Department of ophthalmology

Surgery to correct a ‘squint’ in children

About the surgery to correct the squint

Surgery for squint is usually performed to improve the appearance of eye alignment but sometimes it can also help the child use both eyes together, improving depth perception. Squint surgery involves the weakening or strengthening of one or more eye muscles, and can be performed on one or both eyes (although the squint can appear to be limited to one eye, squint surgery may need to be performed in both eyes). The eye muscles are easily reached, and surgery does not involve ‘taking the eye out’. The operation usually lasts 30 to 40 minutes.

Before your child’s procedure

- You and your child will be seen within one month of surgery by an orthoptist (eye specialist), who will measure the size of the squint, and an ophthalmologist (eye doctor), who will discuss the planned surgery.
- At this clinic, we shall ask you for details of your child’s medical history and carry out any necessary clinical examinations and investigations. Please inform the doctor if your child has had any recent health problems, and discuss any questions regarding the surgery that you might have.
- You will be asked if your child is taking any tablets or other types of medication - these might be ones prescribed by a doctor or bought over the counter in a pharmacy. It helps us if you bring details with you of anything your child is taking (for example: bring the packaging with you).
- This procedure involves the use of general anaesthesia, which means that your child will not be conscious during the surgery. See below for further details about the types of anaesthesia we shall use.
- You may be required to attend ward F3 for a pre-op assessment – where possible we would request this on the same day as your clinic appointment but this is not always possible.
- Squint surgery is usually performed as a day-case procedure on ward F3 but, if your child has other medical problems, an overnight bed may be arranged.
- You are welcome to look around the ward in advance of your procedure, but please contact them prior to your visit:
  - Ward F3: 01223 348313
  - Ward D2: 01223 217250
  - Ward C3: 01223 217450
• If to your knowledge the answer to any of the following is **yes**, it is important that you tell us. Has your child ever:
  - received human growth hormone
  - had brain surgery prior to 1992
  - or has anyone in your family been diagnosed with CJD

A positive answer will not stop any treatment, it will however allow us to plan your operation so as to minimise any risks.

**Fasting before surgery**

Please ensure that your child has plenty to eat and drink the day before surgery. If your child is very young, you might like to wake them in the evening for an extra drink.

To prepare for a general anaesthetic your child must stop eating and drinking for a set period of time beforehand.

**Food includes** formula baby milk, chewing gum, sucking hard boiled sweets and drinking milk and fruit juice.

**Clear fluids are** fluids through which newsprint can be read and **DO NOT** include fruit juice, fizzy drinks, red or purple drinks, caffeine drinks or hot drinks.

This means that (unless you have been told otherwise by your child’s consultant):

- **If your child has been asked to come to F3 for 07:15** they must not have anything to eat after 02:00 in the morning (last breast feed to be completed by 04:00). It may be easier to offer your child a snack before bed time and then nothing else to eat until after their anaesthetic. They may drink clear fluids (water or weak squash) until 06:00.

- **If your child has been asked to come to F3 for 11:00** they must not have anything to eat after 06:00 in the morning (last breast feed to be completed by 08:00). **Please offer your child an early light breakfast**, such as toast or cereal. They may drink clear fluids (water or weak squash) until 10:00hrs.

**On the day of the surgery**

If you are unwell please do not accompany your child onto the ward. Visitors must be clear of any illness for 48 hours before arrival. To help us to prevent the spread of infection please ensure that you use the hand washing facilities and alcohol gel provided throughout the ward; especially upon entering and leaving the hospital.
Upon admission your child will need to have swabs taken to test for methicillin-resistant Staphylococcus aureus (MRSA). Please ask if you would like more information about this.

Addenbrooke’s has a number of advice leaflets for patients and their visitors about infection control. They can be accessed from the Addenbrooke’s website: http://www.cuh.org.uk/addenbrookes-hospital/for-patients/patient-information-and-consent-forms/patient-information-leaflets

If you do not have access to the Internet, please contact the patient advice and liaison service (PALS) on 01223 216756.

Parents are encouraged to stay with their child on F3. Upon your arrival the nurses need to complete admission paperwork about your child and family.

The nurse will record your child’s weight and take some swabs to check for MRSA, check your child’s temperature, pulse rate, breathing rate and any other observations that are necessary. These are important measurements to ensure that your child is fit and healthy prior to undergoing any procedure.

Your doctor will be informed of your arrival and they will come to meet you in order to answer any further questions you may have and to complete a consent form if this has not already been completed. Your child’s legal guardian, a person with parental responsibility, will be asked to sign the consent form (if this has not already been signed).

