

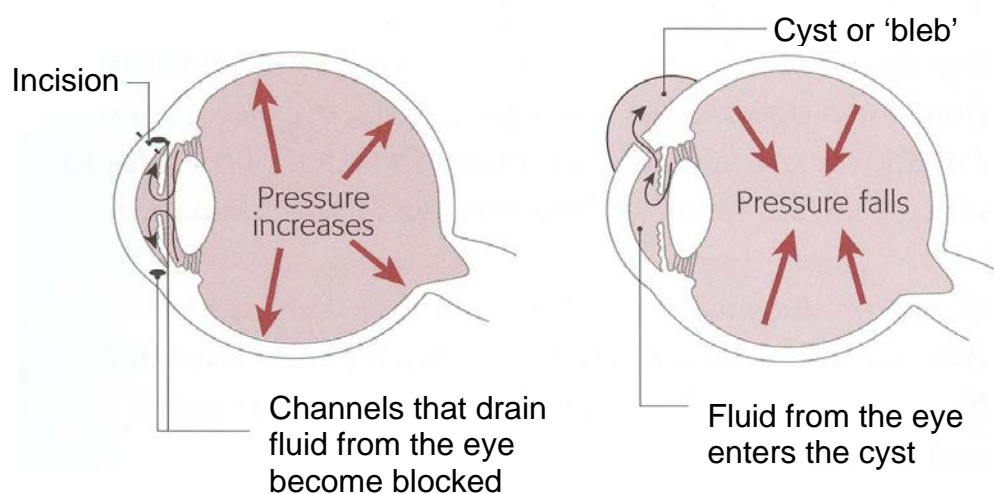
Having trabeculectomy surgery

This leaflet aims to answer some of the questions you may have about having trabeculectomy surgery. It explains the benefits, risks and alternatives of the procedure as well as what you can expect when you come to hospital. If you have any questions or concerns, please do not hesitate to speak to a doctor or nurse caring for you.

What is trabeculectomy surgery?

A trabeculectomy is surgery to decrease the pressure inside the eyes of people with high eye pressure or uncontrolled glaucoma.

The surgeon creates a new channel through the white of the eye (sclera), to allow excess aqueous humour (fluid inside the eye) to escape. When this happens, the amount of pressure within the eye is reduced.



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The fluid does not leave the eye completely, but will form a small blister-like swelling on the white surface of the eye, usually underneath the eyelid where normally you cannot see it. The fluid can then be reabsorbed back into the blood stream, and does not come onto the surface of your eye. This small blister structure is also known as the drainage 'bleb', and remains on the eye's surface.

Why do I need to have trabeculectomy surgery?

Your eye surgeon has recommended trabeculectomy surgery because:

- medical treatments, eye drops, or laser, have not controlled your condition properly; and/or
- eye drop treatment is unsuitable.

In some cases this may even be the first choice of treatment. Your doctor will make the decision to operate after assessing your progress and condition.

The NICE glaucoma guidelines (2017) recommend this surgery in primary open angle glaucoma if you need more than two different eye drops to control the pressure or if you have advanced glaucoma.

What are the benefits of having a trabeculectomy?

A trabeculectomy is carried out to reduce the pressure inside your eye, preserving the sight you have. **It will not restore any sight you may have lost or improve your sight**, but aims to reduce the risk of further loss of vision.

What are the risks of a trabeculectomy?

- Sometimes your **vision may not be as sharp** after the surgery as before, even with new glasses. Some people may feel that their sight seems worse afterwards. However, if your doctor feels you need this surgery, it is because he or she feels you are in danger of losing your sight altogether if the glaucoma is not controlled.
- **Infection** is a complication that can occur after any surgery, but serious infection is uncommon.
- **Failure of the surgery to adequately control the eye pressure.** Scarring of the 'bleb' is the most common reason for the surgery not to work as well as intended. There are various measures which are taken both during and after the surgery to try and reduce the risk of scarring. Despite this, unwanted scarring often reduces how well the surgery works. If this happens, you may be asked to use eye drops to help control the eye pressure.
- **Loss of sight** - there is a very small risk of less than one in two hundred (0.5%) of complete loss of sight in the operated eye. This can be due to infection or bleeding inside the eye.
- Your **eyelid position** might change after the surgery and you may require further surgery to correct this later on.
- **Certain symptoms** after your surgery could mean that you need prompt treatment, including:
 - excessive pain
 - sticky eye that continues to produce sticky discharge after gentle bathing with cooled boiled water
 - a sudden, or very obvious, worsening or darkening of your vision
 - shadows or a 'spider web' pattern across your vision
 - flashing lights
 - increasing redness of your eye.

Contact the hospital immediately using the numbers on page 7 if you have any of these symptoms. It could lead to you losing your sight altogether.

