NHS
Greater Glasgow and Clyde

Information about your Child's Squint (Strabismus)

This leaflet aims to answer some of your questions about your child's squint. This does not cover everything, as each squint and every child is unique! If you have any questions please ask your child's doctor or orthoptist.

What is squint or strabismus?

Squint is a condition where the eyes do not line up perfectly together in the direction of interest (misalignment). The medical term for squint is 'Strabismus' The misalignment of the eyes can result in the eyes being either turned in towards the nose or turned outwards or sometimes turned up or down. It can be present at all times (constant) or can come and go (intermittent) or can switch between the two eyes (alternating). Most squints develop in the first three years of life but some can develop in older children and adults.

What causes squint in children?

A squint may present by itself without any cause or may happen due to underlying need for glasses (i.e., refractive errors like long sightedness or short sightedness) or problems with eye muscle(s) or problems in the eye (i.e., cataract, eye nerve problems).

A child may have increased risk of developing squint when someone in the family has squint or when born prematurely

How does squint affect a child?

If a child has a squint, they may develop a 'lazy eye', which is reduced vision in the affected eye (amblyopia). Sometimes a child will complain of blurry vision or double vision, but in many instances, a squint is not noticed by the child and is usually picked up by family, friends or in photographs.

Can a child grow out of squint?

Yes, very young children can appear to have a squint due to their shape of head and eye lid, without any true misalignment of the eyes. This is called 'Pseudo-squint'. It improves with age and does not require any treatment. Children with true misalignment of their eyes require treatment.

What is the treatment for a squint?

The treatment for squint depends on its type and cause. This often includes wearing glasses, exercises, Botox, surgery, or a combination of these.

Surgical Treatment for Childhood Squints

What is the aim of squint surgery?

Surgical treatment for squint aims at reducing the misalignment between the eyes. In some cases, it may allow the eyes to work together better and improve 3D vision. It is also used to reduce abnormal head tilt, lessen double vision and improve appearance.

It is important to remember that squint surgery does not remove the need for glasses and will not improve vision.

Currently, there are two surgical options available for management of squints

1. Botox injection to eye muscle
2. 'Cut and Stitch' muscle surgery

For surgical treatments, children have a under general anesthetic which means they will be asleep. They will be able to go home on the same day as their treatment (day case).

How does Botox injection help squint?

Botox injection causes temporary weakness of the muscle to which it is injected. The muscle structure is preserved. When injected into the eye muscle, the effect starts in 1 to 2 weeks and reaches its maximum in 6 to 8 weeks.

Unlike in other cosmetic procedures, where the effects of Botox can be sustained only with repeated injections, its effect on squint can sometimes be longer-lasting. One of the beliefs about why Botox has long lasting effect in children is that it helps brain mechanisms that stabilise alignment of the eyes. It also doesn't stop your child having muscle surgery in the future.

Botox can be used as a treatment on its own, before muscle surgery or sometimes during muscle surgery.

Are there any disadvantages or side effects for Botox treatment?

Botox takes time to work (6 to 8 weeks) and can sometimes cause local side effects like droopy eyelids, over-correction (eye turning to the opposite direction of the initial squint), vertical squint and double vision. These side effects are often temporary as Botox wears off eventually. In some children, Botox fails to achieve the desired result and your child may need further treatment.

What happens in muscle surgery for squint?

Everyone has six eye muscles attached to each eye, which move the eye up and down and from side to side. In 'cut and stitch' muscle surgery, the surgeon strengthens or weakens the muscles to minimise the misalignment. This is done by moving the position of the muscle or shortening the muscle. The surgery may be carried out in one or both eyes and may involve one or more muscles, depending on the size and type of squint. Sometimes more than one surgery may be required to get the best results.

What to expect when my child has a procedure for squint?

Both Botox and muscle surgery, are done under general anesthetic as day case and most often your child can return home the same day, unless your child takes longer to recover from the effects of the anaesthetic.

Immediately after the surgery, the white of their eye will be red and there may be some swelling of the eye and eyelid. The eye will feel gritty and sore. Regular painkillers for a day or two will ease your child's discomfort. We will give your child eye drops to reduce the risk of infection and calm any inflammation.

It is important to stop your child rubbing their eyes as this can cause irritation and increase the risk of infection. Your child may benefit from extra rest for a day or two after the surgery. They can return to exercise and sporting activities after two weeks but they should avoid swimming for 4 to 6 weeks due to increased risk of infection.

The redness may take 3 months to completely disappear, and eventually there will be very little visible evidence that your child has had eye muscle surgery. The alignment (position) of the eyes may vary for the first few weeks' immediately after surgery and will take time to settle. Some children may be aware of double vision, but this is usually temporary. Your orthoptist will review your child's status and make sure that they benefit from the procedure.

What are the benefits of squint correction?

Mainly cosmetic. Most of the children and parents notice improvement in squint after surgery. Although, many children need more than one surgery in their lifetime to establish or maintain the desired position of the eyes. In some cases, by reducing the misalignment, squint surgery promotes the use of the two eyes together and may enhance 3D vision.

Squint correction may also help to reduce double vision and improve abnormal head posture in certain conditions.

It is important that you know that after squint surgery your child will still need their glasses or any treatment that is necessary to improve their vision.

Are there any risks associated with squint surgery?

Squint surgery is generally safe and complications are rare. However it is important to be aware of them.

- **Risk with anesthesia** - The procedure is performed under general anesthesia which is usually safe but carries small and potentially serious risk. The anesthetist will discuss these with you before child's surgery.
- **Nausea and pain after surgery** - This is not uncommon and knowing your own child's response to pain and nausea can help guide the anaesthetist and surgeon as to the best treatment.
- **Under and Over Correction** - Every squint is unique and the results of surgery are not completely predictable. There can be under-correction (small degree of original squint –persisting) or over-correction (original squint changes to opposite direction) or rarely a different type of squint appears. Some children may notice double vision and further surgery becomes necessary.
- **Infection and Inflammation** - Some redness and discomfort are normal after surgery and this gradually improves as each day passes. In the event of infection around stitches, these symptoms worsen. Usually, this responds to more frequent eye drops, but sometimes there is abscess or cyst formation over the stiches, that may require further surgery.
- **Redness of the eye** - Some develop visible discoloration in the white of the eye permanently. This is more common in repeat squint surgeries. Some children suffer allergy to eye-drops that causes redness and swelling of the eye and eyelid. This usually improves promptly after stopping the eye drops.

- **Lost muscle** - In about 1 in 1000 (0.1%), during or immediately after surgery, one of the operated muscles may dislodge from its new position. This causes return of squint and poor movement of the eye. This can be fixed with a further surgical procedure. Please be aware that sometimes there may not be a complete fix.
- **Penetrating needle injury to the eye** - Penetrating needle injury to the eye - There is roughly about 0.3% risk of injury i.e., hole in the eye, caused by inadvertent deep pass of the needle or when the white of the eye is very thin. Laser treatment may be necessary to heal the hole and depending on the site of injury, this can affect vision in that eye.
- **Loss of vision** - Although very rare, the serious risk to vision can happen in approximately one in 30,000.
- **Change in appearance of the eyelid and pupil** - This can sometimes happen depending upon the type of squint and number of muscles operated upon.

Further Information

If you have any questions please ask your child's orthoptist or eye doctor.

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Thanks to contributions from:
Dr Eoghan Millar and Orthoptic Team - RHC