Your child will also see an anaesthetist who will fully explain everything to you regarding your child’s general anaesthetic. This will give you the opportunity to ask questions about the procedure.

There will be a wait while all of the children are assessed. There is a play room with a selection of toys, equipment for your child to engage with ‘colouring in’ and word searches and a television with DVDs to watch. Please bring a small toy with you, a quiet activity, such as a book or magazine for example, to help to distract your child and pass the time while they are waiting.

When your child’s nursing team, surgical team and anaesthetist have assessed all children on the theatre list and confirmed that they are fit for theatre, if you so desire, you can be provided with a rough estimate of when your child’s procedure will be taking place.

When your child’s allocated theatre slot is ready, a member of theatre staff will arrive to collect your child and take him/her to theatre. A maximum of two parents are allowed into the theatre area with your child to comfort him/her whilst the anaesthetic is administered. Usually a member of staff from the ward will accompany you from the anaesthetic room to paediatric recovery where you will be
Patient information

You are then free to have a break in the concourse and you will be bleeped when your child is in recovery.

You will be bleeped to return to the recovery area when your child’s recovery nurse considers it appropriate for you to be present. The paediatric recovery staff will try to call you to recovery prior to your child waking, however this is not always possible and your child may already be awake by the time you arrive in recovery. Your child may be very sleepy when you first see them, or a little disorientated and tearful. Both reactions are completely normal.

Your child might have an oxygen mask on his/her face to help him/her breathe. After this procedure, your child will have a small, plastic tube in one of the veins of his/her arm. This is called a cannula and is left in place in case your child requires any medication that they are unable to take in their mouth.

Upon return to the ward, close observation will be made of your child. The nursing staff can give your child pain relieving medication if required. Following squint surgery, it is fairly common for children to feel a little unwell and vomit.

Once your child has eaten and drunk (without vomiting), passed urine, is comfortable and back to their usual self, mobilising and communicating appropriately then your child’s cannula can be removed and they can be considered fit for discharge.

What should my child wear?

Your child may need to wear a theatre gown for their procedure. It is recommended that your child wears loose fitting clothes so that they remain comfortable throughout their stay with us.

We request that you remove all makeup, nail varnish and jewellery (other than those with religious connotation), including earrings, prior to your child’s admission. Please keep the amount of property that you bring with you on the day to a minimum, as space is limited around waiting areas and bed spaces and we cannot take responsibility for any loss or damage to items left unattended during your time spent with us.

During the procedure (operation) itself

- Before your child’s procedure, s/he will be given the necessary anaesthetic – see below for details of this and the role of the anaesthetist in your child’s care.
- During surgery, while your child is asleep with the general anaesthetic, several eye muscles are adjusted. These muscles are located on the sclera (the white of the eye), either on the inner (nose side) or outer (ear side) corner or under the lower lid. After adjustment of the muscles’ strength, the muscles are sewn back on to the eye. Several dissolvable stitches will be present on the surface of the eye. Eye drops used during the operation might at first dilate the pupils.
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**After the procedure**

- **Eating and drinking:** When your child is fully awake, they will be encouraged to drink and eat. We provide snacks for your child, such as a sandwich, crisps, cake, yoghurt and juice. We also have toast, cereal, milk and squash if they would prefer. Alternatively please feel free to bring in appropriate light snacks. Please bring with you any formula milk that you may require for the day and ask a member of staff if this requires warming. If your child has any special dietary requirements, please discuss this with your allocated nurse on arrival.

For safety reasons if you have a hot drink please take care not to leave it unattended.

**When you can leave hospital:** Parents are expected to provide transport on discharge home. The use of a bus may not be appropriate. If you experience transport difficulties then ask your GP surgery if hospital transport can be arranged.

Your child is undergoing a planned surgical procedure therefore it would be helpful if you ensure that you have sufficient supplies of simple pain relief such as paracetamol and ibuprofen at home, in anticipation of some minor discomfort.

You should plan for your child to spend at least half a day on F3. This is the estimated average length of stay; however, according to the nature of your child’s procedure, sometimes it may be necessary for your child to remain with us for longer. Please bear this in mind when planning your day.

- **Car parking:** There are car parking facilities, multi-storey car park 1 is closest to the ward. Discounted tickets can be obtained from the customer services desk (by the pay point in the car park) You will need to either show your admission letter or have your parking ticket stamped on the ward. As of April 2017 the charge for these is £3.60, regardless of your length of stay during the day; however, the charge may have changed since this leaflet was authored.

- **When your child can resume normal activities including school:** Your child should have about five to seven days off nursery/school. Your child should not swim or play with sand for four weeks but can take part in PE and other (non contact) sports.