- There is a small risk that **the ‘bleb’ can become infected** at any time after your surgery. If this occurs, you may need different antibiotic eye drops, or you may need to use your drops more frequently. You may also need further surgery. Your doctor will decide this. There is a risk of your vision getting worse after an infection and your doctor will discuss this with you.
- Sometimes, **the eye pressure can drop too low**, or fall low too quickly. Low eye pressure is the biggest risk after the surgery. Low eye pressure can result in bleeding at the back of the eye, which is a very severe complication. This is why it is important that you attend your follow-up appointments as scheduled. It is also important to avoid rubbing your eye after your surgery as this could cause the pressure to drop too low.

If your eye pressure is too low you may need further surgery which might include:

- tightening the stitches in the eye; or
 - injecting some gel (called a viscoelastic) into the front of the eye.
- Rarely haemorrhage (bleeding) can occur inside the eye after the surgery. This may permanently damage your vision.

There is also a chance that **cataracts may worsen**. If you have cataracts and you need surgery to treat your glaucoma, sometimes the surgeon can perform both operations at the same time. Your surgeon will discuss this with you and ask for your consent before the operation. If a cataract operation is needed after a trabeculectomy, there is a small risk that the trabeculectomy could stop working properly. Your doctor will speak to you about this if it applies to you.

Are there any other alternatives?

You must remember that your doctor has suggested this surgery for you to save the sight you still have. It will not restore any sight you may have already lost or improve your sight. It is likely that you will continue to lose your sight permanently without this surgery.

Your alternative is to continue with the eye drops you take. There are also alternative operations such as an aqueous drainage tube operation, cataract extraction with laser/implant inside the eye.

In some cases tablets can be prescribed to reduce the pressure. However, tablets are a short term option due to their side effects.

Your doctor can discuss these alternatives with you if they are suitable in your case.

Asking for your consent

We want to involve you in all the decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This confirms that you agree to have the procedure and understand the risks and benefits. If you would like more information about our consent process, please speak to a member of staff caring for you.

What do I need to do to prepare for the surgery?

You will attend the day ward for approximately half a day as a day case. Sometimes you may need to stay overnight. The treatment will take place in one of our theatres.

Will I need an anaesthetic?

The surgery can be performed under local anaesthetic (where the eye is numbed) or general anaesthetic (you will be asleep). The type of anaesthetic used depends on the surgeon and the patient, and will be discussed with you.

The nurses in the pre-assessment clinic will advise you of any special instructions you need to follow. If you are having a general anaesthetic you should follow the instructions about fasting (not eating or drinking) before your operation that we give you. If you are having general anaesthetic you will also need to have someone to accompany you home after your operation. You should also receive a copy of our leaflets **Having an anaesthetic** and **Going home after your eye surgery under a general anaesthetic**. If you have not received a copy, please ask for one.

It is important that you use your regular eye drops as normal on the morning of your surgery, unless your doctor has told you otherwise.

Medicines

If you are taking any medication, these may need to be temporarily stopped or adjusted around the time of your operation or treatment and you will be given information on how to do this at your pre-assessment appointment. Do not make any changes to your usual medicines and continue to take them unless you have been advised to do so. Please remember to bring them into hospital with you.

If you are taking any medicines that thin your blood, such as antiplatelet medicines (for example aspirin or clopidogrel) or anticoagulant medicines (for examples warfarin or rivaroxaban), please tell your doctor or the nurse as you may need to stop them temporarily before your operation. Also tell your doctor or nurse if you have diabetes as you may need to alter the dose of your diabetes medicines, as you will need to fast before the procedure. Further information on stopping any medicines will be given to you when you come for pre-assessment. Please ask us if you have any questions.

Please let us know if you are taking any regular medicines (including anything you buy yourself over the counter or any herbal or homeopathic medicines) and if you have any allergies to any medicines.

What happens during the surgery?

Trabeculectomy surgery usually takes about one hour under local or general anaesthetic.

Surgeons use a chemical called Mitomycin-C to reduce scarring and help the surgery to work as intended. Mitomycin-C is applied to the area of the trabeculectomy for up to three minutes during the surgery. The use of mitomycin for this condition is unlicensed. This means although the manufacturer of the medicine has not specified it can be used in this way, there is good evidence it will be beneficial to help with healing and it has been used routinely worldwide in trabeculectomy operations for many years.

The new drainage channel is created by the surgeon and a number of stitches are placed to control how much fluid drains through the new drainage channel. These stitches can remain in the eye long term or be removed after the surgery in the eye clinic using eye drops to numb the eye.

Medicine - Taking an unlicensed medicine

The leaflet, **Unlicensed medicines – a guide for patients**, has more information about unlicensed medicines. If you would like a copy, please ask your doctor, nurse or pharmacist. Alternatively you can call the pharmacy medicines helpline – contact details are at the end of this leaflet.

Will I feel any pain?

After the anaesthetic is given you should not feel pain during the surgery. After the surgery, it is usual for your eye to be a little red and swollen and feel a little uncomfortable. You may be aware of the tiny stitches used for the surgery. Although uncomfortable, these symptoms are not serious, and will get better over the first few weeks.

