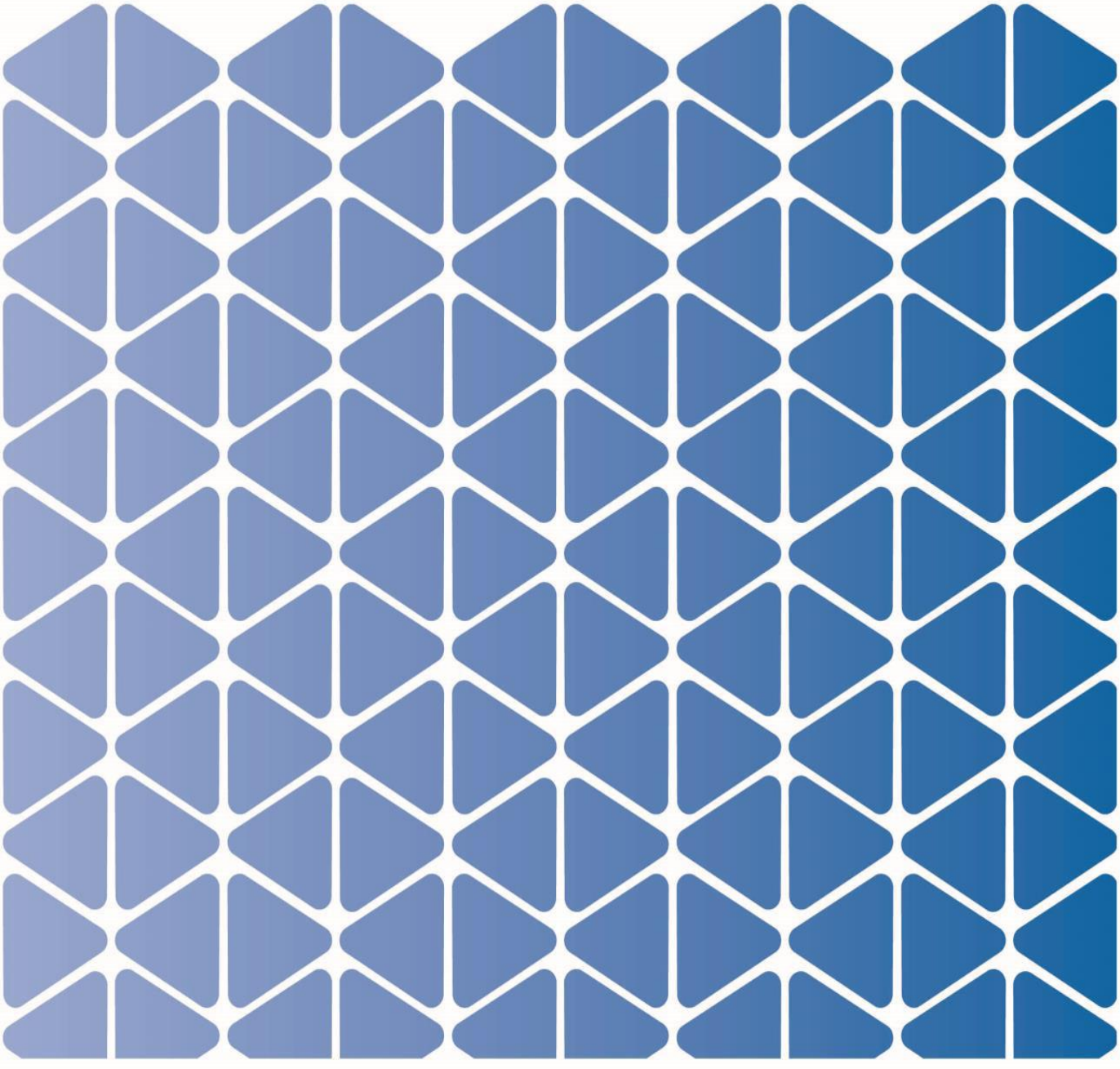
NHS
Worcestershire Acute Hospitals NHS Trust

PATIENT INFORMATION

Squint Surgery (Child)



Introduction

This leaflet is for parents whose child has a squint that may be helped by an operation. In this leaflet, we explain some of the possible benefits and risks of surgery and we mention alternatives to surgery. If we have suggested that a squint operation may be a good idea, we recommend that you read this leaflet carefully, so that you can make the right decision for your child. Some things in this leaflet may not apply to your child. Please ask us about anything you do not fully understand, or you want explained in more detail.

