

Having aqueous shunt/tube surgery

The aim of this information sheet is to help answer some of the questions you may have about having aqueous shunt/tube 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 an aqueous shunt or tube?

An aqueous shunt or tube is a tiny device that is used to decrease the pressure inside the eyes of people with high eye pressure or uncontrolled glaucoma (see photographs below).

The device is put into the eye during an operation that allows excess aqueous humour (fluid inside the eye) to drain. Your surgeon will place a plate towards the back of your eye where it will form the small blister or 'bleb' where the fluid will drain to. You cannot see the bleb as it is too far back behind your eye to see. By draining away the excess fluid inside the eye, the amount of pressure within the eye is reduced.

You can't feel the bleb and tube, and you cannot feel the fluid flowing through them.



Why do I need to have an aqueous shunt?

Your eye surgeon has recommended a tube operation because:

- medical treatments (drops), or previous surgery have not controlled your condition properly; and/or
- drop treatment is unsuitable.

In some cases this may even be the first choice of treatment. Your doctor makes the decision to operate after assessing your progress and condition. Normally, you do not need any eye drops or treatment after the aqueous shunt/tube operation.

What are the benefits? Why should I have an aqueous shunt/tube?

The aqueous shunt/tube will reduce the pressure inside your eye, preserving the sight you still have. It will not restore any sight you may have already lost or improve your sight, but aims to prevent further loss of vision.

What are the risks?

- Occasionally after the operation your **vision may not** be **as sharp** as before the operation. You may be concerned that your sight seems worse afterwards. However, if your doctor feels you need this operation, it is because he or she feels you are in danger of losing your sight altogether if the glaucoma is not controlled.
- Your eyelid position might change after the operation and you may require another operation to correct this later on.
- **Infection** is a complication that can occur after any operation, but serious infection is uncommon.
- **Certain symptoms** that occur after the operation 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, veil or 'spider web' shadow of your vision
 - flashing lights
 - increasing redness of your eye.

Contact the hospital immediately using the numbers on page 6 if you have any of these symptoms. It could lead to you losing your sight altogether.

- Very rarely, the **eye pressure can drop too low** or fall low too quickly. Low eye pressure is the biggest risk after the operation. 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 for you to attend your follow-up appointments as scheduled.
- If your eye pressure is too low, a surgeon may need to inject some gel into the front of your eye. The doctor may also recommend increasing or decreasing certain eye drops.
- Occasionally you may need **another operation** to reduce the amount of fluid draining through the tube.
- Very rarely haemorrhage (bleeding) can occur inside the eye after the operation. This may permanently damage your vision.

Are there any other alternatives?

It is important to remember that your doctor has suggested this operation to you to save the sight you still have and prevent further loss of vision. Your alternative to surgery is to continue with the eye drops you are currently taking. However, it is likely that you will continue to lose sight permanently without this operation.

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

You will attend the day ward for approximately a whole day so that we can prepare you for and perform the operation, then observe you afterwards. Sometimes you may need to stay overnight. The treatment will take place in one of our theatres.

The operation 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 we will discuss this with you.

This means that you will have to follow special instructions before you come into hospital. The nurses in the pre-assessment clinic will advise you of any special instructions you need to follow. You should be given a copy of our leaflet **Having an anaesthetic**. If you have not received a copy, please ask for one.

Because you may be 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 leaflet **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 medication drops as normal on the morning of your operation, unless your doctor has told you otherwise.

Giving my consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

What happens during the operation?

The tube operation usually takes around one to two hours under a general anaesthetic. Your surgeon will also insert a small silicon tube (less than 1 mm in diameter) into the front chamber of your eye. It is so small you would need a microscope to see it.

To stop the tube from moving around and becoming exposed through the conjunctiva, your surgeon will stitch a patch made from donor eye tissue onto the surface of your eye, over the tube.

The donor tissue comes from the UK transplant service after tests for infections such as:

- Hepatitis B and C
- Syphilis
- HIV.

There is no test for v-CJD (Mad cow disease) at the moment, but the risk of transmission from transplanted eye tissue appears to be extremely low.

Sometimes the surgeon may use a suture to stop too much fluid draining during the first few months. This means that your eye pressure could still be high until this suture has been removed.

Will I feel any pain?

After the operation, it is usual for your eye to be a little red and swollen, and to feel a little uncomfortable. Some patients are aware of the tiny stitches which are used for the operation. Although uncomfortable, these symptoms are not serious, and will get better over the first few weeks to months.

What happens after the operation?

After the operation, the inside of the eye is often inflamed (swollen). You will have anti-inflammatory drops to reduce this. You may need to use them as often as every hour. Your doctor or nurse will give you specific instructions about this, as every patient is different. The anti-inflammatory drops most commonly used in the hospital following aqueous shunt/tube is dexamethasone (Maxidex®).

You will also have antibiotic drops. These drops are used to prevent infection following the operation, and usually you need to use them four times a day. The antibiotic drop most commonly used in the hospital following an aqueous shunt/tube is called chloramphenicol. Your doctor or nurse will give you specific instructions about this, as every patient is different.

You will also have a plastic shield to wear at night. This is to prevent you accidentally rubbing your eye during the night. You should wear the shield for four weeks following the operation, unless otherwise instructed. 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.

What do I need to do after I go home?

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.

It is not uncommon for the operated eye to be a little sticky in the mornings. You can clean your eyelids gently with boiled, cooled water. Please speak to your doctor for instructions about this.

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

Activity following aqueous shunt/tube operation

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

If you work, you should arrange to be away from work for approximately two weeks, but this can depend on the:

- nature of your employment; and
- 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 you should take an adequate supply of drops with you. You should check with the eye doctor before travelling.

Will I have a follow-up appointment?

You will have an appointment in the outpatient department the following day to make sure the operation is working well.

You must attend the clinic follow-up visits as requested. In the initial period following the operation we need to regularly check that the operation is working well and there are no complications. You may have to attend the clinic every week or two for the first four weeks after the operation. 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.

If you use glaucoma drops, you will usually stop putting them into the eye operated on after the operation. If you continue to use them, the eye pressure could drop too low, and this can be dangerous. Please check with the nurse or the doctor whether or not you need to continue using them if you are unsure.

If you are using glaucoma drops to the untreated eye, please continue to use them unless clearly instructed otherwise.

You will have a patch placed over your eye before we discharge you. A nurse will remove this when you come in for your outpatient appointment. If you have poor vision in the eye not operated on, you will have a clear shield instead of a patch over your operated eye so that you can still see and move around after surgery.

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

Contact us

If you develop any of the symptoms featured in this leaflet, or need urgent advice about your eye(s), please contact the nurses in the eye day care unit at St Thomas' hospital on 020 7188 6564

- Monday to Friday 7.30am to 6pm
- Saturdays 9am – 12pm.

Outside these hours, please contact the eye doctor on call via the main switchboard on 020 7188 7188.

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 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

NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

w: www.nhs.uk

Get involved and have your say: become a member of the Trust

Members of Guy's and St Thomas' NHS Foundation Trust contribute to the organisation on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it is up to you how much you get involved. To find out more, and to become a member:

t: 0800 731 0319 e: members@gstt.nhs.uk w: www.guysandstthomas.nhs.uk/membership

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