If you have pain after the surgery you can take ordinary painkillers like paracetamol or ibuprofen (unless you have been advised against using these).

What happens after the surgery?

In the majority of cases the surgery is done as a day case so you can go home once you have recovered sufficiently.

To protect your eye, you will have a patch placed over your eye before we discharge you. A nurse will remove this the following day when you attend your outpatient appointment. If you have poor vision in the eye that has not been operated on, you will have a clear shield instead of a patch on the operated eye, so that you can still see and move around.

After the surgery, the inside of the eye is often inflamed (swollen). You will have anti-inflammatory drops to reduce this. You may need to use them every two hours for the first weeks. Your doctor will give you specific instructions about this as every patient is different. The anti-inflammatory drops most commonly used in the hospital after trabeculectomy are dexamethasone. These are continued in reducing doses for around 3-4 months to assist healing, but again your doctor will give you specific instructions about this. If you run out of the drops it can make the operation fail. Please make sure that you get a further prescription from your GP.

You will also have antibiotic drops. These drops are used to prevent infection following the surgery, and usually you need to use them four times a day. The antibiotic drops most commonly used in the hospital following trabeculectomy are called chloramphenicol. Your doctor will give you specific instructions about this

You will also have a plastic shield to wear at night. This is to stop you accidentally rubbing your eye during the night. You should wear the shield for four weeks following the surgery, unless your doctor tells you otherwise. You should wash and thoroughly dry the shield before covering your eye each night. You may also wear it during the day if you are concerned. **You must avoid rubbing your eye at any point as this could cause the eye pressure to drop too low which could potentially lead to serious complications.**

What do I need to do after I go home?

Eye-Drops

You should continue to use the anti-inflammatory eye drops, the antibiotic eye drops and the plastic shield (all mentioned above) as directed by your doctor. Please only use the eye drops that your doctor has told you to use.

If you use glaucoma drops, you will usually stop putting them into your operated eye. If you continue to use them, the operation might fail, or the eye pressure could drop too low, and this can be dangerous. If you are unsure what to do, please check with the nurse or the doctor if you need to continue using them.

If you are using glaucoma drops in the un-operated eye, please continue to use them unless clearly instructed otherwise.

If you have been on acetazolamide tablets for eye pressure control before the operation then these are stopped immediately after the operation.

Activity and advice following a trabeculectomy

It is usual for the operated eye to be a little sticky in the mornings. You can gently clean your eyelids with boiled, cooled water. Please speak to your doctor for instructions about this.

Remember to always wash your hands before putting drops in or cleaning your eye.

You should avoid stooping, bending and strenuous activity during the first couple of weeks, or until your doctor says otherwise. You should also avoid swimming and contact sports. However, it is safe to bathe and shower as normal, watch TV and read as normal.

If you work, you should arrange for time away from work for roughly two weeks, but this can depend on the nature of your employment; and/or the level of vision in your other eye. You may need more time off if you do heavy manual, or dirty/dusty work.

In the long term, if you plan to travel abroad, you should let your doctor know as it is advisable to take an adequate supply of drops with you. You should check with your eye doctor before travelling.

Depending on your level of glaucoma prior to surgery and level of vision after surgery, your doctor can advise you about driving. Usually if you were legal to drive before and your vision settles down after surgery then you should be able to drive.

Will I have a follow-up appointment?

You will be given a follow-up appointment in the eye clinic outpatient department for the following day so we can make sure the surgery is working well.

You must attend the clinic follow-up visits as requested. In the initial period we need to check regularly that the surgery is working well and that there are no complications. You may have to attend the clinic every week for the first four weeks after the surgery. You will start to visit less often after this. Your doctor will decide exactly how often you need to be seen, as every patient is different.

The follow up visits are critical for the success of this surgery. During these visits the eye pressure is checked and the 'bleb' is examined to look for signs of failure. We place stitches during the surgery to prevent the pressure dropping too low. These can be removed as needed. Sometimes the eye heals too quickly and a medicine called 5- Fluorouracil (which is an unlicensed medicine) may be injected around the bleb to prevent healing.

As with any operation, the affected part of the eye will take a little time to settle back to normal. It is normal for some patients to find their vision is blurred. This may change from day to day for some weeks to months. Once your eye has settled, a visit to your optometrist/optician for new glasses will usually improve your sight to a very similar level, if not the same level, as it was before. Your doctor will inform you when the right time is for a glasses check. In general we advise you to wait for three months before having a glasses check.

Contact us

If you have any questions or concerns, or if you develop any of the symptoms featured in this leaflet, or need urgent advice about your eye(s), please call the Iris Clinic

t: 020 7188 4307, Monday to Friday, 9am to 5pm, or

t: 020 7188 7188, Monday to Friday, 9 to 4pm and ask for eye casualty.

Outside of clinic hours **t:** 020 7188 7188 and ask to be put through to the Emergency Department (A&E).

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) **e:** complaints2@gstt.nhs.uk

Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch.

t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk

NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

t: 111

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