



Botulinum Toxin injection for Squints (Strabismus)

What is Botulinum Toxin?

Botulinum Toxin (BT) is a protein that blocks the chemical interaction between nerves and muscles causing temporary weakness of the muscle into which it has been injected.

There are six muscles that move each eye and others that move the lids. These muscles are injected with BT for the treatment of some eye conditions.

Some conditions that may be treated with Botulinum Toxin:

- Squint (Strabismus)
- Nystagmus (rhythmical eyeball movement)
- Blepharospasm (uncontrolled lid closure)
- Lid retraction
- Entropion (turned in eyelid)
- Eye ulcers (lid is closed with BT to help ulcer heal)

Botulinum Toxin use in squints

- To temporarily straighten the eyes for patients with long standing squints. This is done to determine whether permanent double vision would occur after squint surgery and helps the surgical planning. It also helps the patient to reach a decision regarding surgery.
- To treat loss of control of a latent squint, thereby reducing double vision and headache. This might allow the patient to regain long-term control without the need for surgery.
- To treat squints caused by paralysis of a muscle. This avoids permanent shortening of other eye muscles and may reduce double vision.
- To treat a shortened muscle so that permanent surgery can be planned.

Is Botulinum Toxin Injection an alternative to Squint Surgery?

BT may be used to treat squints in some patients where surgery or anaesthesia might be dangerous. In most cases, however, the effect of BT is temporary and the injection has to be repeated every few months. Occasionally this may result in a permanent effect.

How is Botulinum Toxin Injection performed for squints?

Anaesthetic drops are used to numb the eye in adults. Children are given a short acting general anaesthesia. Two wires are placed on the forehead to monitor the position of the injection using an EMG (electromyographic) machine. This is to allow the exact site of the injection to be carefully monitored by detecting the electrical activity of the muscle and it can be heard through a loudspeaker connected to a monitor during the injection. The patient is asked to move the eye right and left or up and down during the procedure.

How is Botulinum Toxin Injection performed for other conditions?

No anaesthetic is required. Using a very fine needle, one or several small injections are given through the lid or facial skin into the muscles lying just underneath.

Will it have an immediate effect?

The treatment takes effect within 2 to 3 days and will be at its greatest 1 to 2 weeks afterwards. The effect lasts for 2 to 3 months and then gradually wears off.

Are there any side effects?

Some patients feel a slight ache in the eye or eyelids immediately after the injection. If this is not better after an hour, take whatever medication you would normally take for a headache, such as paracetamol. There may be some temporary swelling or bruising of the eye or lids.

There are some other temporary side effects, which will almost usually improve without further treatment:

- You may notice reversal of the direction of the squint (squint can turn the opposite way). This is often the desired effect and we will have discussed this in clinic before the injection. As the paralysis of the muscle wears off the eye will gradually straighten.
- Double vision, which may be different to the one experienced before surgery if it is present. It may occasionally have a vertical element, or it may cause disorientation. This is temporary and for patients that are finding this to be extremely bothersome we can give prisms to alleviate the symptoms. If you have significant double vision, you shouldn't drive unless you cover one eye.
- Drooping of the eye lid
- Eye irritation
- Difficulty closing the eye

There is a remote chance of damage to the eye or vision, if the needle penetrates the coat of the eye. This may introduce infection or bleeding inside the eye but this is extremely uncommon.

Can the treatment affect my general health?

BT has been used to treat eye conditions since 1980 (Scott) and is safe. Allergic reactions are rare. The dose used in the eye is very small and there is no risk to general health, even after repeated injections. In particular, there is no risk of Botulism or food poisoning.

There is no known risk to pregnant women but most patients and surgeons will prefer to postpone the treatment until after pregnancy.

When do I return to the clinic?

We like to see all our patients 1 to 2 weeks after the injection. If the injection has not produced an adequate effect, it may be necessary to repeat the injection at this stage or list you for the next available Botulinum toxin list.

Contact us:

If you have further questions, please contact the Orthoptic department on telephone number 0121 424 0950 or 0121 424 3524 and ask to speak to Ms Jo Innes, Senior Orthoptist. Good Hope patients can ring the Orthoptic department on 0121 424 9677.

Clinic Contact Numbers:

Appointments:		Nurses answer phone:	Orthoptic Office:
Heartlands	0121 424 0543	0121 424 1536	0121 424 0950
Solihull	0121 424 4463	0121 424 4456	0121 424 4450
Good Hope	0121 424 9651	0121 424 9533	0121 424 9677

In the rare event of a problem after BT treatment contact the Orthoptic department or telephone the main hospital switchboard on 0121 4324 2000 and ask to speak to your Consultant's secretary.