What is a squint (strabismus)?

Normally, both eyes work together as a pair and point towards the object the child is looking at. A squint (strabismus) is present when one eye is not pointing in the direction it is supposed to. A squint may affect only one eye, or it may alternate (swap between the eyes). A squint may be constantly present or intermittent. The angle (size) of the squint may be slight or obvious, and it may vary. Wearing glasses may affect a squint, so a child who needs glasses must be wearing them properly before the doctor can advise about squint surgery. (The word ‘squinting’ is sometimes used to describe the narrowing of the eyelids that people do when they face the sun or when they try to see more clearly without glasses. This is completely different from our use of the word ‘squint’ – meaning strabismus.)

What is a lazy eye (amblyopia)?

In most children with a squint that affects only one eye, the squinting eye has poor vision – it is ‘lazy’ (amblyopic). This means that the brain is not learning to properly use the messages from this eye. Treatment for a lazy eye is generally done before any squint surgery, but it may need to continue after surgery. The child wears glasses if needed, and then treatment is given to make the brain ‘pay more attention’ to the lazy eye. This means either covering the good eye with a patch or making the vision in the good eye blurred with eye drops. The treatment aims to improve the vision in the lazy eye - it will not help the squint.

What is squint surgery for?

In most cases, the aim of surgery is to improve the appearance of a squint by reducing its size: the surgery does not improve the vision in the squinting eye. Sometimes the treatment plan involves more than one operation. Sometimes, further operations may be needed in future years, as there is often a life-long tendency to squint.

In some cases, the aim of surgery is to help the eyes work together as a pair (that is, to improve ‘binocular single vision’). This may help preserve the vision in each eye and may also keep the eyes pointing in the right direction in the long term. Older children occasionally have a squint that causes double vision (diplopia). Surgery may

be done to reduce the double vision. Some children need to tilt or turn their head in order to control a squint, and surgery can help them be comfortable with a ‘straighter’ head.

If the squint is convergent (an eye is turned inwards) an operation may give a wider angle of view (improved peripheral visual field).

What is the best age for a squint operation to be done?

For many squints, we want to have the best chance of a single operation giving a good result that lasts throughout childhood. We therefore generally delay surgery until the child is successfully wearing any glasses that they need, and until the orthoptist has been able to make some reliable measurements of the squint. Also, surgery may be more successful if it is done after any treatment for amblyopia (‘lazy eye’). If a squint is intermittent, we may prefer to wait and see if there will be any improvement with time, and meanwhile we sometimes prescribe special glasses. We operate on most constant squints between the ages of 2 and 5 years.

In our trust, we cannot give general anaesthetics to children less than two years old. Occasionally a large, constant, inward-turning squint is seen in young babies. For these babies, there is an option of early treatment in Birmingham (with surgery and / or a Botox injection). The aim of early treatment is to give the brain a better chance to learn to use both eyes together as a pair (that is, to achieve ‘binocular single vision’). However, this is only sometimes successful. The main disadvantage of early surgery is that there is a greater chance of more operations being needed. There has also been some concern about a possible effect of general anaesthetics on the development of the brain in babies. Nevertheless, if early surgery might be appropriate, we would discuss this option with you.

What are the alternatives to squint surgery?

You may decide that a squint operation is not wanted, particularly if you feel that the appearance of the eyes is acceptable. However, if a squint is constantly present, a child is very unlikely to grow out of it. It is not necessarily a good idea to wait until the child is old enough to decide for themselves, as a younger child may adapt better to surgery than a teenager. Some kinds of intermittent squint may be controlled using special glasses, but this may not be a long-term solution. Occasionally, it may be appropriate to inject a tiny amount of Botox into an eye muscle (under general anaesthetic) to see what effect this has on a squint.

