Information for adults undergoing squint surgery
Ophthalmology Department

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Introduction
You have been given this leaflet because it has been suggested that you would benefit from having squint surgery.

This leaflet explains what is involved and details the benefits and risks of having this operation. The decision is yours as to whether to proceed with an operation or not. We hope this leaflet will help answer any questions you might have. Please discuss any questions you have with your surgeon.

What is a squint?
A squint is where the eyes are not looking in the same direction and are out of alignment with each other. The squint can be there all the time or just some of the time, such as when the eyes are tired. An eye may turn in (convergent squint) or out (divergent squint) or one eye can be higher or lower than the other (vertical squint). A squint might be in one eye or swap between the two eyes.

What is squint surgery?
Squint surgery is an operation that tightens or moves one or more muscles on the coat of the eye (the sclera) to help change the position of the eyes. The eye is never removed from its socket during the surgery.
What are the benefits of squint surgery?
The surgery is carried out for different reasons. In some people who have double vision it will eliminate, reduce or move the field of double vision. It may improve the appearance of the eyes by making the squint look less obvious. It may allow the eyes to work together better and in some it may reduce a compensatory head posture.

Are there any alternatives to surgery?
Alternatives are available in some cases such as prisms in glasses, regular botulinum toxin injections or use of a special patch or contact lens to block the vision in one eye.

Before surgery
You will be invited to a pre-operative assessment to see a specialist nurse to ensure that you are fit for surgery. It is extremely important that you attend this appointment, as the surgery cannot go ahead without this assessment.

The squint surgery
The surgery is performed in two parts:

First part of surgery
In our unit, the operation to move the eye muscles is usually performed under a general anaesthetic. General
anaesthetic means you are asleep for the main part of the operation.

The operation takes anywhere from 20 minutes to 1 hour depending on how many muscles need to be moved and whether you have had previous surgery. The operation is performed using very fine instruments and tiny stitches (sutures).

**Second part of surgery: the adjustment**

In the majority we will then perform an adjustment to fine tune the surgery. This is under local anaesthetic after the first part of the main surgery. Local anaesthetic means you are awake and you will be given anaesthetic drops to numb the eyeball. The anaesthetic means you will not feel pain. In this part the stitches will be relaxed, tightened or just tied off. **Please make sure you bring your glasses** as they will be required for the adjustment.

**After the surgery and adjustment**

The majority of patients will go home the same day. You will have a dressing to wear over your eye. The dressing can be removed the following morning. In the evening following the operation, the eye may feel a little sore but most patients do not complain of much pain. Simple painkillers like paracetamol usually help to ease any pain or discomfort. You are advised to rest and not exert yourself.

Despite having had a major operation on your eye you will probably feel quite well. It is therefore important
to remember to be sensible and to rest yourself to allow the eye the best chance to heal.

It is normal for the vision to be blurred for about 24 hours after the operation. It is normal for the eye to feel gritty and a little sore for several weeks after the operation. You do not need the stitches removed as they gradually dissolve after 6-8 weeks.

You will be given eye drops to take home. They are a combination of an antibiotic and a steroid drop. The antibiotic will help reduce the risk of infection. The steroid will reduce inflammation.

You will be invited for a follow-up appointment at around 3 weeks after the surgery to review the results and taper the post-operative drops. It is important to attend this appointment to assess the success of the surgery and monitor the healing process.

What are the risks?

Some people may require more than one surgery to achieve the results required.

Risks include:

- **Under or overcorrection**: This might improve with time. It takes up to two months for the results of the operation to become stable. Further treatment may be necessary (prisms in glasses, botulinum toxin muscle injection or more surgery). It might not be possible to have straight eyes.

- **Double vision**: This may occur as the brain adjusts to
the new position of the eyes. This often settles over days to weeks. If it is permanent other treatment may be necessary.

- **Scarring:** Every operation causes some amount of scarring. This may noticeable over the white part of the eye and particularly if you have had previous squint surgery. Most settle by 3 months. It is important to use the drops prescribed after the operation to reduce the chance of scarring.

- **Change in eyelid position:** This is not very common, but if noticeable you may need lid surgery to correct the position.

**Rare but serious risks:**

The British Ophthalmic Surveillance Unit conducted a study into severe complications of strabismus surgery in the United Kingdom in 2011.

Overall severe complications occur in 0.3% or 3 patients per 1000.

- **Inflammation of the coat of the eye** (scleritis). This would require additional medication.

- **Lost muscle or slipped muscle** 0.09% or 1 patient per 1100.

Rarely, one of the eye muscles might slip back from its new position during the operation or shortly afterwards. If this occurs, the eye is less able to move around and, if severe, further surgery can be required. Sometimes, it is not possible to correct this.

- **Needle penetration/Globe perforation** 0.1% or 1 patient per 1000.
If the stitches are too deep or the white of the eye (sclera) is thin, a small hole in the eye (needle penetration) can occur. Antibiotic treatment is usually prescribed, and occasionally some laser treatment may be required to seal the puncture site. Depending on the location of the hole, the sight could be affected.

- **Anterior segment ischaemia** (reduced blood flow to the front of the eye) is a risk with multiple previous squint surgeries and/or increasing number of muscles operated on in one eye.

- **Loss of vision** is rare but can result from a detached retina or infection in the eye (endophthalmitis) 0.05%, or 1 patient in 2000.

Sometimes there are other unexpected occurrences and this may require further surgery.

**Things to do**

- Do use your drops strictly as advised.
- Do use the lid wipe provided or boiled cooled water and cotton wool to clean any stickiness from the eyes.
- Do keep all your follow-up appointments.
- Do contact the ophthalmology department if your vision suddenly gets worse, if there is increased pain or discharge around the eye or if you are worried.
Things to avoid

• Avoid getting fluid or dirt into the operated eye and always wash your hands before putting in your drops.
• Avoid swimming for up to 4 weeks after surgery.
• Avoid using make-up in close proximity to the eye for 4 weeks.
• Contact lenses should not be worn while the eye is red, this may be up to 8 weeks after surgery, but varies from person to person.

If you experience double vision after the surgery please do not drive or operate machinery.
If the double vision persists or worsens, or you are concerned, please contact the department.

When can I go back to work?
Returning to work will depend on your occupation. Please discuss this with your surgeon prior to the surgery.

Summary
Remember that squint surgery operations have been performed on patients for many years and with successful results in the majority of patients, but as with any operation, it is important to understand the risks involved to make a fully informed decision.
Please write down any questions you may have in the space provided and bring this information leaflet with you.
If you have any concerns post-operatively or enquiries about your post-operative appointment, please contact your consultant’s secretary.
The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4323.

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