



## WHAT'S THE BUZZ ABOUT BOTOX® ?

BY DR. SAUL BERGER, BOARD CERTIFIED PLASTIC SURGEON



Before



After

One of the most popular procedures available, it has often been described by clients and medical practitioners alike as the “fountain of youth”.

**JUST AS THE REMARKABLE** benefits of penicillin were accidentally discovered in the growth of mold in a culture dish, so have we come to discover, and embrace, the benefits of a toxin produced by the bacterium “clostridium botulinum.” Botox® (produced by Allergan Company) is the trade name of a purified substance produced by the same bacterium respon-

sible for the illness botulism. How this substance has been adapted for medical use and become the “sweetheart” of non-surgical facial rejuvenation in America is a remarkable story.

It had been known for many years that certain medical conditions occur because of muscle spasm or imbalance. The beneficial use of botulinum toxin dates back

to research in the 60s and 70s which led to its use in treating eye muscle problems by 1989 (e.g. crossed eyes or eyelid spasm). It was later adapted to treat other disorders in the neck that also benefited from relaxation of muscles. During these therapies, botulinum toxin was noted to relax muscles that caused wrinkling of skin and scientific reports of the cosmetic benefits of botulinum use were published by 1998. In 2002, after many years with a safe track record, the FDA approved the use of this substance for cosmetic purposes.

Botox works by attaching near the junction of a nerve and its target muscle to interfere with the chemicals that signal a muscle to contract. Once the muscle is no longer stimulated, it will relax and stop folding the skin that creates wrinkles such as “frown lines” between the eyebrows or “crow’s feet” at the sides of the eyes. Given enough time, this phenomenon reduces the appearance of wrinkles and can even make shallow lines disappear. Botox is administered with an extremely fine needle directly into the target muscles, and can be given with minimal discomfort in skilled hands in just a few minutes. The medication takes several days or longer to become fully effective and is active for about three to four months. The effects are local to the site of injection, and the amounts needed to achieve cosmetic improvement are far below levels considered toxic for the body. Very few medical situations would render an individual unsuitable for treatment – pregnancy or a bleeding tendency would probably be the most common.

The keys to a successful Botox treatment are (1) proper handling and storage of the material, (2) accurate injection into the specific muscles desired, and (3) injection the proper dose to achieve the best result. Deficiencies in any of these aspects can result in a disappointing outcome and may be more likely if an individual is injected in a non-medical environment (ex. “Botox party”) or by a practitioner who is not an expert in the anatomy and function of the muscles. Patients should always be wary of paying fees based on the area being treated rather than the actual Botox dose – they may not know how many units they are

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actually receiving. A safe way to start Botox therapy is under the supervision of a board-certified plastic surgeon who uses Botox as part of his/her regular practice.

Over the past few years, the demand for Botox has exploded: Over 2.2 million treatments were given in the U.S. in 2003 – this represents a 37% increase over 2002. And the innovative uses for Botox continue to be unveiled as it has been shown to be highly effective in the prevention of migraine headaches and was just approved by the FDA last month for the treatment of underarm sweating disorders. Who would have thought that a tiny bacterium could create such a buzz?



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