

Information for Patients

Trabeculectomy (Glaucoma Drainage Surgery)

You may have been told by your doctor that you require an operation to control the pressure within your eye. This operation is called a trabeculectomy (trab-ec-u-lec-tomy). A trabeculectomy operation is recommended for patients whose glaucoma continues to progress despite using eye drops and/or having had laser treatment.

The goal of trabeculectomy surgery is to help lower and control your eye pressure. The eye pressure is known as intra-ocular pressure (IOP). If your intra-ocular pressure remains high, then further irreversible loss of vision from glaucoma may occur.

This operation will not improve your vision or cure glaucoma but aims to prevent or slow down further visual loss from glaucoma damage.

What is a trabeculectomy?

A trabeculectomy is an operation to create an alternative drainage channel, to help aqueous fluid (natural fluid of the eye) drain from your eye. This operation creates a bypass for the blocked natural drain (trabecular meshwork) of your eye. Your eye pressure is reduced because fluid can now drain more easily through the newly created drainage channel.

How is a trabeculectomy operation performed?

During this operation a tiny opening is made to form a new drainage channel in the white of your eye (sclera), underneath the top eyelid. This allows the aqueous fluid to drain through the opening into a reservoir called a bleb and then to be absorbed by the body. Trabeculectomy surgery can be carried out under either a local anaesthetic or a general anaesthetic. These choices will be discussed with you prior to your operation date.

How successful is trabeculectomy surgery at lowering intra-ocular pressure?

Audits and studies show that the success of trabeculectomy surgery is dependent upon many things. Factors that can reduce the success of trabeculectomy surgery are:

- Young age
- Ethnic group
- Uveitis (inflammation within the eye)
- Previous eye surgery
- Previous severe eye injury
- Neovascular glaucoma (where abnormal blood vessels grow on the iris)
- Natural healing process causing scarring
- Diabetes
- Some eye drops, including multiple use of eye drops

The measurement of surgical success will vary depending on the individual needs of the patient and on the parameters measured. If an eye pressure below 21mmHg at 2 years is taken as a success measure, research shows the national average is around 80% of patients achieving this.

At the Manchester Royal Eye Hospital, we have repeatedly audited our results over the last 10 years and we consistently achieve success rates higher than this average. More specific details about success rates and your individual targets can be discussed with your ophthalmologist.

Are there any risks associated with trabeculectomy surgery?

As with any surgery, there is the potential for complications or problems to arise. Complications can occur during surgery, shortly after surgery or many months after surgery.

Complications that can occur:

- The most serious problem that can occur is bleeding inside the eye. This can lead to loss of vision and even blindness but occurs in less than 1 in 1000 patients.
- An infection inside the eye can be very serious and also cause loss of vision or blindness. This also happens in less than 1 in 1000 patients.
- After the operation the IOP may be too high or too low. This may require additional treatment in the outpatient clinic or sometimes further surgery is required.
- Inflammation inside the eye can occur; this is treated with eye drops.

- Some patients are aware of the drainage bleb under their upper eyelid or that there is slight drooping of the eyelid, this usually settles down.
- As your eye settles and heals you may need a change of glasses, to get your best vision. About 10% of patients notice that their vision is reduced by one line on the eye chart a year after the operation, as cataract formation may be increased by trabeculectomy surgery.

The use of antimetabolites (anti-scarring drugs)

The main reason for trabeculectomy failure is that the newly created drainage site can scar and heal up. The previous mentioned risk factors can influence this.

Antimetabolites are drugs that prevent scar tissue from forming. If the doctor is concerned that excess scarring may occur, then the use of these medications can reduce this process and enhance the success rate of the operation.

The most commonly used antimetabolites are 5 Fluorouracil (5FU) and Mitomycin C (MMC). These can be used at the time of surgery and 5FU can be used in the out-patients clinic and given by the doctor as an injection around the drainage bleb. Further information will be given to you if you require this treatment.

Before your operation

You should continue any eye drops and tablets for your glaucoma as prescribed until the time of your surgery, unless directed otherwise by your ophthalmologist. If you take any blood thinning medicines for example Warfarin, it is very important to tell the doctor or nurse in the clinic, as this may need adjusting prior to your operation.

You will be asked to attend a pre-operative assessment appointment. For this appointment, please bring with you an up-to-date list of your current medications and a brief summary of your medical history, available from your GP if you are unsure. During this visit your general health and suitability for anaesthetic will be assessed and any investigations for example blood tests will be undertaken if required.

After your operation

Immediately after your operation, your eye will be covered by a protective plastic shield. Eye drops are not usually required in your operated eye until the day after surgery. Any eye drops that you use in your other eye **must** be continued as normal.

