

## Information for Patients

# Squint surgery in children

This leaflet provides information for parents/carers of children undergoing squint surgery. It will answer some of the questions which you might have about your child's squint surgery.

Before the operation you will be asked to sign a consent form, so it is important that you understand the contents of this booklet before you decide to go ahead with the surgery for your child.

The Manchester Royal Eye Hospital is a teaching hospital and as such is responsible for the training of junior doctors specialising in Ophthalmology. Your child's operation will be undertaken by the consultant or another senior eye surgeon. Some operations are performed by doctors in training under consultant supervision. There are medical students attached to the Manchester Royal Eye Hospital who might be in the theatre to observe only.

### What is a squint?

A squint (strabismus) is a condition where the two eyes look in different directions and are misaligned. Whilst one eye looks forwards to focus on an object, the other eye turns either inwards, outwards, upwards or downwards. The squint can be there all the time or only some of the time.

### How does a squint affect vision?

In young children, a squint can cause:

- Blurred vision.
- Double vision.
- Lazy eye (amblyopia) – reduced vision.

If your child has a squint, their eyes are no longer working together and they could see two images (double vision) instead of one. To avoid double vision, your child's brain ignores the signals from the eye with the squint and only recognises images from the normal eye. As the squinting eye is not being used, it eventually becomes 'lazy'. This laziness can become permanent unless treated early in childhood. This treatment involves wearing a patch over the good eye (patching), to force the brain to use the affected eye.

In older children, a squint can cause double vision but not result in a lazy eye. This is because their vision has fully developed and their brain is unable to ignore signals from the eye with the squint.

### **How can a squint be corrected?**

Although each case is different, generally a squint can be corrected or reduced by glasses, prisms, Botulinum toxin injection to the eye muscles and by an operation. Your Ophthalmologist will tell you which is/are the best treatment option(s) for your child.

### **What is involved in a squint operation?**

Our eyes are shaped like a ball. The eyeball is moved by muscles attached to it much like the reins of a horse. When a particular muscle contracts (tightens) it moves the eye in a particular direction.

A squint operation involves either loosening or tightening these muscles to improve the alignment of the eyes. So for example, in a child with an inwards turning squint (esotropia), the surgeon will loosen the muscle which pulls the eye in and/or tighten the muscle which pulls the eye out. This is done through an incision in the conjunctiva (layer covering the white of the eye). The eye is not taken out of its socket!

### **What are the expected benefits of the operation?**

Squint surgery is carried out for different reasons. The surgeon will discuss these with you when your child is listed for surgery. Do not hesitate to ask for further clarification if needed.

The main goals of surgery are to:

- Straighten the eyes.
- Promote use of both eyes together (binocularity).

- Reduce double vision.
- Reduce an abnormal head posture

### **What are the risks of the operation?**

- Squint surgery is very safe and complications are rare.
- A general anaesthetic is required, which carries a small risk. Your anaesthetist will discuss these risks with you before the operation.
- Not all children will respond to surgery in the same way, so that for some children the amount of surgery will lead to a too big or too small correction. It is possible that the squint has been noticeably over or under corrected. The chances of this happening vary with the type of squint and you can discuss this with your child's surgeon if you wish, before the operation.
- Long term drift (recurrence of the squint) can occur over a period of years.
- Sometimes, there is a mild, temporary over-correction following surgery, which can result in double vision. A change in the glasses prescription, use of a stick-on prism on the glasses, and/or orthoptic exercises can help this. If the over-correction persists, further surgery or Botulinum toxin injection to the eye muscles might be required.
- It is extremely common for your child's eyes to be both red and slightly sore for two weeks following squint surgery. The drops you have been given will soothe your child's eyes and reduce the inflammation (redness) and help to prevent infection.
- Persistent redness or scarring can occur at the surgery site although this is usually not noticeable after some months. Repeat squint surgery carries a slightly higher risk of noticeable scarring.
- Change in focus of the eye – meaning there could be a need for glasses or alteration of the power of current glasses after the operation.
- Glasses will still be needed following the operation and there might be a change in the prescription.

