

# Having eye surgery for glaucoma with a Preserflo™ drainage tube

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Information for Patients

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## What is glaucoma?

Glaucoma is a term used to describe a group of eye conditions where there is damage to the optic nerve in the eye. The optic nerve acts like an electric cable with over a million wires. It carries images from the eye to the brain. In the early stages of glaucoma there may be no symptoms, but as the optic nerve becomes more damaged, you can get loss of sight. Most people with glaucoma have high pressure in one or both eyes. The pressure inside the eye is known as the intraocular pressure (IOP) and depends on the amount of fluid in the eye.

Although there is no cure for glaucoma, treatments can lower the IOP and slow down or help to stop loss of sight. There are 3 main ways that pressure in the eye can be reduced: eye drops, laser therapy and surgery. The treatment depends on what is best for controlling the pressure in each case.

## What is Preserflo™?

Preserflo is the name of the tube (stent) used to help reduce eye pressure. It is seen as a minimally invasive glaucoma procedure. This means it is a smaller operation than the traditional surgical procedure to treat glaucoma (trabeculectomy) but with similar results.

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or call 111 for non-emergency medical advice**

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The aim of Preserflo is to lower the pressure inside the eye. This pressure is causing damage to the optic nerve. If the pressure is lowered then further damage to the optic nerve can be stopped. Preserflo surgery will not bring back vision that is already lost from glaucoma.

## How does Preserflo work?

During Preserflo surgery, a small 8mm tube is implanted in the wall of the eye (the sclera). Fluid from inside the eye (aqueous humor) is then able to drain through the implant and out under the clear outer coat of the eye (the conjunctiva). The fluid which exits the eye via the implant may cause the conjunctiva to become slightly swollen. This swelling is known as a 'bleb' and is usually hidden just under the upper eyelid. The fluid within the bleb is dispersed and taken away naturally by other parts of the eye, including veins.

After an operation (or any trauma) the body reacts by forming scar tissue and heals. Scarring can be a problem after Preserflo surgery as it may block the opening of the tube and stop fluid from leaving the eye. This will cause the pressure inside the eye to rise. Preserflo has been made with a synthetic material called SIBS. This has been shown to limit any scarring with the sclera or conjunctiva of your eye.

To help stop scarring we often use an "anti-scarring" medicine during the surgery (Mitomycin C). It is put on the surface of the eye for 2 to 3 minutes during the operation and then washed away so its action is only limited to the implant area.

## What can I expect during the operation?

Most people will be awake during the surgery and local anaesthetic is all that is needed to numb the eye and the surrounding area. This will be an injection around the eye.

Unlike traditional trabeculectomy surgery (which can take up to 1 hour), the procedure can take between 20 to 30 minutes.

The procedure does not normally need a general anaesthetic.

## What happens after surgery?

Straight after the operation a clear plastic shield will be put over your eye to protect it from accidental rubbing or trauma.

You should be able to go home the same day. You will be discharged with 2 sets of eye drops. Like most surgeries involving the eye, we would expect someone to accompany you to the hospital to ensure you are able to return home safely. You do not need someone to stay with you overnight.

You will need to come back the next day for an examination. At this examination we will take off the eye shield for you.

For the first few days, and sometimes weeks after the surgery, it is normal for the eye to appear red and it may feel prickly, like there is something in your eye. This is due to the surgery itself and sometimes the stitches we use.

Unlike traditional glaucoma surgery, Preserflo has been designed to have little discomfort and is less likely to cause blurry vision immediately afterwards.

If you feel your vision is getting worse or the eye is becoming uncomfortable, please contact the hospital or go to Eye Casualty.

## What happens after the follow-up examination?

After the examination you will be able to go home and start using the eye drops provided.

The eye drops used after Preserflo surgery are usually an antibiotic (such as chloramphenicol) and an anti-inflammatory steroid (such as dexamethasone or Pred Forte®). These drops are usually all that is needed in the operated eye and how to take them will be explained to you in detail after your surgery.

