

Injections for Spasticity and Dystonia

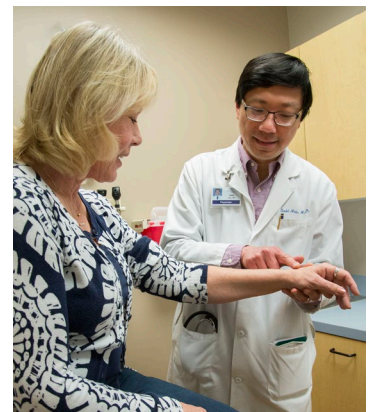
How they work and what to expect

This handout describes 2 muscle disorders, spasticity and dystonia. It explains how injections are used to treat the symptoms.

What are spasticity and dystonia?

Spasticity and dystonia are disorders that affect the muscles.

- Spasticity is a condition where muscles are stiff or tight. It most often occurs when the brain or spinal cord is injured. It can lead to pain, limited joint movement, and problems walking, bathing, dressing, or doing other daily activities.
- In dystonia, muscles contract without a person's control. This can cause abnormal posture or movements. It can affect different parts of the body. For instance, a whiplash injury can cause dystonia of the neck muscles.



Please talk with your provider if you have any questions about your condition or treatments.

How are they treated?

- Spasticity can be treated with stretching, splinting or bracing, oral medicines, and *botulinum toxin* or *neurolytic block* injections.
- Treatments for dystonia include oral medicines, botulinum toxin injections, and surgical therapy with *deep brain stimulation*.

What is botulinum toxin?

Botulinum toxin is a substance produced by bacteria. It can be used to treat spasticity in many conditions, including brain injury, spinal cord injury, stroke, or *multiple sclerosis*. It is also used for dystonia, chronic *migraines* (headaches), and many other conditions.

Botulinum toxin comes in many forms. Common brand names are Botox, Dysport, Myobloc, and Xeomin.

How does botulinum toxin work?

The toxin is injected directly into a muscle. It blocks the signal between the nerve and the muscle. This relaxes the muscle.

When will I see results and how long will they last?

Over the 1 to 2 weeks after the injection, the injected muscles should slowly relax. Botulinum toxin reaches its greatest effect in about 2 to 4 weeks.

Results last for about 3 months and then slowly fade. After 3 months, your doctor can repeat the injections if they were helpful. Your doctor may also adjust the botulinum toxin dose or inject different muscles to get the best effect based on your goals.

How do I receive botulinum toxin injections?

First, your doctor will do a physical exam and assess your muscles and movement. This will help us know which muscles to inject.

Your doctor will then use a special *electromyography* (EMG) needle to inject the botulinum toxin. This needle reads the electrical signals in your muscles. It allows your doctor to make sure the needle is in the right place to affect the target muscle.

What can I expect after the injection?

- Some patients have mild soreness at the injection sites.
- We will watch for bleeding or signs of infection. These signs include bruising, swelling, redness, warmth, or pain that gets worse.

What are the side effects of this injection?

Common Side Effects

- The most common side effect is pain at the injection sites.
- Some people have weakness in the muscles that were injected.
- Some people have flu-like symptoms.
- Sometimes there is bruising or bleeding at the injection site.
- The risk of infection is very low.

Rare Side Effects

Sometimes, botulinum toxin spreads to muscles that were not injected. Very rarely, this affects a person's breathing or swallowing.

If you have trouble breathing or swallowing, call 911 right away or go to the nearest emergency department.

What are neurolytic blocks?

Neurolytic blocks are injections of medicine into an overactive or spastic muscle. The medicine that is injected may be *bupivacaine* or *lidocaine* (local numbing medicines) combined with *phenol* or *ethanol* (a close relative of alcohol).

How do neurolytic blocks work?

Phenol or ethanol blocks the nerve, which stops the signal between the nerve and the muscle. When the nerve is blocked, the spastic or overactive muscle can relax.

How long does the effect last?

- Bupivacaine or lidocaine injections numb the area for a few hours.
- The effects of phenol or ethanol usually start right away and last for 6 to 12 months. The injections can be repeated if needed.

How do I receive neurolytic blocks?

First, your doctor will do a physical exam and assess your muscles and movement. This helps us know if neurolytic blocks are a good option for you.

These injections are done with a special *electromyography* (EMG) needle attached to a nerve stimulator. You may feel a small thump or movement in the muscle when your doctor inserts the needle and stimulates the nerve. The medicine is injected near the nerve.

What can I expect after the injection?

- Most patients have mild soreness at the injection sites.
- We will watch for bleeding or signs of infection. These signs include bruising, swelling, redness, warmth, or pain that gets worse. The risk of infection is very low.

What are the side effects of neurolytic blocks?

Common Side Effects

- You may have mild pain or feel some burning when the medicine is injected.

Less Common Side Effects

- Some patients feel a burning or tingling in their arm or leg. This is called *dysesthesia*. This pain may only last a few days. Very rarely, it can be permanent.

- It is very rare to have muscle weakness that lasts for longer than 6 to 12 months.

Is it OK to get botulinum toxin injections or neurolytic blocks if I take blood thinners?

These injections should not cause any problems if you are taking blood-thinning medicines.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

UWMC Rehabilitation
Medicine Clinic: 206.598.4295

Clinic hours: Weekdays, 8 a.m.
to 5 p.m.

To talk with a nurse during
clinic hours, call 206.598.2376