

Information for patients

Adult squint surgery

This leaflet provides information that will help you understand and decide whether to have a squint operation. It is important that you understand this leaflet before you have surgery. If you have any questions, you may wish to write them down so that you can ask a member of the hospital staff or your consultant.

Squint surgery:

Your eye surgeon has suggested that squint surgery may be of benefit to you either to improve the appearance of your eyes or to help your eyes work together more comfortably. If you decide not to have or don't want an operation your squint will usually remain unchanged, however, some squints can increase over a period of time. Squints do not usually resolve of their own accord. Waiting or delaying squint surgery does not usually affect either the type of operation required or the outcome of the surgery.

Alternative treatments for squint may include:**

Prisms - Double vision caused by a small squints can sometimes be relieved by prisms which alter the direction of light entering your eye. Initially plastic prisms are applied to your glasses and if found to be satisfactory, can in time, be incorporated into your spectacle prescription.

BTX (Botulinum toxin) - Sometimes weakening the effect of an eye muscle using BTX can be helpful to improve the position of your eye to approximately demonstrate the effect of squint surgery or to reduce the likelihood of a muscle becoming permanently contracted. The effects of BTX are temporary, lasting a few weeks to a couple of months. BTX is delivered by a targeted injection under local anaesthetic and is not without risk (double vision, droopy eyelid, bleeding, infection and damage to the eye and vision).

Exercises - For a few types of squint eye exercises may be helpful and these will be explained to you if appropriate.

No treatment – Just because you have a squint does not mean that you need any form of treatment but it is unlikely that your squint will resolve of its own accord.

****Please note the above treatments do not prevent you having squint surgery if you later change your mind.**

The operation:

The purpose of the operation is to realign the direction of your eyes.

The operation is usually performed under general anaesthesia so that during the operation you are asleep and unaware of the surgery being performed. The operation usually takes about 20-30 minutes per muscle being operated upon, but may take longer, particularly if you have had previous squint operations.

During the operation the surgeon will weaken, strengthen or alter the direction of action of the muscles that control the movement of your eye. This is achieved by placing a clip between your eyelids to keep your eyelids open and then making small cuts through the thin membrane over the white of your eye. The eye muscles are then identified and are then shortened, lengthened or moved as appropriate. The amount of surgery performed is determined empirically [best estimate] and biological variation means that the final outcome can only be determined after you have woken-up. If the surgeon suggests that you have adjustable squint surgery, this means that one or more of the stitches used will not be fully knotted until after the operation is over and you have woken-up. This gives the surgeon a second chance to correct the alignment of your eyes and is explained a little further on in the leaflet.

Please note, your eye is NOT removed from your eye-socket during the surgery, it is operated upon in its normal position.

After the operation

The eye is not normally padded following squint surgery but occasionally it is necessary to do so. If however, you have had adjustable squint surgery, then your eye will be padded closed to prevent you accidentally pulling the stitches out when you are waking up.

The eye will probably feel a little uncomfortable and as though there is something in it. This is all normal. It is also normal for eye movements, and particularly the extremes of movement, to be uncomfortable / sore.

Please also note that even if you are only having the muscles moved on 1 eye, that you may be aware that the other is a little pink or uncomfortable afterwards. This is because at the time of surgery it is important for the surgeon to test the freeness of movement of both of eyes.

If you have discomfort when you wake up please ask the nurses for a pain reliever such as paracetamol every 6 hours (please avoid aspirin - as this may cause bleeding).

As the eye settles over the next few days and weeks, it is normal to feel itching and for the eyes to be sticky in the mornings. You may be aware of a mild discomfort and a little discharge. After 2-3 weeks any discomfort should disappear however, the eye may remain pink for some weeks. In most cases, healing will take about 6 weeks.

You will be given eye-drops to use 3 times a day for 2 weeks - the hospital staff will explain how and when to use them.

Whilst your eye is healing it is advisable to avoid strenuous exertion and hot baths. You should also do your best to keep out of dirty environments not to rub your eye(s). It is advisable to take about a week off work. You should refrain from driving for one week but you must not drive at any time if you experience any double vision.

