

SKIN

Botox Injections May Improve the Appearance of Facial Scars

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Botox is to plastic surgery what coconut oil is to beauty. It seemingly does everything. Now, doctors say it might even help stop scars from forming after plastic surgery.

While technically only Food & Drug Administration-approved for a few uses on the face, [botulinum toxin type A injections](#), like Botox, have a wide range of [off-label uses](#) — both medical (say, minimizing migraines) and aesthetic (like [non-surgical face-lifts](#)). According to a new study published this month in [Plastic and Reconstructive Surgery](#), the injectable even has the potential to totally change the way we treat scars.

To explore its wound-healing powers, doctors tested the effects of botulinum toxin type A injections on facial plastic surgery incisions for 16 patients. (Most of the patients in the study were undergoing plastic surgery to alter a disfiguring birthmark.) Post-surgery, doctors injected half of the incision with botulinum toxin A — the other side was injected with a saline solution as a placebo.

Four months later, the patients had follow-up appointments with independent plastic surgeons, who evaluated each side of the scar and rated the appearance on a scale of zero to 10 (with 10 being the best). On average, the surgeons rated the botulinum toxin type A's treated scars about a point higher (with a score of 5.76) than the side that had not received the injections.

According to the findings, Botox injections reduced both the bumpiness and the width of the scars. Here's why: "We know that tension on a wound causes scars to be thicker and wider," Darren Smith, a board-certified plastic surgeon in New York City, who was not involved with the study, tells *Allure*. A major source of tension on a scar is motion, he explains. For example, a scrape on your knee is much more likely to leave a nasty scar since the skin is constantly moving while it's trying to heal. "Using Botox to weaken the muscles under a healing incision, and thereby reducing motion and tension on the overlying incision makes sense," says Smith.

There are a few catches. In the study, doctors injected the surgery site immediately to prevent scar tissue from ever forming. So, in other words, the findings wouldn't apply to older scars. Even with fresh wounds, Botox wouldn't be suitable for all locations. "Some areas scar very well [on their own]" — for example, eyelids — "due to the thickness of the skin and the location of the wound," Melissa Doft, a board-certified plastic surgeon in New York City (also not involved in the study), tells *Allure*. "For the forehead, where Botox works very well, it would reduce tension and perhaps improve the scar."

The experts also caution that the study used a very small sample size. "This is a study with promising results, but needs to be validated by more research," says Smith. "Ultimately, Botox may work very well in concert with topical therapies, like silicone, to improve scar quality by approaching the problem from multiple angles."