

## Pediatric Botox® Injection for Salivary Glands

Doctors inject Botox® into children's salivary glands to help control excessive drooling. The doctor will use ultrasound imaging to identify the target glands and guide the injections. This procedure requires little to no preparation. However, you should discuss this procedure with your child to help ease any anxiety. The injections may effectively reduce drooling for up to six months. Your doctor can repeat the procedure as needed.



### What is pediatric Botox® injection for salivary glands?

Doctors inject botulinum toxin type A (Botox®) into children's salivary glands to treat excessive drooling. Botox® reduces the activity of the salivary glands. The injection may decrease the amount of saliva your child produces.

Doctors usually perform these injections on an outpatient basis. This procedure typically uses sedation or general anesthesia. This is to make sure the child is comfortable during the injection. Doctors often use ultrasound (<https://www.radiologyinfo.org/en/info/genus>) to identify the target glands (submandibular and/or parotid salivary glands) and guide the injections. The procedure typically delivers injections to two to four glands.

### What are some common uses of the procedure?

Botox® injections to the salivary glands may reduce excessive drooling.

Drooling can result from excessive saliva production. It can also result from neurological conditions like cerebral palsy. Such conditions can weaken the ability to swallow and clear saliva from the mouth. This, in turn, can lead to a build-up of saliva and excessive drooling.

Drooling is normal the first two years of life. After that, it can cause problems for children, including:

- Choking from saliva going down the airway
- Lung infections
- Skin and dental issues around the mouth
- Social stigma

The injections should reduce drooling within two to three weeks. The effects may last up to six months. Your doctor can repeat the procedure as needed.

### How should we prepare?

Discuss the procedure with your child. Use words they can understand. Children will feel less anxious when they know what to expect. Let your child know they will receive medicines to make them feel comfortable during the procedure.

Tell your doctor about all the medications your child is taking. Inform your doctor about any allergies, recent illnesses, or other medical conditions.

Your child may require general anesthesia. Your doctor may tell you to withhold food or drink from your child for several hours before the procedure. Fasting reduces the risk of vomiting during and after the procedure. If your child has special needs during fasting, talk to your doctor. Your child can take their regular morning medicine with a sip of water two hours before the procedure.

It is important that your child is healthy on the day of the procedure. Let your doctor's office know if your child starts to feel sick or has a fever within two days before the injections. You may need to reschedule the procedure.

Aspirin, ibuprofen, and blood thinners may increase the risk of bleeding. If your child is taking any of these medicines, discuss this with your doctor. You may need to stop these types of medications before the procedure.

## **What does the equipment look like?**

Botox<sup>®</sup> injections use a very small needle that leaves no scar.

Ultrasound scanners consist of a computer console, video display screen, and an attached transducer (probe). The small, hand-held probe looks like a microphone. The doctor places the probe on the skin to allow them to see the gland and to guide the needle into it.

## **How does the procedure work?**

Botox<sup>®</sup> is a toxin produced by a certain type of bacteria. It is safe to use in small, diluted amounts. Doctors inject it into the main salivary glands to block the signal from the nerve to the muscle. This makes the glands less active.

## **How is the procedure performed?**

The procedure typically requires 30 minutes to an hour.

Your child likely will receive sedation or anesthesia before the injections. This helps reduce anxiety. It also helps decrease the risk of complications from movement during the procedure.

Doctors most commonly deliver general anesthesia via breathing gas after an intravenous (IV) injection of medicine. Patients typically have no memory of what happens during general anesthesia.

In deep sedation/monitored anesthesia care, sedatives are usually given by vein through an IV catheter. Patients are normally able to breathe on their own.

For minimal/moderate sedation, the doctor may give your child medicine to reduce anxiety. They will be able to respond to questions and follow instructions as needed.

*For more information, see the Pediatric Sedation (<https://www.radiologyinfo.org/en/info/safety-pediatric-sedation>) page.*

Once your child is under anesthesia or sedation, the doctor performs the injections. The doctor uses ultrasound imaging to find the glands near the jaw and mouth that produce saliva.

The doctor will clean the skin to ensure a sterile site.

Under ultrasound guidance, the doctor inserts a tiny needle through the skin into the glands. Once the needle is in place, the doctor will inject a small amount of Botox<sup>®</sup> into the space. The doctor will be very careful to avoid blood vessels and nerves.

Typically, the doctor will inject four salivary glands. These are placed most often through the skin in front of the ear (targeting the parotid gland) and below the chin (targeting the submandibular gland).

The doctor will cover the puncture sites with a bandage. No incisions or sutures are necessary. The doctor will monitor your child for a short period afterward to allow for recovery from the anesthesia or sedation. Typically, your child will be able to go home about one to two hours after the procedure.

## What will my child experience during and after the procedure?

Doctors usually administer sedatives to children through an IV catheter. Your child may feel slight pressure or a sharp pinch when the doctor inserts the IV catheter. Your doctor may occasionally use oral medications to sedate children younger than two years old.

The doctor will perform the procedure using ultrasound to help guide the injections. If your child is sedated they will not feel any pain.

If your child received some form of sedation, you and your child will stay in the department for a recovery period. You will receive instructions on any limitations in activity for the day. *For more information, see the Pediatric Sedation (<https://www.radiologyinfo.org/en/info/safety-pediatric-sedation>) page.*

Your child may experience soreness and bruising at the injection site. This is normal. The soreness should last only a day or two.

You may remove the bandages 24 hours after the procedure. Once you remove the bandages, your child may shower or take a bath.

You should see maximum effect at two to three weeks. The results usually last three to six months.

## Who interprets the results and how do we get them?

The doctor that performed the procedure will create a report summarizing everything that happened during the procedure and will send a copy to the doctor who ordered the exam.

## What are the benefits vs. risks?

### Benefits

- The injections are minimally invasive, reliable, and effective.
- The procedure does not require a surgical incision—only a skin puncture. Your child will not need a stitch to close the skin puncture. There will be no scarring related from the needle injection.
- In most cases, the procedure is not painful after the injection.
- Recovery is quick.
- The doctor can repeat the procedure as necessary.

### Risks

- Minimal bleeding
- Low risk of infection (any time a needle is used to inject a body part there is always a low risk of infection)
- Temporary inability to move the facial muscles near the salivary glands. Temporary facial drooping that lasts three to six months.
- Dry mouth, a condition resulting from a significant drop in saliva production.

- Swallowing weakness due to leakage of Botox® outside of the gland.
- Though rare, side effects and allergic reactions from anesthesia can occur. Some patients may have nausea, vomiting, and dizziness. These side effects are usually mild, brief, and treatable.

## What are the limitations of pediatric Botox® injections for salivary glands?

Treatment does not result in a permanent solution. Your doctor will often need to repeat the procedure after a few months.

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