What is the success rate of squint surgery?

It is relatively easy for us to improve the appearance of a large squint with an operation, but more than one operation may be needed to get the desired result. It is more difficult to make a significant improvement in the appearance of a small squint.

If there have been one or more previous operations, then scarring may make the results of another operation more uncertain. Overall, about eight in ten families are pleased with the result of an operation, one in ten are fairly happy, and one in ten are disappointed.

What is the pre-op assessment?

This clinic appointment is usually about 1 to 3 weeks before surgery. The orthoptist will repeat the measurements of the size of the squint. You will have the opportunity to discuss squint surgery with the doctor. It is important that you understand the type of operation that is planned for your child and the risks associated with the surgery. The doctor will then make a recommendation about squint surgery. When surgery is planned for older children, they will usually be involved in making decisions. If you agree to your child having a squint operation, you will be asked to sign a consent form. Your child will have a nursing and health assessment. The nurse will discuss with you what happens on the day of the operation.

If your child's health changes between the pre-op assessment and the day of surgery, please telephone Miss Thurairajan's secretary on 07759 118041 or Mr Nair's secretary on (01527) 512132. A significant cold or cough usually means the operation has to be postponed: taking antibiotic medicine will probably not change this. Please also let us know if your child has contact with chickenpox.

What happens during the operation?

The operation is planned as a 'day case', with no overnight stay in hospital. The surgery is performed with the child under a general anaesthetic. (Children can be told that they will be given a special medicine to make them go to sleep and stay asleep until the operation is finished.) The operation usually takes between 30 and 90 minutes. The surgeon will cut open the clear skin of the white of the eye. Then the surgeon will adjust one or more of the muscles that move the eye, in order to weaken or strengthen their effect. The eye remains in its socket during the operation. The operation may be on one eye or both eyes and surgery is sometimes appropriate on an eye that is not squinting.

Will the operation cure a lazy eye or the need for glasses?

In general, children who wear glasses will continue to need them after squint surgery. After surgery, a child who has a lazy eye (amblyopia) may still require further treatment with patches or drops.

What are the risks of the general anaesthetic?

A doctor experienced in anaesthetics for children will give the anaesthetic. It is not possible to completely remove risk, but modern anaesthetics are very safe. If your child has a significant medical condition, this may affect the risks of the anaesthetic.

Common after-effects of an anaesthetic are mentioned later in this leaflet (see ‘Recovery and going home’).

What is the risk of needing a further squint operation?

During the months following surgery, the eyes will settle into a new position, and we will measure the effect of the operation on the muscles. Children respond differently to surgery and sometimes the effect will be either too much (over-correction) or too little (under-correction). This is more likely to occur in children with delayed development. Occasionally, a muscle slips out of position, for example, due to stitches working loose. In the first year after squint surgery, the risk of an unplanned further squint operation being needed is about 1 in 5 (20%). Unless the eyes work together as a pair, there will be a life-long tendency to squint, so that further operations may be needed in future years.

What are the other risks of squint surgery?

All types of surgery have risks, and squint surgery is no different. However, most squint operations have a good outcome. The risk of permanent loss of sight or loss of the eye is about 1 in 25,000. Significant risks include those mentioned below.

- In some cases, the aim of surgery is to help the eyes work together as a pair (that is, to improve ‘binocular single vision’). This may not be successful.
- If a squint is intermittent before surgery, then occasionally surgery will lead to the squint becoming constant. This could lead to a permanent loss of stereo vision (‘3D vision’).
- The risk of the inside of the eye being damaged at the time of surgery (globe perforation) is about 1 in 1,000. Further treatment may be needed. In most cases, the final outcome is good.
- Rarely, at the time of surgery (or shortly afterwards) a muscle may be ‘lost’ behind the eye (or ‘slip’). This risk is about 1 in 1,000. Even with further surgery, this is sometimes difficult to sort out.
- Following squint surgery, the range of movement of the eye may be a bit reduced, at least in some directions. This is most likely to occur when a large angle of squint has been corrected. When the child wants to look to the side, they may turn their head more than they used to. (This turning of the head is usually not a problem). A more major loss of eye movement is rare but may require further surgery.
- The risk of an infection in a muscle or other deep tissue is about 1 in 1,000. This would require antibiotics by mouth or by injection. (More commonly, a surface infection (conjunctivitis) is treated with eye drops.) There is also a risk of about 1 in 1,000 of serious inflammation of the white layer of the eyeball (scleritis).

