

Results: reduction of muscle stiffness, improved range of motion, stimulation of normal growth and acceleration of normal activities such as crawling or walking in children affected by this disease.

Cervical dystonia or "crooked neck," is a painful condition in which muscles of the neck and shoulders cramp severely, leaving the head in an abnormal position. Botox relieves spasms when injected into those muscles.

Under investigation are a wide range of muscular problems, such as cramps in the neck, shoulders, back, limbs, hands or feet. Botox is being used in stroke patients to relax rigid muscles so they can regain the use of affected limbs. Researchers are examining the possibility of using Botox to treat Parkinson's disease. The drug is also being tested as an alternative to surgery for anal fissures or cracks in the skin around the anus. These cracks are dangerous because they occur in an infection-prone area.

Other uses

Blepharospasms or eye twitching, constant blinking. Injecting small amounts of Botox relaxes the eye muscle and stops the twitching.

Strabismus or "lazy eye" is actually an overactive eye muscle. With Botox injections, the specific muscle is paralyzed, while the remaining muscles are able to align properly, correcting vision.

Excessive sweating or hyperhidrosis especially sweaty hands and armpits benefit from Botox injections. Sweating is significantly reduced for up to three months. Perspiring is governed by chemical transmitters along the autonomous nervous system pathway. With injections into the armpits, Botox sets up a temporary roadblock.

BOTOX: IRONS OUT WRINKLES HOW IT'S DONE

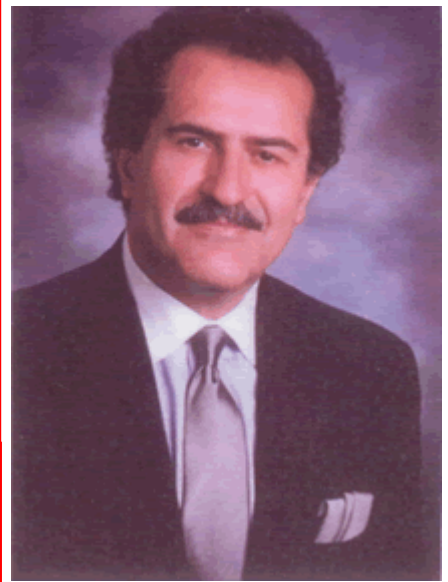
Botox paralyzes the tiny muscles involved in facial expressions. Lines in the forehead, above the eyebrows, around the sides of eyes (crow's feet) are reduced for a few months because those muscles are unable to crease the skin.

The procedure depends on the location and number of sites. "It can take as little as 10 minutes if only injected in the forehead," says Mokhtar Asaadi, MD, dermatologist and board certified, New Jersey plastic surgeon, past president of the Noor va Danesh organization. "If you have several injection sites, it may take about 15-30 minutes." There's a one-centimeter diffusion of the material around the injection site. That's where you'll notice a slight bruising and swelling, the next day.

While results may differ from person to person, there are no differences among ethnic skin types, although there can be differences along gender lines. "Sometimes men's lines improve better than women's," admits Asaadi. "But it is mainly because the results are more noticeable as men's muscles are stronger." He notes however, this procedure is most often requested by women.

Some people may not notice changes until two days or even a week after initial injections. The changes last for four months on the average. "It works best on crow's feet or more superficial wrinkles, not deep lines or creases," he says. It also improves glabellar lines, the vertical wrinkles in the forehead between the eyes.

Asaadi warns patients that exercising can increase circulation and the injection site may become more swollen and bruised. "It is not recommended for younger adults (under 20), pregnant women or those allergic to aminoglycosides," he says. Side effects include headaches which last a day or so, extra bruising if you're taking aspirin or



Mokhtar Asaadi, MD, dermatologist and board certified New Jersey plastic surgeon.

coumadin, and droopiness of eye-lids if injections were too deep.

Warning

Botox parties (events growing in popularity, where untrained medical professionals inject Botox outside a medical office) do more harm than good. "This is still a toxin that is being injected, it needs to be taken seriously, and done by someone who is familiar with the anatomy of the body and the effects that botulinum toxin can have on those muscles," says Asaadi. "I can't emphasize this enough: The procedure must be done by plastic surgeons. The person who administers the injections must know about the muscles that control the movements of the face. They must know how deep to go."

For more information
Allergan (makers of Botox®)
www.allergan.com/site/

MedlinePlus Health Information (U.S.
National Library of Medicine)
[www.nlm.nih.gov/medlineplus/
druginfo/uspdi/202608.html](http://www.nlm.nih.gov/medlineplus/druginfo/uspdi/202608.html)

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