

## Patient information

**Glaucoma Surgery**

## St Paul's Eye Department

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

**What is glaucoma?**

Glaucoma is a condition in which the pressure inside your eye is too high, which leads to long-term damage to your sight. You would not notice this damage at an early stage in the disease because the damage begins in areas of the peripheral vision (field of vision) but may later worsen and may progress to affect central vision.

**Surgery for glaucoma**

Eye pressure is a balance between how much fluid gets into the eye and how much leaves the eye. Glaucoma surgery can either reduce the amount of fluid getting into your eye ("turning off the tap") or increase the amount getting out ("pulling the plug") by a couple of means.

- **Trabeculectomy / Including Deep Sclerectomy** ("pulling the plug") to increase the amount of fluid getting out of the eye.
- **Drainage tubes and Ahmed valve** ("pulling the plug") to increase the amount of fluid getting out
- **Cyclodiode Laser** ("turning off the tap").

## **What are the benefits of having glaucoma surgery?**

By lowering the eye pressure, the glaucoma damage is slowed or stopped altogether.

## **What are the risks of having a glaucoma surgery?**

As with any procedure, there may be risks involved and you should discuss these fully with the Consultant before your operation.

### **The most common risks are:**

- Bleeding inside your eye, which usually clears up on its own.
- Blurring of sight, which is usually temporary
- Over-drainage causing low pressure. This can make the sight blurred and create a shadow. This is usually temporary
- Scarring, which causes the pressure to rise
- Formation of a cataract, which may need removal at a later stage
- Loss of sight. This is rare. If the glaucoma is already very bad, the sight can suddenly vanish

## **What sort of anaesthetic will be given to me?**

General anaesthetic, or local anaesthetic, may be appropriate for your surgery. General anaesthetic is drug-induced unconsciousness.

It is always provided by an anaesthetist, who is a doctor with specialist training. 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 local and general 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.

The risks of anaesthesia 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 leaflet **“You and Your Anaesthetic”** (PIF 344).

## **Local anaesthesia for glaucoma surgery**

When it is your turn, we will take you through to the anaesthetic room in the operating theatre suite either on foot or in a chair, whichever is the most appropriate.

You will be given some more drops to numb the front of your eye and the skin around the eye will be cleaned with an antiseptic that may feel cold. You may be asked to look at a mark on the ceiling that helps you keep your eye still whilst the anaesthetic is being given.

The local anaesthetic mixture is injected around the eye into the eye socket and spreads from there to make the whole eye numb and the effect can last for several hours. This can occasionally be combined with some sedation to help you relax.

You will then be taken into theatre for your operation, which will take 30 to 40 minutes. You will be lying flat in theatre with your head supported on a special pillow. You will not be able to see what is happening but will be aware of a bright light. If needed, we can top up the anaesthetic during surgery.

Local anaesthesia for eye surgery is usually safe. You may develop bruising or a black eye as the injection damages a small blood vessel around the eye. This is not usually serious but can look unsightly for a week or so. It is more common if you take aspirin or other drugs that thin the blood.

Serious complications are very rare. Although rare or very rare, bleeding behind the eye ball or injury to the eye ball and effects on your heart, blood pressure and breathing can happen. These may lead to your operation being cancelled.

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

## **Getting ready for your operation**

You will be seen in the Pre-operative Assessment Clinic before you are admitted to hospital. This is usually within twelve weeks of your operation. This assessment takes place in the St Paul's Day ward.

## **Important**

- Please do not forget to bring a urine sample with you and a list of your current medication.
- If you are have diabetes or travel by ambulance, it may be worthwhile bringing a sandwich with you.

## **Tests**

Depending on the type of anaesthetic you will be given, the following tests maybe required: Blood, heart, urine, weight, and vision test.

- It may be necessary for you to undress to the waist and wear a hospital gown to undertake these tests. Female patients will need to remove tights. Lockers are provided.
- These tests are very important for you. It is better to find out about any problems at this stage than to come into hospital expecting to have an operation, only to be told it has been postponed for medical reasons.

If there are any complications, our doctors will refer you to the appropriate hospital specialist or to your family doctor (GP). You will be told if this is the case.

## **Interview / teaching session**

You will be encouraged to ask questions and talk about your condition and operation. A qualified ophthalmic nurse will explain your care in detail using a specially designed care programme.