- Occasionally there may be a problem with wound healing. This can improve with time but sometimes, after squint surgery, scarring over the white of the eye is a cosmetic concern. Other changes in the appearance of the eye may be noticed. Rarely, further surgery may be needed to remove a cyst or a pink lump (granuloma).
- Older children are sometimes troubled by double vision after surgery, but this usually disappears within a month as the brain learns to ignore it.
- Common, short-term, effects of surgery are mentioned later in the leaflet (see 'What happens after the surgery').

Instructions about eating and drinking before the operation

If there is food or liquid in your child's stomach during the anaesthetic, it could come back up into the throat and then go down into the lungs, causing serious damage. The following rules are for children having an operation during the morning. At any time before 2 a.m. in the night before the operation, your child can have a light meal or glass of milk. Children must not eat anything at all after this time, and they must not chew chewing gum. From 2 a.m. until 6 a.m. on the morning of the operation they may drink water or very dilute squash, but they are not allowed other drinks such as milk, fruit juice or fizzy drinks. At 6 a.m. on the morning of the operation, children should have one cupful of water or very dilute squash. (This should stop them feeling too thirsty later on.) After 6 a.m. they must not drink anything at all.

Before leaving home on the day of surgery

Make sure you have a supply of paracetamol appropriate for your child. Dress your child in loose clothing. Bring a towel and a plastic container in case your child vomits on the way home after surgery. Bring a favorite toy or books or tablet, to keep your child happy. Please also bring any medication that your child normally takes at home. After the anaesthetic, you will not be able to take your child home on public transport, so check that you can travel home by car.

What happens on the day of surgery?

Please attend for surgery with your child at 8 a.m. The anaesthetist will come to see you and your child. The anaesthetist will check information about your child's health, and whether your child has any wobbly teeth. The anaesthetist may prescribe some medicines for your child to take before the operation. Your child may have local anaesthetic cream put on their hand or arm. This 'magic cream' is used before a needle, or a cannula (a tiny plastic tube) is put in and it usually prevents this hurting. It is best to tell your child that the cream 'helps the skin go to sleep', so that you can avoid saying the word 'hurt'.

It is usual that at least one parent is welcome to come into the anaesthetic room and

stay with the child until the child is unconscious. Your child may be given an anaesthetic gas to breathe, and they may be restless until it works. Alternatively, your child may be given an injection through a cannula. (This can work very quickly). As soon as your child is unconscious, the nurse will take you back to the waiting area.

Recovery and going home

After the operation, when your child is awake, he or she will be brought back to you in the recovery area. Some children seem extremely upset when they first wake up, but then settle after about 30 minutes. Some children feel dizzy or sick, but when it is appropriate, the nurse will offer something to drink, and later, something to eat. When the nurses are happy, you can take your child home. (This will be after at least two hours on the ward.)

Some children have a sore throat after the anaesthetic, which may take a day or two to settle. (Paracetamol can be taken to ease any discomfort.) We will give your child pain-relieving medication before or during the anaesthetic to make sure that your child is as comfortable as possible after surgery. Before you leave the hospital, we will give you any extra medication that your child will need to take after going home. Occasionally, children feel sick for up to 24 hours. This can be treated with rest and small drinks and snacks.

What happens after the surgery?

After surgery, we recommend that you give your child regular pain relief with paracetamol for at least one or two days. (If your child can take ibuprofen, then this can also be given if needed.) After squint surgery, we do not cover the eyes with a pad or dressing. The eyelids may be a bit swollen, and the eye (or eyes) will be red and sore and may be sensitive to light. For example, occasionally, dryness or minor damage to the corneal epithelium (skin of the cornea) may cause some pain for a 1 or 2 days. Tears may be bloodstained. Blood under the skin of the white of the eye (subconjunctival haemorrhage) can cause a patch of redness. Eyes may be sticky after sleep. Redness and stickiness often get worse during the first week as the body reacts to the stiches. Some redness of the eye may persist while the stitches are dissolving (usually up to 8 weeks). Double vision (diplopia) is common after squint surgery, but in young children it usually does not last long.

