



Botulinum toxin treatment for squint in children

Botulinum toxin can be used in the treatment of squint (misaligned eyes) in both adults and children. Sometimes it is a one off treatment and sometimes a course of injections are needed. Your doctor will be able to explain which would be best for your child. This leaflet is intended for younger children having day case toxin treatment. Older children may have the injection under local anaesthetic drops as an outpatient procedure. This is discussed in further detail in our leaflet for adults having toxin treatment, which can be found on our website here:

www.moorfields.nhs.uk/condition/squint-strabismus.

Frequently asked questions:

What is the effect of botulinum toxin?

Botulinum toxin causes a temporary, partial or complete, paralysis (weakness) of the muscle into which it has been injected. To begin with, you may notice a temporary reversal of your child's squint, followed by gradual straightening of the eyes as the paralysis wears off.

How long has it been in use?

Botulinum toxin has been used to treat eye disorders for more than 30 years.

Will it affect my child's general health?

The treatment we give is safe and there is no risk of developing botulism or food poisoning. We have never had a patient experience any general health problem with botulinum toxin, but all medication carries a small potential risk of a serious allergic reaction (anaphylaxis). However, please be aware that the anaesthetist who will be carrying out the anaesthetic or sedation is trained to manage any allergic reaction.

Who will my child see when they attend the clinic?

Your child will be examined in clinic by an orthoptist and will be seen by one of the doctors before the day of treatment. Together with your child and the doctor, you will choose whether the injection will be done with full (general) anaesthesia or with sedation (an injection which will make your child calm and sleepy). You will then be asked to read and sign a consent form. Following this, you will go to see one of



the nurses on the children's ward for an anaesthetic pre-assessment.

What will happen on the day of treatment?

Your child will be admitted to the ward by a children's nurse and will be seen by the anaesthetist and a member of the surgical team. They will answer any questions you may have and confirm that you wish to go ahead.

You will then go with your child to the anaesthetic room in the operating theatre, where they will be prepared for the procedure whilst lying down on a trolley. If your child has a general anaesthetic you will be able to stay with them until they go to sleep. If your child is sedated, they will be awake and aware of what is happening, but you will not be able to stay with them for the whole procedure.

Local anaesthetic eye drops (to numb the eye) will be given to children having sedation. These drops are very effective in stopping pain in the eye, but a short moment of discomfort might still be experienced when the injection is given.

Your child will then have some wires attached to their forehead which are connected to a loudspeaker. This allows the injection to be correctly placed in the muscle by monitoring the muscle's electrical activity, heard as a noise from the loudspeaker.

Children who are awake will be asked to lie still, keeping their head still throughout. They will also be asked to look to one side while the injection is placed and then to the other side to make the muscle work.

They will then hear a loud noise from the loudspeaker before the toxin is injected. The injection will be held in place for 60 seconds. Please note that children having injections under general anaesthetic will often have more than one muscle injected to maximise the effect of the toxin and avoid the need for further injections under anaesthetic.

What happens after the injection?

After the injection, your child will be brought to the recovery area and when fully alert, back to the children's ward. If your child had an injection with sedation their eye will be very numb and will need to be protected with a pad for about three hours. This is to prevent dust blowing in and scratching their eye. After three hours, you can take the pad off and give your child their glasses or sunglasses to wear, which will protect their eye.

Some children may feel an ache in their eye after the injection and can take a painkiller to relieve this if needed. You will be allowed to go home once your child has fully recovered.

When should I expect to see an effect from the treatment?

You will usually notice the effect starting about two days after the injection.

How long does the effect last?

This will be different depending on each individual case. For example, in some children the effect wears off after a couple of months, whilst in others it produces changes in muscles, leading to a long term improvement of their squint.

At the start, there is often a temporary reversal of the squint (e.g. from in-turning to out –turning), followed by the gradual straightening of the eyes as the effect wears off. In children with a very new squint, the brain can sometimes lock the eyes back into position as the toxin wears off, so that the eyes remain straight long term.

What are the possible side effects?

Nearly all side effects are temporary and will improve with time. Potential side effects can include:

- Temporary reversal or change in the direction of the squint.
- Temporary double vision – this is more common in teenagers and older children.
- Temporary drooping of the eyelid – this usually recovers after a few weeks.
- Bruising of the surface of the eye – the eye looks red (subconjunctival haemorrhage).
- Bruising around the eye affecting the lids - looks like a black eye.
- Rarely, there may be a scratch on the front of the eye (cornea) from the anaesthetic used before the injection or from minor injury whilst the eye is still numb.

- Very rarely, the injection can cause permanent paralysis of the injected muscle.
- There is an extremely rare possibility of the needle piercing the eye, or significant bleeding occurring around the eye, causing serious eye or vision damage. This risk is no greater than one in 5,000 injections.

When do I return to the clinic?

We like to see our patients one to three weeks after the injection. If the first injection did not produce enough effect, we may need to organise a repeat injection.

Other important information

Botulinum toxin has been used to treat eye disorders for more than 30 years. Although botulinum toxin was originally introduced for the treatment of squint in 1979 (with our clinics successfully treating patients since 1982), the manufacturers have never applied for a drug product licence. We use it on a 'named patient' basis, and records are kept of all injections and patient details. This is one of many examples of a drug with a product license for one condition being used safely and successfully for another condition.

If you are not clear about any part of this treatment or have any questions, please ask the doctor or orthoptist to explain further. Please keep this leaflet for future reference.



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to advise you further (see above). For more information about your rights under the NHS constitution, visit www.nhs.uk/choiceinthenhs

Moorfields Eye Hospital NHS Foundation Trust
City Road, London EC1V 2PD
Phone: 020 7253 3411
www.moorfields.nhs.uk

Moorfields Direct telephone helpline

Phone: 020 7566 2345
Monday-Friday, 8.30am-9pm
Saturday, 9am-5pm
Information and advice on eye conditions and treatments from experienced ophthalmic-trained nurses.

Patient advice and liaison service (PALS)

Phone: 020 7566 2324/ 020 7566 2325
Email: moorfields.pals@nhs.net
Moorfields' PALS team provides confidential advice and support to help you with any concerns you may have about the care we provide, guiding you through the different services available at Moorfields. The PALS team can also advise you on how to make a complaint.

Your right to treatment within 18 weeks

Under the NHS constitution, all patients have the right to begin consultant-led treatment within 18 weeks of being referred by their GP. Moorfields is committed to fulfilling this right, but if you feel that we have failed to do so, please contact our patient advice and liaison service (PALS) who will be able

