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Botox Resistance: The Surprising Reason Why Your Neurotoxin Injections Aren't Working

Britt Fallon | June 7, 2024



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Over the course of my 15 years as a beauty editor, I've had more than a few people tell me they feel like their neurotoxin injections aren't working anymore. "Can you become immune to it?" one friend asked. One reader DM'd me on Instagram asking if I'd heard of "Botox resistance." Though not common, it is possible. For some people, their line-smoothing neurotoxin (Botox Cosmetic, Dysport, Xeomin, Daxxify or Jeuveau) appears to "stop working" over time.

"Neurotoxins refer to substances produced by clostridium botulinum," says New York dermatologist Marisa Garshick, MD. "They work by blocking the release of acetylcholine at the neuromuscular junction, which prevents muscle movement. As a result, it reduces the appearance of expression lines." However, neurotoxin injections aren't a silver bullet for everyone. These are the reasons why they may seem to stop working, or, not work at all, according to experts.

Featured Experts

- Doris Day, MD, a board-certified dermatologist based in New York
- Julie Russak, MD a board-certified dermatologist based in New York
- **Kimberly J. Lee, MD**, a board-certified facial plastic surgeon based in Los Angeles
- Marisa Garshick, MD, a board-certified dermatologist based in New York
- Michael Suzman, MD, a board-certified plastic surgeon based in Purchase, NY

Reason #1 Why Your Neurotoxin “Doesn’t Work”: You’re Getting Injected Too Often

According to New York dermatologist Doris Day, MD, the more you are exposed to a neurotoxin, the more likely you are to build up a resistance to it. “This is because of the way the neurotoxins are processed,” she explains. “If you get injected and then wait three months, the drug is completely out of your system and has completely worn off. So, the next time you get it, it’s like getting it for the first time.”

On the other hand, some people get “Baby Botox” more often. “This means getting fewer units every four to six weeks,” says Dr. Day. “These patients are increasing their risk of building their immunity to the neurotoxin. It’s not that they want to look frozen, but some people may benefit from treatments more often to get the look they want. However, if you keep getting injected over and over in less than two-month intervals, you’re more likely to build up a resistance. The way to minimize the issue is to make sure you space your treatments out every three to four months.”

New York dermatologist Julie Russak, MD, agrees, saying the body can develop antibodies to a specific product and your immune system will resist it. “In most cases, people build up antibodies to the accessory protein in Botox Cosmetic and Dysport, rather than the active molecule.”

The only product on the market that the resistance wouldn’t occur with is Xeomin, Dr. Day says. “All the other neurotoxins available in the U.S. are formulated with binding proteins. Xeomin is the only pure form of the drug without any other elements that might create an antibody response. I use it very precisely and get fantastic results. I can also modify the treatment based on the patient’s goals.”

Reason #2: You’re Part of the 4 Percent

Los Angeles facial plastic surgeon Kimberly J. Lee, MD says patients can be resistant to neurotoxins entirely. “Approximately 4 percent of the population is resistant to neurotoxins, meaning they have no effect from the injection.”

Reason #3: It May Be the Result of Natural Aging

According to Purchase, NY plastic surgeon Michael Suzman, MD, there’s a possibility that the neurotoxin is still working, but you’re perceiving it differently after many years of getting injected. “If a patient sees a lessened effect after receiving their regular injections, it may be because they are so used to the smooth look they’ve achieved. But, because they still continue to age normally over time, they see less of a ‘youthful’ result,” he explains.

Reason #4: You Didn’t Go to an Expert Injector

Neurotoxins have been around for decades and are super quick to administer—my forehead and glabella take less than five minutes total—but that doesn’t mean they shouldn’t be considered a serious procedure. Injecting anything in the face should be left to a board-certified dermatologist or plastic surgeon, or an Expert Injector. “Another reason someone might think their neurotoxins

aren't working is if the injection missed the strongest part of the muscle. It may have concentrated between areas of muscle where it is less effective," says Dr. Suzman. "A touch-up with product from a fresh vial should correct the issue. Always make sure you're getting treated by someone who is properly qualified and trained."

Can You Reverse Botox Resistance?

While Dr. Garshick says you cannot necessarily reverse Botox resistance, there are some strategies to overcome it. "The solution may be to use a different type of botulinum toxin," she explains. "For example, if someone finds they are developing a resistance to Botox, they may prefer to switch to Xeomin, Dysport or Jeuveau. Or, they can switch to another strain of neurotoxin, such as botulinum toxin type B. [Neurotoxins use botulinum toxin type A.] However, this is not as easy to find among cosmetic injectors and doesn't last as long. Another option may be to consider the neurotoxin Daxxify, which is thought to last longer."

"You may also consider taking a zinc supplement, which may help neurotoxins last longer," says Dr. Garshick. "More data is needed, but a small study showed that zinc should be taken four to five days prior to neurotoxin injections, and on the day of the injection, to help the toxin bind to its target. Another option is to take a break from neurotoxin injections for six to 18 months to see if that provides time for your body to clear any potential circulating antibodies."

With all this being said, however, Dr. Day says she doesn't see this "immunity" happen very often. "In the 20-something years I've been using Botox and other neurotoxins, it's not often that I see this problem. But, we are now starting to use these products a lot more often in the form of 'Baby Botox,' so I do think we'll start to see more of it."

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