

What is Botulinum toxin?

Botulinum toxin type A is a neurotoxin that is extracted from a bacterium under laboratory conditions. It can be used in small doses for treating stiff (spastic and dystonic) muscles in some children with cerebral palsy, or other neuromuscular conditions.

How does Botulinum toxin work?

Botulinum toxin relaxes stiff muscles by blocking the nerve signals to the muscle fibres around the injection site. It may also help to reduce muscle spasm.

The toxin usually starts working a few days after the injections, and the effects commonly last approximately six months.

How will Botulinum toxin be given?

Botulinum toxin is given by injection into the specific muscle(s) being treated.

The muscles to be injected will be identified by the treating doctor using ultrasound and/or electrical stimulation. These techniques ensure that the toxin is injected exactly into the correct muscles.

How do I know if Botulinum toxin is suitable for my child?

Every child is different. Your child's Rehabilitation Specialist will discuss whether Botulinum toxin is appropriate for your child, and for which muscle groups.

Further assessments may be required, by a physiotherapist or occupational therapist, prior to

a decision being made.

If it is decided that Botulinum toxin injections are suitable for your child, the Rehabilitation Specialist will then discuss what to expect and possible side effects. There are a number of ways the injections can be given, this will be explained and you will be involved in the decision making. A number of forms will then be completed so the procedure can be planned. Your child will be placed on a waiting list and you will be notified, by letter, once a date is available. The letter will include information on where to present and fasting information, if required.

What are the different ways the injection can be given?

Paediatric Rehabilitation Department:

A local cold spray, for numbing the area, can be applied immediately prior to the injections. No fasting required. Parents can stay with their child.

Medical Day Unit:

A medication called Midazolam can be given orally or intranasal which will make your child very drowsy for the whole day. A half day admission is required and fasting for six hours prior to the injection. A local cold numbing spray may also be used. Parents can stay with their child.

Midazolam is generally safe but temporary side effects can include:

- > Drowsiness; over-sedation
- > Respiratory depression
- > Paradoxical excitation
- > Allergic reactions

Hospital staff are trained in monitoring, assessing and managing any adverse reaction. However if you are concerned about a specific issue please discuss this with your doctor.

Nitrous Oxide Sedation (Nurse-Led):

Nitrous Oxide ('laughing gas') is given via a mask. This makes the child relaxed and forget the procedure. A two hour admission is required and fasting for two hours prior to the injections. Parents can stay with their child.

The nitrous oxide is generally safe but temporary side effects can include:

Drowsiness, dizziness, light-headedness

Nausea and vomiting

Dry mouth/nose

Hazy memory and euphoria

Over-sedation with respiratory depression

Hospital staff are highly trained to prevent and/or manage all of these problems but if there is a specific issue that concerns you please speak to your doctor.

Operating Theatre:

This is a full anaesthetic with fasting from 7am and a full day admission. Parents can stay with their child until they go into the operating theatre but are not able to be with them during the procedure.

Are there any side effects to Botulinum toxin injections?

Side effects are uncommon and are usually very mild. Side effects may include:

- > Local pain, bleeding or bruising at the injection site.
- > Small risk of skin infection,
- > Muscle weakness, which is temporary
- > Temporary bowel or bladder incontinence
- > Generalised tiredness, or experiencing a “flu-like” illness usually lasting no more than 24 hours.
- > Dose dependent effects – there is a “Black box” warning in the United States put out by the Food and Drug Administration as children given very high doses of Botox (not used on our unit) have presented with generalised weakness of many muscle groups. This has led to severe side effects in a small number of children.

Any concerns you have about side effects should be discussed with your child’s Rehabilitation Specialist prior to the injection/s.

How often can my child have Botulinum toxin injections?

Each child will be assessed individually by their Rehabilitation Specialist. Your child will have a post-injection follow-up appointment booked. It is essential to attend, to plan further treatment if required. On average, your child may have injections every four to six months.

What will happen after the injections?

Botulinum toxin injections often provide an opportunity for improvements in function, hygiene/personal care and positioning. A comprehensive therapy program must be developed together with your child’s therapy staff to allow maximum benefit from the injections. A therapy program should focus on your child’s goals. It may include stretching and strengthening exercises, use of equipment and splints, aquatic therapy, gait re-education, or activity and positioning ideas for home and school.

Summary

Botulinum toxin injections do not cure cerebral palsy. Improvements are usually seen within four weeks of treatment. The effects of the Botulinum toxin can last for between three and six months. Repeated injections are usually required but this depends on your child’s response to treatment.

For more information:

**Women’s and Children’s Hospital
Paediatric Rehabilitation Department
Zone A, 1st Floor, Rieger Building
72 King William Road
North Adelaide SA 5006
Telephone: 8161 7367**

<http://www.wch.sa.gov.au/services/az/divisions/phealth/paedrehab/index.html>

Non-English speaking: for information in languages other than English, call the interpreting and Translating Centre and ask them to call Department of Health. This service is available at no cost to you, contact (08) 8226 1990.

© Department of Health, Government of South Australia
Printed August 2017

Botulinum Toxin for spasticity

Information for
parents & caregivers