In general, children who wear glasses should continue to do so after the operation. Encourage your child not to rub his or her eyes. If necessary, eyes may be cleaned by wiping the closed eyelids with clean cotton wool that has been dipped in cooled boiled water. You will be given eye drops (containing an antibiotic and a steroid) to use 4 times a day (spaced out a bit) for 2 weeks. Wash your hands before cleaning an eye or putting drops in. (Usually, all the drops can be given at home, without needing to use them at school or nursery.)

In the first few days after surgery, many children feel a bit upset and may want to rest. Most children return to nursery or school after 3 to 7 days, but for a few weeks, they may be ‘clingy’ (worried about leaving you). Your child can do most games and PE after 2 weeks but should not swim or do contact sports for 4 weeks. To reduce the risk of children rubbing their eyes during the first 4 weeks after surgery, extra care should be taken to avoid getting soap or shampoo in the eyes.

Your child will be seen in the outpatient clinic about 2 weeks after the operation and again after about 3 months, to check the result of the surgery when healing is complete. (Most children will then need further clinic visits during which the vision is monitored.) A few weeks after the operation, a change of glasses is occasionally needed.

Problems during the first few days after surgery

If you have concerns during the period after the operation, please telephone the eye department at Kidderminster (01562) 512382 or Worcester (01905) 733569. Please telephone without delay if you notice any of the following things in an eye that has had surgery:

- The eye points in a very unexpected direction.
- Persistent bleeding that soaks several tissues.
- A lot of green or yellow sticky discharge.
- Persistent severe pain that is not relieved by paracetamol.
- Significant loss of vision.

Preparing your child for what will happen

Depending on your child’s ability to understand, you should explain what is going to happen, and encourage your child to talk about it. It is good for older children to feel that they have agreed to have the operation. The explanation given by the nurse at the pre-op assessment is a good guide as to what to say to your child. For example, "Your eye will be a bit sore after the operation” and “Mummy will come to you when you wake up”.

Any Questions?

At the pre-op assessment, you will see an orthoptist, a nurse and an eye surgeon. If you have questions or concerns this is a good time to raise them with a member of the team. Otherwise, you can contact us using the details below.

Contact details – telephone numbers

- Eye Department at Worcester (01905) 733569
- Eye Department at Kidderminster (01562) 512382
- Day Surgery Nursing Staff, Kidderminster Hospital (01562) 512384
- Ward 1 Nursing Staff, Alexandra Hospital, Redditch (01527) 512095
- Miss G Thurairajan's secretary 07759 118041
- Mr R Nair's secretary (01527) 512132
- Anaesthetic Department, Worcestershire Royal Hospital (01905) 760637
- Anaesthetic Department, Alexandra Hospital, Redditch (01527) 503858

Information on the internet

The following websites have information that you may find useful:

- www.worcestershirehealth.nhs.uk/Acute_Trust

  Information about Worcestershire Acute Hospitals NHS Trust.

- www.patient.co.uk

  Information fact sheets on health and disease.

- www.nhsdirect.nhs.uk

  On-line Health Encyclopaedia and Best Treatments Website.

- www.rcoa.ac.uk

  Information Leaflets about anaesthetics from the Royal College of Anaesthetists.

If your symptoms or condition worsens, or if you are concerned about anything, please call your GP, 111, or 999.

Patient Experience

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

Feedback

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

Patient Advice and Liaison Service (PALS)

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

How to contact PALS:

Telephone Patient Services: 0300 123 1732 or via email at: wah-tr.PALS@nhs.net

Opening times:

The PALS telephone lines are open Monday to Friday from 8.30am to 4.00pm. Please be aware that you may need to leave a voicemail message, but we aim to return your call within one working day.

If you are unable to understand this leaflet, please communicate with a member of staff.