

Oxford Orthoptic Service, Oxford Eye Hospital  
Children's Day Care Ward, The Children's Hospital

# Squint surgery for children



This leaflet has been written to give you information about surgical correction of a squint.

## What is squint surgery?

There are six muscles attached to the surface of each eye. These are responsible for moving the eyes in different directions. The aim of squint surgery is to put your child's eyes in a straighter position, by moving some of these muscles to strengthen or weaken their action.

The surgery may be carried out on one or both eyes and may involve moving one, two or more muscles, depending on the type of squint your child has. Sometimes more than one operation is required to get the best result. Additional operations would be carried out at a later date.

# Planning for squint surgery

You will have the initial discussion with the Orthoptist about the option of an operation for your child's squint. They will be able to tell you the purpose of the operation and what it will involve. They will also be able to answer any other questions you may have.

The Orthoptist will need to make sure that measurements of the size of your child's squint are stable. This will require three visits where the measurements are the same.

If you are happy for an operation to be considered, an appointment will then be made with the Consultant Ophthalmologist (Eye Doctor), who will review the orthoptic reports and discuss the squint surgery with you.

If the Consultant Ophthalmologist feels that squint surgery will be of benefit to your child, they will put your child's name on the waiting list. It is not possible to say exactly when your child will have their surgery, but it is likely to be within 3 months.

# What are the benefits of squint surgery?

The benefits of squint surgery depend on the type of squint or eye movement disorder your child has. This will be discussed with you in more detail by the Ophthalmologist for your child's particular condition. Benefits may include one or more of the following:

- improvement in eye position and appearance
- better eye co-ordination – making it easier for your child to use their eyes together, to achieve binocular (3D) vision (this generally applies when the squint is controlled some of the time)
- improvement in the movement of the eyes, if this is abnormal when your child is looking in one or more direction.

It is very rare for children to have double vision, but sometimes squint surgery is done to help with this.

# What are the risks?

Before your child's operation, the Ophthalmologist will discuss the possible risks with you in more detail.

The risk of damage to your child's vision is extremely low, as the operation is performed on muscles which are on the surface of the eye, not within the eye itself.

Risks of squint surgery include:

- Infection/inflammation – Your child will be given eye drops or ointment to reduce the risk of infection and calm any inflammation after the operation.

Infection on the eye surface (on the outside of the eye) is treatable and would not cause a long term problem. An infection inside the eye is much more serious and could lead to loss of vision in that eye. This is exceptionally rare (less than 0.5% or 1 in 200 chance in general eye surgery and even less in squint surgery).

- Damage to eye muscles, which can result in a restriction or unexpected change in eye movement.
- An 'over-correction' of the squint – this can cause the eye to turn in the opposite direction (for example, the eye turned inwards before the operation but is turning outwards following surgery). This will often settle with time but, if it does not, another operation may be required.
- Double vision – Occasionally children can be aware of seeing two of things after squint surgery, due to a change

in the position of their eye. This can last from a few days to a few weeks. We would normally expect this to settle with time, but in rare instances the double vision remains, and may require another operation.

- There is a very minimal risk for permanent scarring of the conjunctiva – a thin film of tissue which covers the eye surface – but again this is exceptionally rare.

## Pre-assessment

Your child will not need to have a separate pre-operative assessment. When the Ophthalmologist puts your child's name on the waiting list, they will discuss the operation with you and your child (if appropriate), explaining the benefits and any risks. You will also be asked about your child's general health and past medical history. It is important that you tell the consultant of any medical condition(s) your child has. This information will be passed on to the anaesthetist.

The Ophthalmologist will ask for your consent for the operation to go ahead. If there is anything you are unsure about, or if you have any questions, please ask the doctor before signing the consent form.

# What happens during the operation?

During the operation the eye muscles are adjusted, moved and secured to the eye surface using stitches that will dissolve after about six weeks. The operation usually takes less than an hour to perform.

The operation is carried out under general anaesthetic, normally as a day case, which means your child should be able to go home later that day. Your child will be asleep throughout the operation.

## Consent

We will ask you for your written consent (agreement) for the operation to go ahead. If there is anything you are unsure about, or if you have any questions, please ask the doctor before signing the consent form.

## Fasting instructions

Please make sure that you follow the fasting (starving) instructions which should be included with your appointment letter.

Fasting is very important before an operation. If your child has anything in their stomach whilst they are under anaesthetic, it might come back up while they are unconscious and get into their lungs.

# Pain assessment

Your child's named nurse will use a pain assessment tool to help assess your child's pain score after their operation. This is a chart which helps us to gauge how much pain your child may be feeling. You and your child will be introduced to this assessment tool on the ward before their operation. You can continue to use this assessment at home to help manage your child's pain if you wish.

# Pregnancy statement

All girls aged 12 years and over will need to have a pregnancy test before their operation or procedure. This is in line with our hospital policy.

We need to make sure it is safe to proceed with the operation or procedure, because many treatments including anaesthetics, radiology (X-rays), surgery and some medicines carry a risk to an unborn child. The pregnancy test is a simple urine test. The results are available straight away; however, if the result is positive we will discuss this and work out a plan to support your child.

# Anaesthetic risks

In modern anaesthesia, serious problems are uncommon. Risk cannot be removed completely, but modern equipment, training and drugs have made general anaesthesia a much safer procedure in recent years. Throughout the whole of life, a person is at least 100 times more likely to suffer serious injury or death in a road traffic accident than as a result of anaesthesia.<sup>1</sup>

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 talk to you about this in detail before the operation.

