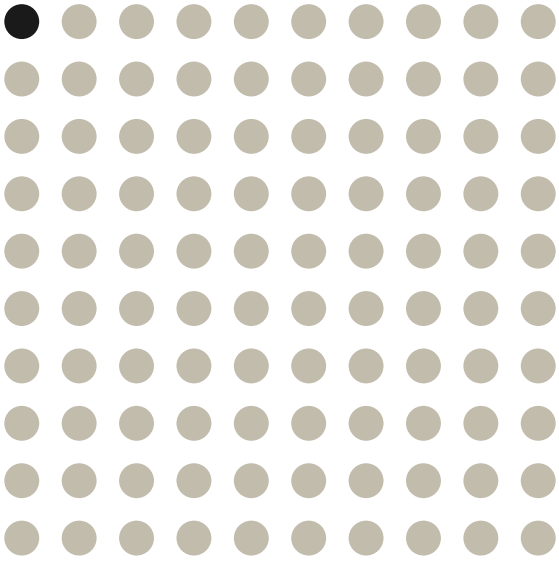
**About 40 to 50 in every 100** (4 to 5 in every 10) – for large holes, the surgery does not achieve the hoped-for result: the hole may not close, or it may close but the vision does not improve.



**About 5 in every 100** – a retinal tear during the operation, almost always found and treated at the time.



**About 2 to 4 in every 100** – retinal detachment after surgery, which would need a further operation.



**About 1 in every 100** – serious, lasting loss of sight. In cataract surgery the same risk is about ten times lower, around 1 in every 1,000.

For reference here are the commonly accepted frequent or serious risks of macular hole surgery with an indication of how common we expect to see them. For large holes, the surgery does not achieve the hoped-for result in about 40 to 50 in every 100 cases (4 to 5 in every 10).

**Common (up to 1 in every 20)**

- Inflammation
- Raised eye pressure (usually temporary)
- Swelling of centre of retina affecting vision (usually temporary)
- Cataract (usually within the first year, which may

need surgery, if cataract surgery is not already done or done at the time of macular surgery)

- Ongoing distortion of vision (expected in everyone to some degree)
- Retinal tears
- Retinal detachment
- Need for further surgery

**Uncommon (up to 1 in every 100)**

- Retinal damage affecting sight
- Severe loss of vision
- Glaucoma (high pressure needing treatment or affecting sight)

**Rare (up to 1 in every 1,000)**

- Infection inside eye that may lead to severe loss of sight
- Bleeding into the eye, may lead to severe loss of sight

**Very rare (up to 1 in every 10,000)**

- Severe inflammation or loss of vision in the other eye

Whilst I have gone through lots of complications that

can occur, most people who have this operation have no problems after surgery and most people who have this operation see better after surgery than they did before. If the surgery does not work, but there are no complications, then the vision will be the same as it is now. If the hole does not close, it is possible to operate again to try to close it, though for large holes the chances of a meaningful improvement at a second attempt are usually slim. If the hole has closed but the vision has not improved, further surgery will not help.

Please also read the general information on vitrectomy surgery, and what to expect after surgery.

---

**Emergency contacts:** https://www.vitygas.com/information/emergency-contacts/

NHS patients call Limpsfield Ward or the East Surrey Hospital switchboard. Private patients use the mobile number provided.