- Less commonly, the dissolvable sutures (stitches) placed on the surface of the eye can cause excess inflammation and cause a lump to form on the white of the eye. Further treatment could sometimes be required.
- In less than 1% of squint operations, the muscle can slip from its position on the eye. This causes rotation of the eye either to the outer or inner-most corner. It is important that your child does not rub their eyes vigorously after the operation to lessen this risk. If the muscle has slipped it will need to be corrected by another operation and so urgent attention must be sought (see contact numbers below).
- Rarely, the stitches cause a small perforation (hole) in the eye, which can, extremely rarely, if treatment fails, lead to an infection in that eye which could cause a serious decrease in vision.
- Often, immediately following surgery your child could be disoriented and nauseated but medication can be given to relieve this.

### **Before the operation:**

Your child's admission will be planned as a day-case. This means your child will usually have the operation and go home the same day. Occasionally they might need to stay overnight if they do not recover well from the anaesthetic. You will receive a phone call to check that the planned admission date is convenient. This will be followed by a letter confirming the date and giving further details about the admission. A separate letter will be sent to you with a date for your child to attend for a pre-operative assessment if required.

One assessment will be to see a specialist nurse whilst the other will be with the Orthoptist. Some children might require some blood tests on the day. If your child requires blood tests a topical anaesthetic cream (magic cream) will be applied to their arm or hand before the procedure. The nurse will ensure that your child is fit for surgery and will ask you for details of your child's medical history. Please inform the nurse if your child has had any recent health problems and please bring details of any medication or inhalers your child is taking.

The Orthoptist will measure your child's squint to ensure that the surgeon has up to date information in order to plan surgery effectively. It is extremely

important that you and your child attend this appointment as the surgery cannot go ahead without final measurements. Please bring along any glasses your child is currently wearing, whether full time or part time.

## **On the day of the operation**

Your child will be admitted to a ward in the children's hospital on the day of surgery. They will be having a general anaesthetic so they should not eat, drink or chew gum six hours before the operation, however, if required your child can have sips of water only up to 2 hours before their time of admission otherwise their operation could be cancelled. You will also receive a letter from the admissions department confirming fasting instructions and time of arrival.

You will meet the surgical team who are to do the operation and they will confirm that you still wish to proceed and answer any further questions you might have before asking you to sign the consent form if you have not done so already. The anaesthetist will also visit you and ask you some questions about your child's health and discuss the anaesthetic procedure.

Children may be accompanied by one adult into the theatre and you can stay until they are asleep. The operation takes between 30 - 90 minutes depending on the extent of surgery. However you can expect to be at the hospital for approximately 5 - 7 hours on the day of your child's operation.

When your child's recovery nurse considers it appropriate for you to be present you will be invited into the recovery area. Your child might be very sleepy when you first see them, or a little disorientated and tearful. Both reactions are completely normal. Your child will be transferred to a ward in the children's hospital following initial recovery and will be discharged later that day if they are well, awake, and comfortable and have had something to eat and drink.

## **Discharge information and at home advice cleaning the eyelids**

You may clean around your child's eye if necessary. Always wash your hands before starting. Using cotton wool moistened with cooled, boiled water wiping from the inner corner of their eye to the outer and discard. Repeat if required.

There could be some tears from the eye which are slightly blood stained. This is quite normal and usually clears up after a few days. You will be given some

eye drops for your child, to use at home for 2 - 4 weeks. You will be advised how to use the medication before you leave hospital. Make sure you keep the bottles separate if surgery has been carried out to both eyes. Please discourage your child from rubbing or touching their eye.

Your child may bathe and shower as normal, but make sure they do not get soap or shampoo in the operated eye for at least two weeks.

### **Outpatient appointment**

You will either be given or sent an appointment to attend the out-patients department following discharge, usually in about 10 to 14 days.

### **Restrictions following surgery**

Your child should avoid swimming, playing contact sports and playing in a dusty environment for between 2 to 4 weeks following their squint surgery to prevent infection and allow their eye to heal. Your child should not usually require more than one week off school.

Rarely your child could suffer an allergic reaction from the eye drops which might cause increased swelling and redness around their eyes. Please contact the Orthoptic department on (0161) 701 4805 between 9.00 am to 5.00 pm for advice or outside these hours take your child to the Accident and Emergency Department of the Royal Manchester Children's Hospital or your local Accident and Emergency Department.