## In the anaesthetic room

A nurse and one parent or carer can come with your child to the anaesthetic room. Your child can also take a toy or comforter.

It may be possible to give the anaesthetic with your child sitting on your lap. Your child may either have anaesthetic gas to breathe, or an injection through a cannula (a thin plastic tube that is placed under the skin, usually on the back of the hand). The local anaesthetic cream (EMLA or

Ametop, sometimes known as 'magic cream'), can be put on their hand or arm before injections so they do not hurt as much. It works well for 9 out of 10 children.

If the anaesthetic is given by gas, it will take a little while for your child to be anaesthetised. They may become restless as the gases take effect. If an injection is used, your child will normally become unconscious very quickly indeed. Some parents may find this frightening.

Once your child is asleep you will be asked to leave quickly so that the medical staff can concentrate on looking after your child. The nurse will take you back to the ward to wait for your child.

Your child will then be taken into the operating theatre to have the operation. The anaesthetist will be with them at all times.

## After the operation

Your nurse will make regular checks of your child's pulse, temperature, and the eye that has been operated on. They will make sure your child has adequate pain relief until they are discharged home.

Once your child is awake from the anaesthetic they can start drinking and, if they are not sick, can start eating their normal diet.

The minimum recovery time before discharge is two hours. This is usually enough time for us to check that your child is recovering well. It also gives us time to check that your child

is passing urine (having a wee) after the operation. In some circumstances your child may be allowed home before they have passed urine. If your child has not passed urine within six hours of the operation, please contact the ward for advice.

Your child cannot go home on public transport after a general anaesthetic. You will need to take them home by car. This will be more comfortable for them and also quicker for you to return to the hospital if there are any complications on the journey home.

Occasionally, the anaesthetic may leave your child feeling sick for the first 24 hours. The best treatment for this is rest and small, frequent amounts of fluid, toast or biscuits. If they are sick and this continues for longer than 24 hours, please contact your GP.

The hospital experience is strange and unsettling for some children, so do not be concerned if your child is more clingy, easily upset or has disturbed sleep. Just be patient and understanding.

# Eye care after the operation

Immediately after the surgery the white part of the operated eye(s) will be red and there may be some swelling of the eye lid. Your child's eye(s) may feel sore and gritty. The redness can take up to 6-8 weeks to settle and completely disappear, but eventually there will be very little visible evidence that they have had eye muscle surgery.

The alignment (position) of your child's eyes may vary for the first few weeks immediately after surgery and will take time to settle. They may also have some awareness of double vision (seeing two of things).

Try to discourage your child from rubbing their eyes, as this could cause irritation and increases the risk of infection.

Avoid irritants, such as soap and shampoo, getting into their eyes.

Your child will be prescribed eye drops to help prevent infection. Your nurse will show you how to use them. Please remember to wash your hands before and after putting in the eye drops, to reduce the risk of infection.

# Getting back to normal

Your child will benefit from extra rest for a day or two after the operation.

They should be able to return to school three to four days after surgery. They can return to sporting activities (such as PE and bike riding, etc.) after two weeks. Swimming should be avoided for one month, because of the risk of infection.

## Follow-up care

Please make sure you have enough children's paracetamol and ibuprofen at home, ready for when your child comes home from hospital.

Your child will be given an appointment for a post-operative visit to the Orthoptic clinic two weeks after their squint surgery. Please make sure that you have been given this appointment before leaving the ward.

# How to contact us

If you have any worries or queries about your child once you get home, or you notice any signs of infection or bleeding, please telephone the ward and ask to speak to one of the nurses, or the orthoptic department. You can also contact your GP.

Orthoptic Department

Tel: **01865 234 567**

(Monday to Friday, 8.30am to 4.30pm)

Children's Day Care Ward

Tel: **01865 234 148/9**

(Monday to Friday, 7.30am to 7.30pm)

Outside of the hours, you can contact:

Robin's Ward: **01865 231 254/5**

Melanie's Ward: **01865 234 054/55**

Tom's Ward: **01865 234 108/9**

Bellhouse Drayson: **01865 234 049**

Kamran's Ward: **01865 234 068/9**

Horton General Hospital Children's Ward: **01295 229 001/2**

**All of these wards are available 24 hours, 7 days a week.**

Oxford University Hospitals Switchboard: **0300 304 77 77**

# Further information

You may find further useful information on the following websites:

- [www.nhs.uk/conditions/Squint/Pages/Introduction2.aspx](http://www.nhs.uk/conditions/Squint/Pages/Introduction2.aspx)
- [www.squintclinic.com](http://www.squintclinic.com)

# References

<sup>1</sup>From the Royal College of Anaesthetists (2014) Fourth Edition

Your child's general anaesthetic. Information for parents and guardians of children.

[www.rcoa.ac.uk/patientinfo](http://www.rcoa.ac.uk/patientinfo)

*We hope that this information is useful to you and would welcome any comments about the care or information you and your child have received.*

If you have a specific requirement,  
need an interpreter, a document in Easy Read,  
another language, large print, Braille or  
audio version, please call **01865 221 473**  
or email **PALSJR@ouh.nhs.uk**

Authors: Darius Hildebrand,  
Consultant Paediatric Ophthalmologist  
Jude Taylor,  
Advanced Children's Nurse Practitioner  
Claire MacIntosh, Senior Orthoptist  
Rachel Edminson, Advanced Specialist Orthoptist



February 2016

Review: February 2019

Oxford University Hospitals NHS Foundation Trust

Oxford OX3 9DU

[www.ouh.nhs.uk/information](http://www.ouh.nhs.uk/information)

OMI 13108P