

BOTULINUM TOXIN (Botox)

One of the goals of the orthopaedic management of children with cerebral palsy is to prevent muscle contracture and bony deformity. Physiotherapy, splints, and anti-spasmodic medications such as BOTOX are all used to help achieve this goal.

The injection of Botulinum Toxin A (Botox) is a non-surgical procedure that decreases spasticity in order to maintain range of motion. Botox injections allow noticeable improvements in positioning and function and may help children delay the need for surgery. If a tight muscle becomes more relaxed, other muscles may work to become stronger.

Definition

Botox is a protein produced by the bacterium *Clostridium botulinum*. The effects of botulinum have been known for many years, but only since 1980 has the toxin been found to be useful for a number of neurological disorders.

For selected children with cerebral palsy, injections of Botox are made into portions of the muscles that are too tight or too active. The toxin is a nerve “blocker.” It binds to the nerve endings and prevents the release of chemicals that activate muscles. These chemicals carry the “message” from the brain that causes a muscle to contract. If the message is blocked, the muscle does not move. The most commonly injected muscles include those that flex the hand and elbow, the adductors, hamstrings and calf muscles.

Procedure

The Botox injection is an intramuscular injection and may require a light anesthesia. Your physician will decide which muscle(s) will be injected using a special needle to aid in confirming that the Botox is in the muscle.



The effects of Botox are NOT permanent. The onset of action may not be immediate, but may take 24-48 hours to appear. Once spasticity has diminished, physical therapy and bracing can be initiated. Most patients experience improvement for an average of three to six months. However, the nerve endings usually grow new connections to the muscles and treatment may be repeated as directed by your physician. Botox is an effective treatment for the relief of symptoms only – **it is not a cure**. And, because every patient is different, the decrease in spasticity will vary from person to person.

It will be important that your child be involved in an active outpatient physical therapy program after the BOTOX injection.

Side Effects

Botox appears to be safe in all patients and has little side effects. The most common complaints are:

1. Soreness or stiffness of the injected muscles.

Soreness is often experienced with any injection and may last for 2-3 days. A dose of Tylenol before the injection and every 4-6 hours as needed after the injection may help relieve the soreness.

2. Redness or slight swelling at the injection site.

This should also subside in 24-48 hours.



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