

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

Department of Ophthalmology

Information for Patients

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What is glaucoma?

Glaucoma is an eye problem where the nerve that connects your eye to your brain (the optic nerve) is damaged more and more. This happens because of high eye pressure. The optic nerve is like an electric cable that send pictures from the eye to the brain. At first you may not notice any problems. As the optic nerve becomes more damaged, you can start to lose your sight. Most people with glaucoma have high pressure in one or both eyes. The pressure inside the eye is called the intraocular pressure (IOP). This depends on the amount of fluid in the eye.

There is no cure for glaucoma. Treatments can lower the IOP and slow down or help to stop loss of sight. There are three main ways that pressure in the eye can be reduced:

- eye drops
- laser therapy
- surgery

The treatment depends on what is best for controlling the pressure in each case. Your clinic team will talk to you about what is best for you.

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or call 111 for non-emergency medical advice**

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What is a Preserflo Microshunt™?

A Preserflo Microshunt is the name of the tube (stent) used to help reduce your eye pressure.

Raised eye pressure is causing damage to your optic nerve. We can stop damage to the optic nerve by lowering the eye pressure to a safer level. Preserflo Microshunt surgery cannot bring back vision that is already lost from glaucoma.

How does a Preserflo Microshunt work?

- We will put a small 8mm tube in the wall of the eye (the sclera). You will not see or feel this.
- Fluid from inside the eye (aqueous humor) drains through the tube and out under the clear outer coat of the eye (the conjunctiva).
- This fluid is then absorbed by your eye itself.
- After any operation (or any trauma) the body forms scar tissue and heals. Scarring can be a problem after Preserflo Microshunt surgery. It may block the opening of the tube and stop fluid from leaving the eye. This will cause the eye pressure to rise. However, the Preserflo Microshunt is made from a special material that is similar to the body's own cells. It can allow the tube to work better and for longer to control your eye pressure.
- We often use an "anti-scarring" medicine during the surgery (Mitomycin C). We put it on the surface of the eye for a few minutes before washing it away. This can further enhance the eye pressure lowering effect of the Preserflo Microshunt.

What can I expect during the surgery?

Most people will be awake during the surgery. We use local anaesthetic to numb the eye and the surrounding area. We give it as an injection around the eye. The surgery itself takes around 1 hour to do. It can take more or less time depending on your needs. You do not normally need a general anaesthetic.

What happens after surgery?

We put a clear plastic shield over your eye. This protects it from accidental rubbing or trauma.

You should be able to go home the same day.

We will send you home with 2 sets of eye drops.

Someone should come with you to the hospital. They need to make sure you are able to go home safely. You do not need someone to stay with you overnight.

You will need to come back the next day for an examination. We will take the eye shield off at this point. We will do your first pressure check to see how the Preserflo Microshunt is working.

Your eye may be red and blurred for the first few days. It can sometime be red for weeks after the surgery. It may feel prickly, like there is something in your eye. This is because of the surgery itself and sometimes the stitches we use. This often settles down over a few days/weeks.

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. We will ask you to start using the eye drops we give you.

The eye drops used after Preserflo Microshunt surgery are:

1. an antibiotic (such as chloramphenicol)
2. an anti-inflammatory steroid (such as Dexamethasone or Pred Forte®).

These drops are all you need to use in the operated eye. We will explain how to take them.

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

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

The Preserflo Microshunt helps you reduce the number of hospital visits. Your surgeon will likely see you 1 day after the surgery in a clinic appointment. They will then see you at weekly to monthly intervals after that. This is only until the eye has settled. Your surgical team will guide you through all your appointment intervals.

What is the success rate?

Studies show that the Preserflo Microshunt has about an 82% success rate over 5 years. This suggests that more than 8 out of 10 people having the surgery would benefit over at least 5 years after surgery, with the eye pressure reduced by at least 20% in 5 years. If successful, you will not need as many treatments like eye drops or more surgery in the future.

What are the risks?

As with any surgery there are risks, but the risks are small. Studies show fewer complications than traditional glaucoma surgery. The main risks are:

- high or too low pressure after the surgery
- scarring that blocks the tube

After surgery, high pressure in the eye can happen if the tube gets blocked as it 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.

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

Long term risks:

Some of the long term risks are:

- **Infection:** While the risk of infection after surgery is rare, there is a very small chance. You must have the eye looked at by an eye doctor if you get any new eye symptoms such as eye redness, pain, blurred vision. While infection is very rare, it can be serious.
- **Cataract formation:** A cataract means that the natural lens inside your eye has started to become more cloudy. It lets in less light from the outside world. Having any eye surgery can speed up the rate of cataract formation. During your follow up clinic visits, your team would be looking out for cataract formation and talk about this with you.
- **Movement of the implant:** Rarely the implant can become dislodged from its position. This will be picked up during your review appointments.

- **Cloudiness of the cornea:** Rarely, the Preserflo Microshunt can cause the clear window at the front of your eye (the cornea) to become hazy over time. This is because of a slow loss of cells in this part of the eye. This is quite rare. Your clinical team will talk about this with you during your follow up visits.

What are the risks of not having surgery?

You should talk about your concerns with your doctor and ask what other options are available.

We will talk about the risk of permanent vision loss if treatment is not taken.

What activities should I avoid after surgery?

It is important to avoid energetic activity straight after the surgery. This includes most sports such as swimming, jogging and contact sports. Watching television, using a computer and reading will not harm the eye. You can keep doing this without worry. You should avoid bending or heavy lifting for the first few weeks and keep your shield on in the day and night. Your clinical team will let you know when you can stop wearing the shield. This is often 2 weeks after your operation if there have been no concerns about your recovery.

When can I go back to work?

How long you have off work will depend on a number of things. One of them being the vision in your other eye. Someone working in 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. Your surgical team at any of your visits will talk to you about this.

What happens once I'm on the waiting list?

You will get an appointment for a pre-operative assessment to see your general health and prepare you for the surgery.

If you have any questions about the surgery, you should contact our glaucoma specialist nurse on **07950 857406**.

What do I do if I have any concerns?

Before treatment:

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

After treatment:

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 and 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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