

Patient information

Diabetic Vitrectomy

St Pauls Eye Department - Royal Liverpool Hospital

Your Consultant / Doctor has advised you to have a vitrectomy
There may be alternative treatments or procedures Please ask a doctor or a nurse to discuss these with you.

What is a Vitrectomy?

A vitrectomy is an operation to remove the vitreous, which is a clear, transparent jelly from inside your eye. The vitreous is situated behind the lens of your eye and in front of the retina, at the back of your eye. It has no real function other than providing packaging inside your eye.

What is diabetic eye disease?

Diabetic retinopathy is a disease that damages blood vessels in the retina. These damaged blood vessels can develop tiny leaks. The retina then becomes wet and swollen and cannot work properly. Your doctor may call this 'macular oedema' (the macula is the part of the retina which lets you see fine detail and you use it for reading, watching television and driving. Oedema is the swelling).

In many patients, laser treatment can stop the leaking from the blood vessels. However, in some patients, if laser does not work the doctor may suggest a vitrectomy to stop the leaking vessels.

A further problem with diabetes is that new vessels are stimulated to grow on the surface of the retina. These new blood vessels can be very bad for the eye because they are fragile and can bleed into the vitreous and reduce vision rapidly (a 'vitreous haemorrhage').

The blood in the vitreous can then cause scar tissue on the surface of the retina, which can pull on the retina and lift it up causing permanent damage (a 'tractional retinal detachment').

What are the benefits of surgery?

A vitrectomy may be needed to

- Treat macular oedema.
- Prevent or remove a vitreous haemorrhage (bleeding).
- Prevent or relieve tractional retinal detachment

What are the risks of surgery?

Most patients who undergo a vitrectomy will need cataract surgery at some date in the future and this can be as soon as several months after the vitrectomy surgery.

When vitrectomy is done for a vitreous haemorrhage, there is often some blood left in the cavity of the eye.

This causes some cloudiness of vision that may take several weeks to clear. In addition, there is a 20-30% risk of recurrent bleeding in your eye in the first few days and weeks following surgery.

This repeat bleeding often clears much quicker than the original vitreous bleeding. Occasionally, it may be necessary to re-operate in order to remove this repeat bleeding.

There is a 5% risk of retinal tears or retinal detachment caused by the vitrectomy procedure. These complications are often noted at the time of surgery and dealt with during the vitrectomy. Sometimes they may require further surgery.

Severe infection is very rare, only occurring in one in 1000 operations. When severe infection occurs the potential for good vision is very poor.

There is a very rare (one in 1000) chance of developing inflammation in your other eye (unoperated eye) after a vitrectomy, known as sympathetic ophthalmitis.

If this rare event occurs treatment with steroids and other drugs is often needed for many years.

Although these complications can often be managed by further treatment, any one of them may cause your vision to get worse or cause a total loss of vision and perhaps eventual loss of your eye.

When considering surgery, the patient and the doctor together must weigh the risks, including the possibility of total blindness, against the possible benefits of either stabilising or improving vision.

It is important for the patient to know that surgery may fail owing to complications or simply to the progressive nature of diabetes.

What sort of anaesthetic will be given to me?

You will be given either a general or local anaesthetic. General anaesthetic is drug-induced unconsciousness. An anaesthetist, who is a doctor with specialist training, always provides it.

Local anaesthetic is drug-induced numbness: it may be provided by an anaesthetist, surgeon or other healthcare professional, depending on the technique used.

Unfortunately, both general and local anaesthetic can cause side effects and complications. Side effects are common, but are usually short-lived: they include nausea, confusion and pain. Complications are very rare, but can cause lasting injury: they include awareness, paralysis and death.

There is a risk of damage to teeth, particularly caps or crowns and veneers. Your anaesthetist will take every care, but occasionally damage can occur.

The risks of anaesthetic and surgery are lower for those who are undergoing minor surgery, and who are young, fit, active and well.

For more information, please ask for a copy of the Royal College of Anaesthetists Patient Information “You and Your Anaesthetic”.

You will be given an opportunity to discuss anaesthetic options and risks before your surgery.

