



~ Please call the Surgical Coordinator at 617-355-5776
with any questions or concerns regarding your or your child's surgery ~

Botox (botulinum toxin) for Strabismus - What To Expect

(Revised 9/04)

A Botox injection is being considered for you or your child. For adults and cooperative children, this treatment is usually performed in the office. For younger children it is performed in the operating room with a brief anesthesia.

Some insurance companies require a second opinion, pre-admission authorization, or both. Please check your health insurance policy or contact your insurance company about such special requirements. If you do not meet these requirements, the insurance company may refuse to pay, or may pay a reduced amount for your treatment. In that case, you will be responsible for payment of all bills not covered by your insurance. It is *your* responsibility to contact your health insurance carrier regarding its policy concerning second opinions and pre-authorization. If a required pre-authorization number has not been obtained, the treatment will have to be canceled.

Q. What is Botox?

A. Botox (also known as Botulinum Toxin Type A) is a therapeutic agent derived from the bacterium, *Clostridium Botulinum*. When given in extremely small doses, it is useful in treating many types of overactive muscle activity. In our office we use it to treat strabismus (misaligned eyes) and blepharospasm (uncontrollable eyelid squeezing).

Q. How does Botox work?

A. Normally your brain sends electrical messages to your muscles so that they can contract and move. The electrical message is transmitted to the muscle by a substance called acetylcholine. In certain types of strabismus, eye misalignment is caused by a muscle imbalance. Botox works to block the release of acetylcholine and, as a result, the stronger muscle doesn't receive the message to contract.

Q. How is BOTOX administered?

A. Botox is injected into the muscle requiring treatment. Your doctor will determine the muscle(s) in need of treatment. A short-acting dilating drop is administered to constrict blood vessels and prevent bleeding. A fine needle is used. The needle is sometimes attached to an amplifier so that the doctor can listen to the sound ("static") made by the amplifier to confirm proper needle placement.

Q. Does the treatment hurt?

A. Each injection takes just a few seconds to administer. Some patients report minor and temporary discomfort from treatment.

Q. Are there any activity restrictions after treatment?

A. After treatment in the office, you may resume all of your usual activities immediately after treatment. After treatment in the operating room, all normal activities may be resumed as soon as the anesthetic has fully worn off.

Q. When does Botox start to work and for how long?

A. You will not usually see any change until 2-3 days after the injection, and the peak effect does not occur until 1-2 weeks. Botox will wear off after about three months. Some strabismus patients will experience a permanent improvement in alignment of the eyes after injection, due to adjustment that naturally occurs in the other eye muscles while the injected muscle has been weakened. If the eye alignment problem returns, the injection can be repeated indefinitely every 3-4 months, or in some cases eye muscle surgery may be preferred. When surgery is required, it is not normally scheduled until 3-4 months after the last Botox injection so that accurate pre-operative measurements can be performed. In some cases, a course of treatment with Botox will consist of three injections separated by 90 days.

Q. Is this an experimental treatment?

A. Botox is an FDA-approved medication and it has been used successfully for many years to treat strabismus. It is not an experimental treatment. However at times we may ask for your consent to allow us to study the response to treatment; this allows us to publish our surgical experience to share the information with other surgeons around the world.

Q. What side effects may be experienced when using Botox?

A. Over-correction (too much effect) or under-correction (not enough effect) of the misalignment may occur. Over-correction usually resolves as the medication wears off. For example, if the eyes are drifting outward, there may be a period of time when the eyes cross for several weeks after injection. Under-correction requires additional treatment.

In about 10% of patients, the medication may reach the eyelid muscles, causing the eyelid to droop temporarily. This usually recovers over a period of weeks to months depending on the severity of the drooping.

In about 10% of patients, the medication may reach another eye muscle, causing a vertical misalignment after injection of a horizontal muscle, or vice versa. This also recovers over a period of weeks to months depending on the severity. It is possible that these

problems would not fully recover and require extra surgery to correct, but this is extremely rare. Other side effects can include transient spatial disorientation, double vision, and occasionally eye irritation, dry eye, tearing, and light sensitivity. This product contains albumin, a derivative of human blood. Based on effective donor screening and product manufacturing processes, it carries an extremely remote risk for transmission of viral diseases.

We are aware of only one case of an injection (performed elsewhere) that accidentally went into the eye instead of the eye muscle. That patient did not lose vision but it is possible that injection into the eye could cause bleeding, infection, or even loss of vision in that eye.

Q. Will the Botox treatment be successful?

A. About one half of patients will require subsequent doses because of inadequate response of the muscle. Patients are re-examined 7-14 days after injection to assess the effect of the dose. If the BOTOX treatment is unsuccessful in alleviating the symptoms of strabismus at that time, your doctor may discuss alternative treatment options with you.

Q. How do I prepare my child for the operating room?

A. For children who might not sit still, the injection is given in the operating room during a brief general anesthesia. A few steps can help psychologically prepare your child for this experience. It is not necessary to talk about the operating room several weeks ahead of time - a day or two before is fine. A child who is 2 or 3 years old needs to be told that he or she will be coming to the hospital. Say that "Dr. _____ will be fixing your eyes." Children need to be assured that they will not be abandoned. Assure them that a parent will stay by their side until asleep. Say that they will see many nice people with green shirts and pants and funny caps in the operating room. Tell them that they will be asleep while their eyes are fixed, that they will wake up in a new room, and that you will be called to be with them when they wake up. Let them know that they will not be able to eat breakfast before the eyes are fixed, so as not to become sick while asleep, but that they can eat as soon as they wake up. This is usually all your child needs to know. Younger children simply need reassurance of your presence. Older children may ask for more details. Just leave it to them to ask.

Q. My child has a cough and its one week before surgery, what should I do?"

A. If your child has a cough or cold, please inform the surgical coordinator. Depending on the severity (for example if your child is waking up in the middle of the night, has a loss of appetite, or a loud, congested cough), the surgery will be rescheduled at that time. If the symptoms seem minor, you can discuss them with a day surgery nurse, who will call you the day before surgery. If your child is cleared for surgery by the nurse and/or your pediatrician, please note that an anesthesiologist will also examine your child the day of

surgery. If the anesthesiologist has any concerns on the morning of surgery, he/she may decide to reschedule the surgery. When this occurs, it is of course frustrating for everyone, but our number one concern is the safety of your child. We will make every effort to reschedule the surgery as soon as it is possible, and safe, to proceed.