Please remember to continue using any drops that you were using in your other eye.

## How often will I need to be seen in clinic for a follow-up?

Unlike traditional glaucoma surgery (trabeculectomy), Preserflo has been designed to reduce the number of visits that you may have to make to the hospital. Your surgeon will likely see you 1 day after the surgery in a clinic appointment, and then at weekly to monthly intervals after that, until the eye has settled.

## What is the success rate of Preserflo surgery?

Currently the longest studies we have available to analyse the success are 5 years long. These have shown it is close to 82% success, which is comparable to traditional glaucoma surgery. This means the eye pressure will have been reduced by at least 20% and you will not need as many treatments in the future, such as eye drops or further surgery.

## What are the risks of this procedure?

As with any operation there are risks when having Preserflo surgery, however the risks are small. As Preserflo is minimally invasive, studies have shown fewer complications than traditional glaucoma surgery. The main risks are that the pressure will stay too high or too low after the operation, or the eye becomes infected.

When the pressure is too high after surgery, this is usually because the bleb or opening of the tube implant is scarred and blocked as the eye heals. Sometimes the pressure in the eye can be very good straight after surgery, but then can become worse again in a few weeks or months (or even years) later.

In a certain group of patients any eye surgery or laser can cause a condition called aqueous misdirection. This causes very high pressure and need for urgent follow-on surgery. This can happen after Preserflo surgery too.

Very low pressure, or a sudden drop in pressure, can lead to bleed inside the eye (choroidal haemorrhage). This is a rare but very serious complication. Preserflo has been designed to have a very small diameter in the tube (70 microns), which means the fluid can not exit too quickly. If the pressure in your eye is very low you may need further surgery to take out the implant from the coating of your eye.

## Long term risks:

The long term risks of a Preserflo operation are infection, discomfort, cataract formation and the implant moving (migration).

- **Infection:** while the risk of infection after surgery is rare, there is a very small risk the bleb might become infected. If a patient who has had a Preserflo operation gets a red eye or conjunctivitis, it is important to have the eye looked at by an eye doctor. While infection is very rare, it can be serious.
- **Migration of implant:** the Preserflo tube has 2 small fins which ensure it fits tightly. This means the implant can remain fixed in the correct position over a lifetime and rarely can it move out of place.

## What are the risks of not having surgery?

You should discuss your concerns with your doctor and ask what alternatives are available. The risk of permanent vision loss should be discussed if treatment is not taken.

## What activities should I avoid after surgery?

It is important to avoid energetic activity straight after the operation. This includes most sports such as swimming, jogging and contact sports. Watching television, using a computer and reading will not harm the eye and can be continued without worry.

## When can I go back to work?

The length of time off work depends on a number of factors such as your job and the vision in your other eye. As this is a minimally invasive procedure, someone working within an office environment would need 1 to 2 weeks off work. If your work requires heavy labour, or work in a dusty environment you may need longer.

## What happens once I'm on the waiting list?

Before you have the operation you will need to have a pre-operative assessment with one of our nurses. This is usually done the same day that you are having the surgery. The aim of the pre-assessment is to find out if there are any problems with your general health that we need to think about before the operation.

## What to do if you have any concerns

If you want to discuss the procedure in more detail or have any other queries that cannot wait until your appointment, you can contact the glaucoma specialist nurse on **07950 857406**.

If you think you may have a problem after your treatment, contact **Eye Casualty on 0116 258 6273**, or go to the **Eye Casualty Department** located in Windsor Eye Clinic, Level 1, Windsor Building, Leicester Royal Infirmary:

Opening times: Monday to Friday - 8.30am to 4.30pm

Saturday & Sunday - 8.30am to 12.30pm

If your problem happens outside of these hours and you feel that it is urgent, you should go to the main Emergency Department.

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