If you are worried about any of these risks, please speak to your Consultant or a member of their team before you are due to have this treatment.

The day of your operation

- Please leave valuables at home. If you need to bring any valuables into hospital, a nurse can lock these away at your request.
- **The Trust does not accept responsibility for any items not handed in for safekeeping.**
- You will be asked to remove jewellery. Plain bands can be worn and will be taped over.
- If you are on regular medication, you will be told to take this if necessary.
- If you are having a local anaesthetic, you may have a light meal before your operation, for example toast and cereal.
- You will be given a hospital gown and underwear to wear.
- A bracelet with your personal details will be attached to your wrist.
- You may be prescribed some medication to take before your operation by the anaesthetist. A member of the nursing staff will give this to you.
- Your dentures, glasses or hearing aid can stay with you on your journey to the operating theatre.
- When you arrive in the waiting area, a theatre nurse will check your details with you. You will then be asked to put on a disposable hat.

- The ward nurse will then leave you and you will then be taken to the anaesthetic room.

How is the Vitrectomy surgery done?

During surgery three or four small openings are made through the white part of your eye. Small, thin instruments are placed into the eye through these openings. The vitreous jelly is broken up and removed from your eye. Sometimes it is necessary to cut or peel fine scar tissue from the surface of the retina.

In many patients laser is applied to the retina during surgery. The small openings are closed using stitches that dissolve several weeks after surgery.

The whole operation can take one to two hours. Most patients are discharged the following day after being examined by a doctor.

What is the vitreous jelly replaced with?

The vitreous jelly does not naturally replace itself and your eye can function normally without it. In most patients the vitreous is replaced at the time of surgery with a salt/water mixture. This is very quickly replaced by your eye's own watery fluid known as aqueous humor.

In some patients it is necessary to fill the eye with a gas bubble at the end of surgery. This bubble is gradually absorbed and replaced by aqueous humor over six to eight weeks.

What can I expect after my Vitrectomy?

Your rate of recovery and the final outcome will depend on many factors and varies from patient to patient. Before surgery your doctor will discuss with you your chances for better eyesight. It may take several months before your vision improves to its best possible level.

In most cases, when diabetes has caused such damage to the retina that vitreous surgery is necessary, the eye will never again see normally. Sometimes, small amounts of visual improvement occur, and occasionally, a great deal of improvement occurs.

Expect your eye to be sensitive and swollen after surgery. A scratchy feeling or occasional sharp pain is common and is due to tiny stitches on the white of your eye.

These stitches will gradually become soft, fall out or dissolve. Redness is common and gradually lessens over time. Either paracetamol or other mild painkillers generally control discomfort.

You will be prescribed a combination of eye drops and these will be needed for four to six weeks. These will help to prevent infection, reduce inflammation and rest your eye following your surgery.

Please contact the Eye Department immediately if you have any of the following symptoms:

- A lot of pain
- A sudden loss of vision
- Increasing redness and discharge from the eye

If a gas bubble has been inserted into your eye at the end of surgery you may have to lie with your head in a particular position ('posturing' – this will be explained to you).

This helps to ensure that the gas bubble presses against the area of retina being treated encouraging it to heal in the correct place.

You will need to follow this instruction for at least seven to ten days, for 50 minutes out of every hour during the day. At night you can lie in any position that is comfortable but try to avoid lying on your back.

When the eye is filled with gas, vision is very poor until the gas is absorbed which can take several weeks. Patients must avoid flying until the gas bubble is absorbed and must inform their doctor if any other surgery is planned whilst the gas bubble is still present.

You will be reviewed in the Outpatient Department one to two weeks after discharge and several times over the next few months. Patients generally rest for the first few weeks following surgery and are to avoid strenuous activity. By four to six weeks most are usually able to return to normal activity.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Your doctor and the nurses in the Eye Department are there to answer your questions and will be pleased to help you with any queries you may have.

Further information

**St. Paul's Admissions Office
Tel: 0151 706 2481**

**St. Paul's Inpatient Ward 9Y
Tel: 0151 706 2498/ 2496**

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