The morning after your operation the protective eye shield will be removed. Your eye will be cleaned and examined, and eye drops started. The eye drops you will need to use in your operated eye will be **different** from the drops that you used prior to your operation. **You will need to be reviewed by the ophthalmologist the day after your surgery.**

Drops will need to be used for approximately three months after your operation. Each time you attend the out-patient clinic any changes to your eye drops will be discussed with you. If you are running out of the drops you must obtain a repeat prescription from your own GP.

Post-operative visits

The success of trabeculectomy surgery depends upon the rate and extent of the conjunctival healing process. Your IOP can vary in the first few weeks after surgery. During the first few weeks you will need to attend the out-patients clinic frequently for close monitoring, initially, on a weekly basis.

There are many adjustments that may need to be made, during your clinic visits, to maximize the success of your surgery. This may involve changes to eye drop medications, adjustments to or removal of stitches and possibly having anti-scarring injections. **For these reasons it is very important that you attend all your clinic appointments and use your eye drops as prescribed.**

Activities after trabeculectomy surgery

Following surgery, you are able to read and watch television as normal as these activities will not harm your eye. It is however, important to avoid strenuous activity during the first few weeks after surgery. The following table is a general guide to 'do's and don'ts'. If in doubt, please ask the doctor or nurse in clinic.

Activity	Advise
Hair washing	No need to avoid but back wash advised to avoid getting shampoo into your eye. It may be easier to have someone else wash your hair for you.
Showering and bathing	No need to avoid but don't allow soapy / dirty water to go into your eye.
Sleeping	Try to sleep on your un-operated side. Tape the plastic eye shield provided over your eye every night for 2 weeks to avoid accidentally rubbing your eye whilst asleep.
Walking	No restrictions.
Wearing glasses	No restrictions. Avoid buying new glasses for 2-3 months after surgery as your glasses prescription can change during this time as

	your eye heals.
Wearing sunglasses	Wear for comfort if your eye feels sensitive to light and wear sunglasses in bright sunlight with UV protection.
Wearing contact lenses	Cannot be worn due to the bleb.
Driving	This is dependent on your vision in both eyes and you will be advised at clinic.
Flying	No restrictions.
Going away on holiday	Discuss with your doctor/nurse as it is very important to attend your follow up appointments.
Wearing eye make up	Avoid for one month then use new make-up. Never share eye make-up with someone else.
Household chores e.g. cleaning, ironing, vacuum cleaning	Avoid for 1 – 2 weeks but this depends upon your intra-ocular pressure.
Sexual activity	Avoid for 1 -2 weeks
Gym workout	Avoid for 3 months
Playing sports e.g. football, tennis, golf, squash, rugby	Avoid for 3 months
Running / jogging	Avoid for 3 months
Swimming	Avoid until all your stitches have been removed, approximately 3 months then after that wear goggles.

It is most important that you do not bump, rub or press on your eye after surgery.

Returning to work

The length of time you will need off work depends upon a number of factors. These include the nature of your job, your vision and the IOP in your operated eye. Most people need 1 – 2 weeks off after surgery. If your job involves heavy manual work or you work in a particularly dusty/dirty environment, you may require longer off. This can be discussed with the doctor/nurse at any clinic visit.

You may need to make your employer aware of your need to attend for frequent follow up appointments after surgery. A self-certifying sick note is required for the first seven days of absence and is available from your employer or GP, not from the hospital. After the first seven days a medical sick note is required and is available from your GP or hospital doctor.

Contact Information

The information in this leaflet is intended as a guide only, as each patient's experience will be different. If you require any further information or advice, please contact a member of staff on the telephone numbers below.

Do not wait until your next appointment, but contact us immediately, if you have any urgent symptoms such as:

- Increased redness of your eye
- Vision disturbance such as double vision or loss of vision
- Increasing pain

Glaucoma Specialist Nurses (0161) 701 4819 or via switchboard (0161) 276 1234 bleep 1976 available Monday – Friday hours may vary

Consultant secretaries available Monday – Friday 9.00am – 4.00pm

Miss Fenerty's secretary (0161) 276 5582

Mr Au's secretary (0161) 276 5522

Mr Yau's secretary (0161) 701 5915

Mr Yu secretary (0161) 276 5915

Ms Tacea's secretary (0161) 276 8957

Any of the above numbers could be answer phones at certain times. Your call will be returned but this might not always be the same day.

If you require emergency treatment, you can contact the Emergency Eye Department which is open from 8.00am to 8.00pm every day. Outside of these hours please contact Ward 55 open 24 hours every day. These departments can be contacted via the hospital switchboard on (0161) 276 1234 asking to be put through to the Emergency Eye Department or the ward.

If you have an enquiry regarding your appointment, please contact the appointment booking team:

- Adult glaucoma appointments (0161) 276 5533 (option 1) available Monday – Friday 9.00am – 4.00pm
- Paediatric (child) glaucoma appointments (0161) 276 5533 (option 5) available Monday – Friday 9.00am – 4.00pm