Minimizing the signs of aging

The first signs of aging often appear as wrinkles around the eyes, forehead, cheeks and lips. While wrinkles are normal defining features of the human face, they can sometimes falsely portray a tired or more aged appearance.

Botulinum toxin–derived injections (such as Botox®, Dysport®, and Xeomin®) are used to treat facial wrinkles, restoring a more youthful, rested appearance.

How do you get wrinkles?

We develop two types of wrinkles on our faces:

**DYNAMIC WRINKLES**

We are born with dynamic wrinkles, which are associated with the muscles we use for facial expression. As we continuously use our facial muscles to smile, laugh and squint, mild wrinkles appear when we are young, but they become deeper and more noticeable as we grow older. The most common areas where we develop dynamic wrinkles are around the lips, the corners of the eyelids (where the wrinkles are known as crows’ feet), between the eyebrows and on the forehead. These wrinkles often make people look older and more tired than they actually are. Botulinum toxin can be used to treat these dynamic wrinkles and make them less noticeable.

**VERY FINE LINES AND WRINKLES**

Very fine lines and wrinkles are caused by sun exposure and aging. As we age or are repeatedly exposed to the sun, collagen—the protein substance found just beneath and within the deep layers of the skin—begins to thin, causing facial skin to stretch and sag. Unfortunately, botulinum toxin cannot treat these types of wrinkles. However, there are other procedures that may be used to reduce the appearance of these types of wrinkles.

How do Botox®, Dysport® and Xeomin® work?

All are made from botulinum toxin A, and are given as an injection that works by blocking signals from the nerves to the muscles. The targeted muscles relax, reducing or eliminating the appearance of unwanted lines. This blocking effect on the nerves usually lasts an average of three to six months, at which time the muscle regains movement and wrinkles reappear.

How is botulinum toxin administered?

Using a very fine needle, your doctor injects the medicine directly into the targeted facial muscles. A topical anesthetic cream may be applied to your skin to decrease the sensation of the injection; you should discuss this option with your doctor beforehand. The treatments take only a few minutes and are given during a typical office visit. You should be able to return to your normal activities immediately. The effects of botulinum toxin–induced muscle relaxation begin to occur within about three days. By the end of the first week, you will probably notice a significant reduction of facial lines and wrinkles around the treated areas. Repeat injections of the muscle relaxant may be given after the effects wear off.

Are you a good candidate for botulinum toxin?

The best candidates for botulinum toxin treatments are people who are physically healthy, with no history of neuromuscular diseases, such as multiple sclerosis or myasthenia gravis, not pregnant or nursing, and at least 18 years old.

Some people who should not have botulinum toxin treatments include those with:

- Existing weakness in the targeted muscles;
- Ptosis (drooping eyelids);
- Deep facial scars;
- Very thick facial skin;
- Marked facial asymmetry;
- Skin disorders around the planned injection sites.

You should inform your doctor of your medical history and all medications, vitamins and herbal supplements you are currently taking before having botulinum toxin treatments. It is important to remember that the level of improvement in the appearance of wrinkles after botulinum toxin treatments can vary among patients. Some people respond better to botulinum toxin than others. Occasionally there is little improvement and another form of treatment may be recommended. It is important to discuss your situation and your expectations with your doctor.
Understanding the risks, complications and side effects

Botulinum toxin–derived medicines are toxins and can be potent in high concentrations. Only small, diluted amounts of botulinum toxin are used in treatments to reduce facial wrinkles.

The most common side effects are headache and temporary redness or bruising of the skin at the injection site. Bruising appears to be more common in patients taking aspirin or blood-thinning medicines. These medicines should be avoided if possible for a few days before treatment. You should inform your doctor of all medications you are currently taking before having botulinum toxin treatments. Occasionally, some people might experience temporary eye irritation or tearing after botulinum toxin treatments.

More serious complications are rare but possible. There is a chance that non-targeted muscles could be affected and weakened. This could cause drooping of the eyelid (ptosis) if the botulinum toxin seeps below the eyebrow and into the muscle that controls eyelid function. Though the effect is not permanent and will eventually go away as the medicine wears off, drooping eyelids may temporarily obstruct your ability to see.

In order to help reduce the possibility of side effects, your doctor may recommend that you use lubricating eyedrops, gels or ointment for a period of time after treatment. You may also be instructed to:
- Sit upright and refrain from lying down for at least four hours after treatment;
- Avoid pressing on or massaging the treated area for four hours;
- Avoid exercising for 24 hours following treatment.

Having an ophthalmologist perform your botulinum toxin treatment can help to ensure the safety of your eyes and your vision. Many ophthalmologists have been on the forefront of botulinum toxin treatment. It has been used for more than 10 years in ophthalmology to treat involuntary spasms of the eyes and other facial spasm disorders. As an eye care specialist, your ophthalmologist is most familiar with all aspects of your eyes, including the muscles and structures surrounding them.

Crows’ feet prior to botulinum toxin injection

Crows’ feet following botulinum toxin injection

Additional online resources

For more about your eye care team, scan this code with your smartphone or visit http://bit.ly/TreatingWrinkles.