## **The day of your operation**

- You will either come into hospital the day before or the day of your operation.
- Please leave all cash and valuables at home. If you need to bring valuables into hospital, these can be sent to General Office for safekeeping.
- General Office is open between 08.30 and 4.30 Monday to Friday. Therefore, if you are discharged outside these times we will not be able to return your property until General Office is open. The Trust does not accept responsibility for items not handed in for safekeeping.
- You will be asked to remove jewellery - plain rings can be worn but they will be taped.
- Please leave body piercings at home. False nails and nail polish will also need to be removed if worn.
- If you are on regular medication, you will be told to take this if necessary
- You will be asked to take a shower and put on a gown and disposable underwear.
- If you are having a local anaesthetic, you may have a light meal before your operation, for example toast and cereal.
- If you are having a general anaesthetic, you will have been given instructions before you come into hospital.

- 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.
- A nurse and porters will take you to the operating theatre.
- Your dentures, glasses or hearing aid can stay with you on your journey to the operating theatre.
- When you arrive in theatre, you will then be asked to put on a disposable hat and the ward nurse will then leave you.
- You will be taken to the anaesthetic room and a member of theatre staff will check your details with you.

## **Your operation**

The purpose of glaucoma surgery is to lower the eye pressure and slow down or stop further glaucoma damage. Sometimes it is done if a patient cannot use drops or has side-effects from drops.

## **Your surgeon may choose to perform:**

- A trabeculectomy.
- Non penetrating glaucoma surgery ( includes viscocanalostomy / deep sclerectomy).
- Glaucoma drainage device (an Ahmed valve).
- Cyclodiode laser.

The choice varies depending on each patient, the type of glaucoma and surgeon preference.

Trabeculectomy is an operation that creates a blister on the surface of the eye, letting fluid out from inside the eye and lowering the eye pressure.

The fluid collects in a little blister (also called bleb) underneath the upper lid. It is not visible.

Sometimes a chemical called 5Fluorouracil (5 FU) or Mitomycin C (MMC) is used during the operation to stop too much scarring from taking place and make the operation work better.

Non-penetrating glaucoma surgery (NPT) can be a deep sclerectomy or a viscocanalostomy. Essentially, this is a modified trabeculectomy in which the fluid flow is less rapid, making it potentially a safer operation.

No special chemicals are required for this surgery. At St Pauls', we have performed this operation for over ten years with good success.

A glaucoma drainage device is a small silicone tube that is placed in the eye. It drains fluid into a plastic plate which is attached to your eye underneath the upper lid. It is invisible, but can sometimes be felt if you rub your eye. Usually we have to cover part of the tube under the eyelid with some tissue from a donor eye. The surgeon can explain this in more detail to you.

Sometimes the surgeon may put a bubble of gas into your eye to prevent the eye from becoming too soft. You will be told if gas is injected as travel by airplane is not safe while you have gas in the eye.

After these operations you will be asked to stop your glaucoma drops in the eye that has had the operation, but if you are using drops in the other eye you should continue them.

After the operation you will be given new eye drops to help the eye heal and prevent infection. You should use these for as long as instructed to help make the operation work.

Unlike the procedures described above which all lower the eye pressure by letting fluid out of the eye, the cyclodiode laser reduces the amount of fluid made by the eye. The eye may be inflamed and painful after this procedure and you would be given tablets and drops for your pain.

These operations can be combined with a cataract operation all done at the same time.

Generally speaking, glaucoma surgery is successful 80 – 90% of the time, though sometimes you may need to go back on to glaucoma drops to lower the eye pressure further.

Factors that reduce the success rate of a drainage procedure include being a young patient, black race, previous eye surgery or inflammation, diabetes or trauma.

Following the procedure, we would make an appointment to see you in one day, one week, one month, three months and then six monthly thereafter.

We may ask you to come more frequently if we have any concerns that need addressing.

As with any operation, glaucoma surgery can have complications, though these are rare.

These includes infection, bleeding, too high or too low pressure in the eye, repeat surgery and, very rarely, loss of sight. Sometimes we cannot stop glaucoma getting worse.

On the whole, these procedures are performed regularly, work well and their complications managed effectively should they arise.

## **What should I expect after my operation?**

- After your operation you will be kept in the theatre recovery room before being transferred back to the ward.
- A nurse will check your pulse, blood pressure, breathing rate and wound regularly.
- The nursing staff will also advise you when you can start taking sips of water. Anaesthetics can make some people sick. If you feel sick we advise you not to drink until this feeling has passed.
- The nursing staff may offer an injection to help this sick feeling go away.
- On arrival back to the ward, eye drops maybe applied by the nursing staff. Also you will be wearing an eye pad until the next morning.
- **The first time you get out of bed, please make sure you ask a nurse to be with you. This is in case you feel dizzy.**

## **Pain relief and medication**

- The nursing staff will advise you about painkillers before you leave the hospital.
- Continue any oral medication prescribed by the doctors.
- You will need to regularly insert eye drops following your operation. This will vary from patient to patient. These drops include a steroid drop (such as Betnesol or Predsol) to help the eye heal and perhaps an antibiotic (such as Chloramphenicol) or a pupil-dilating drop (such as Cyclopentolate or Atropine). You will no longer need your glaucoma drops in the operated eye, unless you are having the cyclodiode laser treatment, in which case you usually continue your glaucoma drops.