- **Check-ups and results. Before leaving hospital you should be given:**
  - Information about your child’s follow-up appointment in the eye clinic (usually two weeks after surgery).
  - Eye drops and pain relieving medication if required.

**Intended benefits of the procedure**

- Squint surgery is usually performed in order to improve the appearance of a squint. Sometimes, by straightening the eyes, the child’s perception of depth can also be improved. We can usually predict this by orthoptic (eye) tests performed before surgery.
Who will perform my procedure?

- This procedure will be performed by Miss Allen, Miss Muthusamy, Mr Vivian or by a senior registrar who is experienced in the technique. Some training of junior surgeons may take place during the operation under close supervision by the consultant.

Alternative procedures that are available

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Serious or frequently occurring risks

- The outcome from squint surgery is not always predictable: it is possible that the squint will be over or under corrected. Approximately 30% of children operated on will need a further operation for their squint.
- 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 can be required.
- It is extremely common for the eyes to be both red and sore for two weeks following squint surgery. The drops you have been given will soothe the eyes and reduce the inflammation (redness).
- 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 surgery can be required to remove the suture that is causing the inflammation.
- Rarely, in less than 1% of squint operations, the sutures holding the adjusted muscle in place untie, and the muscle can detach from the eye. This causes rotation of the eye either to the outer- or inner-most corner. This complication requires urgent surgery to find and re-attach the muscle. Please contact us if your child’s eye is in this position.
- Very rarely, (in less than 1 in 1000 squint procedures) the stitches cause a small perforation (hole) in the eye, which can (if treatment fails) lead to an infection in that eye, which could cause blindness in that eye.

Information and support

- You might be given some additional patient information before or after the procedure, for example: leaflets that explain what to do after the procedure and what problems to look out for. If you have any questions or anxieties, please feel free to ask a member of staff.
  - Ward D2: 01223 217250
  - Ward C3: 01223 217450
Children's anaesthesia

Children may need anaesthetics for operations, just like adults. They may feel distressed and their parents can feel anxious. Anaesthetists generally recognise this, and do their best to keep distress down to a minimum. These days, children usually come into hospital on the same day as the operation, unless it is major, and usually do not have premeds. They are seen with their parents by their anaesthetist and usually have local anaesthetic cream put on their hands at this point.

When they come into the anaesthetic room, it is usual for one of their parents to be encouraged to come in with them, in case they get scared. Many anaesthetists start the anaesthetic with an injection into a vein, and with the local anaesthetic cream this usually does not hurt, or not very much. Others prefer to use gas, and most will use gas if there is a particular fear of needles.

Sometimes, especially for emergencies, gas cannot be used, as there may be a risk of vomiting. Occasionally, the anaesthetist will ask parents to leave the anaesthetic room just before starting anaesthesia, as some procedures that need to be done just as the anaesthetic starts may be distressing to watch. After the operation parents can usually come back to their child as they are beginning to wake, so that they do not feel left alone.

Usually pain can be controlled by use of local anaesthesia to wounds, followed by paracetamol syrup or something similar. For more major surgery other pain relief methods will be required. Discuss this with your anaesthetist at the pre-operative assessment.

What are the risks of general anaesthesia?

In modern anaesthesia, serious problems are uncommon.

Risk cannot be removed completely, but modern equipment, training and drugs have made it a much safer procedure in recent years.

Most children recover quickly and are soon back to normal after their operation and anaesthetic. Some children may suffer side effects like sickness or a sore throat. These usually last only a short time and there are medicines available to treat them if necessary.

The exact likelihood of complications depends on your child’s medical condition and on the nature of the surgery and anaesthesia your child needs. The anaesthetist can discuss this with you in detail at the pre-operative visit.

For a child in good health having minor surgery:
• 1 child in 10 (like one person in a large family) might experience a headache, sore throat, sickness or dizziness.
• 1 child in 100 (like one person in a street) might be mildly allergic to one of the drugs that has been given.
• 1 child in 20,000 (like one person in a small town) might develop a serious reaction (allergy) to the anaesthetic.

Final thoughts
If you have any other children, please try to avoid bringing them along with you on the day. It is not always appropriate to have additional children on the children’s wards and we do not provide child-minding facilities.

As we plan for your child’s stay with us to only be for a few hours visitors are not encouraged. However, people are welcome to telephone you to enquire about your child on 01223 348313.

We encourage children to rest following their general anaesthetic. Due to this fact please be mindful to ensure that mobile phones are placed on silent for the duration of your child’s time with us in the hospital. Thank you.

Help with this leaflet:
If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information via patient.information@addenbrookes.nhs.uk

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.