

VITREOUS FLOATER SURGERY PATIENT INFORMATION

WHAT ARE VITREOUS FLOATERS?

The vitreous is the space at the back of the eye between the retina and the lens. Normally the vitreous cavity is filled with crystal clear, transparent gel. Light passes through the vitreous uninterrupted and is focused on the retina. With age the vitreous liquefies and develops opacities called floaters. Other causes of floaters are bleeding or inflammation

WHAT ARE THE SYMPTOMS OF VITREOUS FLOATERS?

It is normal to have some floaters. Almost every adult can see some floaters and in the majority of cases these do not interfere with vision. The more floaters there are and the denser they are the more they can interfere with vision, either by scattering or blocking light from reaching the retina.

It is important to understand that the floaters themselves do not damage the eye in any way. It is the underlying condition, (e.g. Diabetes, retinal tear or retinal detachment) which can permanently damage the vision.

WHAT CAUSES VITREOUS FLOATERS

The most common cause of vitreous floaters is a “Posterior Vitreous Detachment”. This occurs due to of age changes in the vitreous gel (*vitreous syneresis*) which results in the gel peeling off and separating from the retina. As the vitreous gel separates, some larger denser vitreous fibrils become more visible or it can tear small blood vessels on the surface of the retina or cause a retinal tear or detachment.

Sometimes floaters are due to vitreous haemorrhage, which is usually due to a blood vessel within the retina breaking, and bleeding into the vitreous cavity. Sometimes vitreous cavity bleeding maybe associated with the development of fragile new blood vessels on the retina (***neovascularisation***) due to either proliferative diabetic eye disease (PDR) or blockages within the retinal veins or arteries.

Other causes of floaters include penetrating or blunt injuries to the eye or inflammatory diseases of the eye (Uveitis).

WHAT ARE THE TREATMENT OPTIONS FOR VITREOUS FLOATERS?

1. Observation or “Do nothing”

It is important to emphasise that this is completely elective surgery and the safest option is to do nothing. If vitreous floaters are mild and not affecting your vision, no treatment is medically required. The floaters may be annoying, but if they are mild it is best to ignore them and wait for them to decrease with time. In most people with floaters of recent onset, the floaters may clear within a few months, so it is best to never consider surgery without giving them at least 6 and preferably 12 months to clear by themselves.

2. Laser

For small discrete floaters, laser can be an option. This breaks a large floater up into multiple smaller ones, so if you have one single large floater in the centre of your vision, laser may be an option.

3. Vitrectomy

If the floaters are not clearing after 6-12 month, they can be removed surgically with a vitrectomy. However, it is important to weigh up the risks versus benefits carefully, and only proceed if the floaters are causing noticeable problems with your vision or interfering with your day to day activities.

WHAT TYPE OF ANAESTHESIA IS USED WHAT ARE ITS RISKS?

Vitrectomy surgery is performed under local anaesthesia, with sedation. It is typically performed in a day surgery or hospital setting and an overnight stay is very rarely required.

The surgery takes approximately one hour and is not painful.

There are risks associated with anaesthesia, whether general or local.

Complications of anaesthetic injections around the eye may include:

- Perforation of the eyeball,
- Injury to the optic nerve resulting in loss of vision,
- Haemorrhage,
- Retinal detachment,
- Interference with retinal circulation resulting in possible vision loss,
- Systemic hypotension (low blood pressure)
- Respiratory depression.
- Any anaesthesia or medication can very rarely cause severe anaphylaxis (allergic reactions) which can result in death.

WHAT IS THE CHANCE OF SUCCESS?

Modern vitreoretinal surgery is now very successful in clearing vitreous floaters.

With modern techniques the chance of clearing the vitreous floaters is very high and normal age related floaters do not recur. Depending on the cause, there is a chance that the floaters will recur if they were due to bleeding or inflammation for example.

Of these cases, the majority will be fixed with the second operation, however a small percentage of people may require additional procedures and in rare cases (< 1%) it may not be possible to recover the vision.

WHAT HAPPENS AFTER THE SURGERY

Immediately after the surgery, a patch will be placed on your eye with tape. This will be removed the morning after the surgery when you come to the office. After that, there is no need to wear a patch during the day.

A protective shield is recommended for sleeping, for the first week after the surgery.

Following surgery, the vision will be very blurred due to swelling and the dilating eye drops. For the first week following surgery you need to take it easy.

Eye drops need to be used for one month following surgery. These should commence the day after surgery, after you have seen your surgeon.

WHAT IF I HAVE A GAS BUBBLE?

- Dr Hogden will tell you if you have a gas bubble placed during surgery although this is uncommon for vitrectomy surgery for vitreous floaters.
- If you have a bubble inserted at the time of surgery you will be given instructions regarding the need for any specific head posturing
- If a vitreous cavity air/gas bubble is present, you **MUST NOT FLY** in an airplane **under any circumstances**. Doing so will result in **BLINDNESS** as the bubble expands with altitude. If you have air travel plans within the first two months after your surgery, mention this to Dr Hogden.

- If you need to travel over the range to Toowoomba, you must discuss this also with Dr Hogden. The increased altitude upon ascending the Toowoomba range can cause severe, vision threatening pressure rises and therefore it is usually best to stay at sea level for 1 week before going back over the Range. Importantly, each case is different and your specific requirements depend on the type of bubble used and other operation factors, so ask Dr Hogden.
- If you require surgery of any kind over the following two months you **MUST TELL THE ANAESTHETIST ABOUT THE GAS BUBBLE**, as nitrous gas anaesthetics will cause the bubble to expand and cause severe vision threatening pressure rises. This includes dental procedures.

WHAT ARE THE RISKS OF VITRECTOMY SURGERY

There is no guarantee that surgery will improve your condition. Sometimes despite everyone's best efforts it does not work. In addition, all surgery has risks. Sometimes it can make the problem worse, cause an injury, or create a new problem; if it does, this is called a complication.

Complications can happen right away or not until days, months, or years later. You may need more treatment or surgery to treat the complications.

It is important that you understand the risks involved with macular hole surgery so that you can make an informed and educated decision on the best course of action for your eye care. Below are listed some of the may risks associated with this surgery:

- A **cataract** develops in all adults usually around age 60-80 but will usually develop earlier after a vitrectomy than would be expected during the normal aging process. Sometimes cataract surgery will be required within a few months after macular hole repair.
- Occasionally, the eye may develop increased pressure (**glaucoma**) and medication may be required to control this. A retinal tear or detachment may develop post-operatively and would require further surgery to correct.
- **Infection** and **haemorrhage** are very rare risks which may occur with any surgery. Very rarely, if you have a severe infection or severe bleeding you can go **blind in the eye**. The chance of this occurring is much less than 1 percent.

If you notice worsening eye pain or deteriorating vision following surgery, Dr Hogden's consulting rooms should be contacted on **3831 0101, as soon as possible.**

Other major risks can include:

- Poorly healing or non-healing corneal defects
- Corneal clouding and scarring (in severe cases may require corneal surgery)

- Lens complications such as dislocation or need for removal / replacement
- Double Vision
- Eye lid droop
- Redness of the eye
- Loss of circulation to vital tissues in the eye, resulting in decrease or loss of vision
- Phthisis (disfigurement and shrinkage of eyeball)

IS THERE A RISK TO MY OTHER EYE?

Extremely rarely, the vision in the other eye can be affected by a condition called **sympathetic ophthalmia**, however the incidence of this is less than 1 in 10,000.

Finally, if you have any further questions, or if you would like Dr Michael Hogden to explain more, please do not hesitate to ask.