- Please wash your hands both before and after applying eye drops.
- Apply your drops at the correct times.
- A member of the nursing staff will show you how to apply your drops

**If any severe pain, sudden loss of vision or excessive stickiness is noticed, please contact the Primary Care Department on Tel: 0151 706 3949.**

**Text phone Number: 18001 0151 706 3949**

## **Going Home**

This varies. If you have a local anaesthetic, you may come in and go home on the same day ("day case surgery").

If you need a general anaesthetic, you will be admitted the day before your operation to get you settled into the ward and to be assessed by the anaesthetist. You will be discharged once your specialist is satisfied with your condition, usually within one to two days following the operation.

You may be discharged on the day of your operation. If so and you have had a general anaesthetic and/or sedation, **you must have a friend or relative to take you home and have a responsible adult to stay with you for 24 hours.**

## **For next 24 hours you must not**

- Travel alone.
- Drive any vehicle e.g. car, scooter or ride a motorcycle or bicycle
- Operate machinery (including domestic appliances such as a kettle).
- Climb ladders.
- Make important decisions, sign any business or legal documents.

- Drink alcohol.
- Return to work within 12 hours of treatment. Your general health and any medicines you are taking may increase the time you need off work.

## **You should**

- Take it easy for the rest of the day, avoid strenuous activity.
- Take your medications as usual.
- Let someone else care for anyone you usually look after, such as children or elderly or sick relatives.

## **Your eye**

For **two** weeks after the operation please:

- Avoid rubbing or pressing on your eye.
- Avoid heavy lifting, strenuous exercise or heavy gardening.
- Avoid getting soap or shampoo in your eye while washing.
- Avoid eye makeup.
- For the first two or three months after your operation your sight will vary while your eye settles down. You will also be tested to see if you need new glasses at this stage.
- Sutures may be removed. This is usually done under local anaesthetic drops at your follow-up appointment.

## **Getting back to normal**

Please avoid heavy lifting and bending for two weeks after your operation.

## **Returning to work**

- You can self-certify for the first seven days of sickness. Before you are discharged, a medical certificate (Fit Note) may be issued by your hospital doctor to cover the expected time off you will need.
- Please check with the medical staff at your outpatient appointment when you can return to work.

## **Further Appointments**

An outpatient appointment will be given to you before you are discharged from the hospital.

## **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.

## **Further Information**

**St Paul's Eye Unit**

**Tel: 0151 706 3944**

**Text phone number: 18001 0151 706 3944**

**The International Glaucoma Association**

**[www.iga.org.uk](http://www.iga.org.uk)**

**Author: St Pauls Eye Department**

**Review Date: October 2024**

All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

يمكن توفير جميع المعلومات المتعلقة بالمرضى الموافق عليهم من قبل انتمان المستشفى عند الطلب بصيغ أخرى، بما في ذلك لغات أخرى وبطرق تسهل قراءتها وبالحروف الطباعية الكبيرة وبالصوت وبطريقة برايل للمكفوفين وبطريقة مون والإلكترونية.

所有經信托基金批准的患者資訊均可以其它格式提供，包括其它語言、易讀閱讀軟件、大字

體、音頻、盲文、穆恩體 ( Moon ) 盲文和電子格式，敬請索取。

در صورت تمایل می‌توانید کلیه اطلاعات تصویب شده توسط اتحادیه در رابطه با بیماران را به اشکال مختلف در دسترس داشته باشید، از جمله به زبانهای دیگر، به زبان ساده، چاپ درشت، صوت، خط مخصوص کوران، مون و بصورت روی خطی موجود است.

زانیاری پیوندیدار به نه‌خوشانه‌ی له‌لایمن تراسته‌وه پسمند کراون، نه‌گمر داوا بکریت له فورمات‌ه‌کانی تردا بریتی له زمانه‌کانی تر، نیز ی رید (هاسان خویندنه‌وه)، چاپی گموره، شریتی دهنگ، هیلای موون و نه‌لیکترونیکی همیه.

所有经信托基金批准的患者信息均可以其它格式提供，包括其它语言、易读阅读软件、大字  
体、音频、盲文、穆恩体 (Moon) 盲文和电子格式，敬请索取。

Dhammaan warbixinta bukaanleyda ee Ururka ee la oggol yahay waxaa marka la codsado lagu heli karaa nuskhaddo kale, sida luqaddo kale, akhris fudud, far waaweyn, dhegeysi, farta braille ee dadka indhaha la', Moon iyo nidaam eletaroonig ah.