Certain symptoms could mean that you need prompt treatment. Please contact the hospital immediately if you have any of the following symptoms:

- Excessive pain
- Increasing redness of the eye
- Deteriorating vision
- Sudden onset of double vision

Adjustable squint surgery:

Your surgeon may suggest that your operation is performed in such a way that the outcome of surgery can be modified / adjusted when you wake up. This can be especially helpful where the outcome of surgery is less easy to predict, for example, if you have had previous squint surgery.

If you have an adjustable squint operation your eye will be padded closed after the operation and when you have woken up sufficiently the surgeon will perform the adjustment.

The pad will be removed and anaesthetic eye-drops will be instilled in your eye. The alignment of your eye will then be measured and a decision made as to how much to adjust. You will then lie back on a couch and a small clip will be used to keep your eyelids open whilst the surgeon adjusts the stitches. The process is not painful but may feel a little peculiar. The position of your eye will then be re-measured and the adjustment repeated as necessary. Usually the whole process takes about 15 minutes. After the adjustment is over all the stitches will have been tied and trimmed short.

Benefits and risks of squint surgery:

Outcome of surgery:

The most likely outcome of the surgery is that your eye will now be in more satisfactory position and the appearance of your eyes will be improved and/or they will work together more comfortably. However, you should be aware that there is a small risk of complications, either during or after the operation.

Potentially serious complications occurring either at the time of, or after the operation:

- Dropped muscle - if a muscle slips off the stitches it can retract deep into the orbit and can be difficult / impossible to find. This would result in disturbed eye movements however, it is very rare not to be able to locate it again. (approx. 1 in 5000)
- Loss of vision (approx. 1 in 2400) - if the eye is accidentally damaged or perforated (1 in 1250) by an instrument or suture needle, or if severe orbital bleeding or infection occurs.
- Endophthalmitis - infection inside the eye. (approx. 1 in 24000)
- Eye / orbital infections which can be severe (approx. 1 in 1650)
- Surgically induced necrotising scleritis is a severe inflammation of the white of the eye. (1 in 5000)
- Anterior segment ischaemia is where the blood supply to the front of the eye is disturbed. (approx. 1 in 13,000)
- Adhesion / scarring syndrome – this rare complication results from excessive scarring of the eye muscles and may require further surgery.
- Cardiac arrest - this can occur as a result of tension on the muscles at the time of surgery but is usually predictable and reversible.
- Anaesthetic related complications that are best discussed with your anaesthetist but include: heart attacks, strokes and death.

Other possible complications / effects after the operation:

- Double vision - this is usually transient but if persistent may require treatment.
- Over-correction - the eye now points in the opposite direction. (approx. 1 in 10)
- Under-correction - the operation has not been as effective as hoped. (approx. 1 in 10)

- Suture related infections / inflammation.
- Corneal abrasion - a scratch of the cornea at the time of surgery or afterwards can be very uncomfortable but is not usually serious.
- Bleeding - rarely a problem but can appear impressive and can result in scarring.
- Slipped muscle - if a stitch comes loose from the muscle after the surgery the eye may drift or move position and result in a disturbance of eye movements (at least 1 in 1500)
- Allergy to eye-drops of any medication used.
- Your full range of eye movements may be reduced as a consequence of the surgery but this is rarely a problem.
- If your eyes were widely divergent (pointing outwards away from each other) before the operation you may be aware that the breadth of your field of vision with both eyes open is reduced following your operation.
- Re-operation rate. (approx. 1 in 10)

Overall serious complications are rare and in most other complications can be treated effectively. However, in a small proportion of cases, further surgery may be needed and

very rarely some complications can result in blindness.

The most common complication is an over or under correction of the squint and treatment may involve further operations.

We hope this information is sufficient to help you decide whether to go ahead with surgery.

If you have any questions, you may wish to write them down below so that you can ask a member of the hospital staff or your consultant:

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