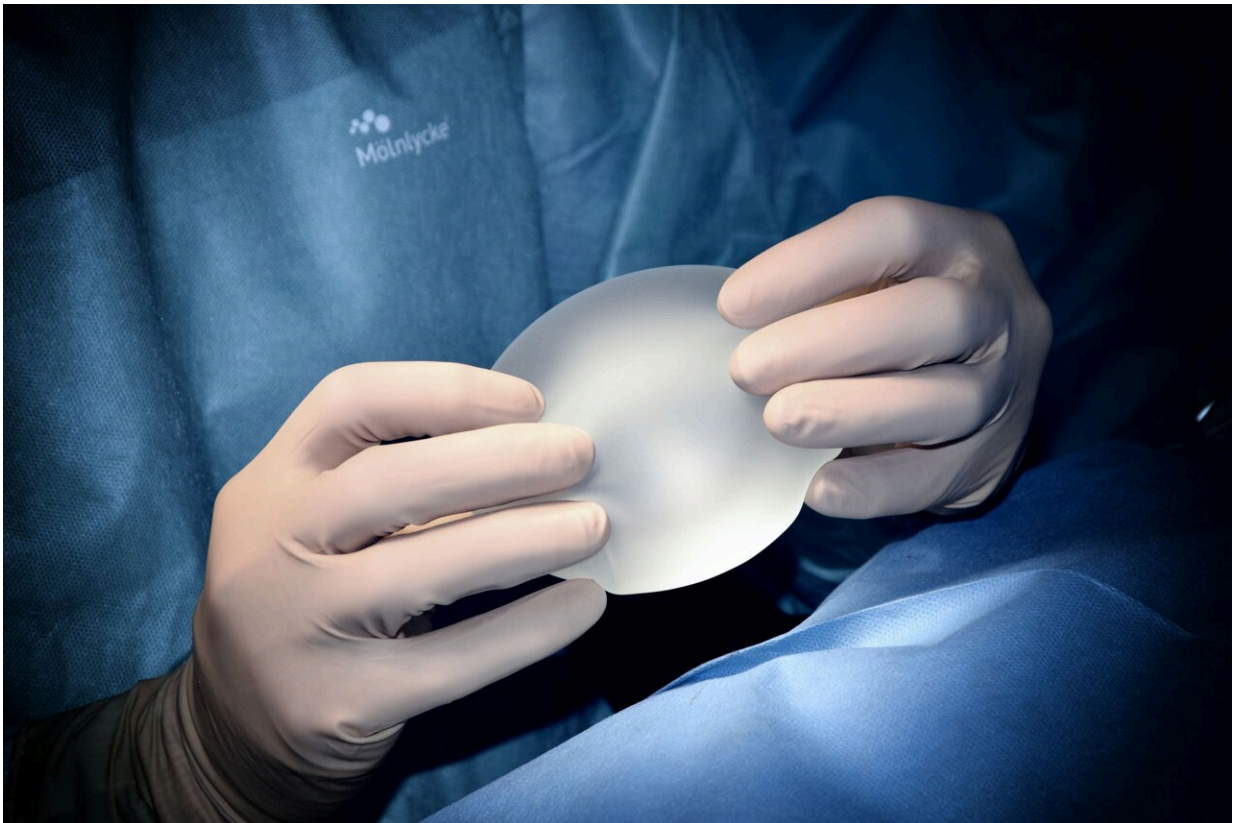


Plastic surgery patients who use marijuana also have elevated nicotine levels

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Marijuana use is common among patients considering plastic surgery and is associated with elevated nicotine levels on laboratory tests, reports a [paper](#) in the September issue of *Plastic and Reconstructive Surgery*.

"We found that patients who report marijuana use also have elevated urine nicotine and cotinine levels—even those who don't smoke or use other nicotine-containing products" comments ASPS Member Surgeon Joseph A. Ricci of Hofstra University School of Medicine, Great Neck, NY. "This raises concerns that unsuspected nicotine exposure might lead to an increased risk of postoperative complications."

The rising prevalence of marijuana use raises questions about potential negative effects in patients undergoing [surgery](#). Marijuana smoke contains carcinogens and irritants similar to those in [tobacco smoke](#), with similarly harmful effects on pulmonary health.

Nicotine causes impaired wound healing, which is a special concern in patients undergoing [plastic surgery](#). The rising popularity of marijuana, combined with newer nicotine delivery products such as vapes, "presents a clinical challenge for [health care providers](#) to identify patients who are exposed to nicotine, as patients themselves may be unaware," the researchers write.

Dr. Ricci and colleagues examined the possible link between marijuana use and nicotine exposure in 135 consecutive patients who consulted a surgeon to discuss cosmetic plastic surgery. Ninety-two percent of patients were women; the average age was 38 years. The patients were largely Hispanic, reflecting the demographics of the area served by the clinic.

High nicotine levels raise 'concern for unrecognized surgical risk'

In a survey, 19% of patients reported active nicotine use while 20% reported marijuana use: marijuana alone in 7% of patients and both nicotine and marijuana by 13%. Levels of nicotine and the nicotine

metabolite cotinine were compared between groups.

The results showed elevated nicotine and cotinine levels among patients who said they used marijuana. The association was apparent not only in those who reported nicotine-containing products, but also in those who denied any type of nicotine use.

Although marijuana users had elevated nicotine, the levels weren't as high as typically found in patients who smoke or use other forms of nicotine. Most patients who reported marijuana and/or nicotine use on the study survey did not mention these substances during their discussion with the plastic surgeon. For this group, nicotine levels were similar to those in active cigarette smokers.

"Patients may be hesitant to disclose their substance use history, possibly due to a lack of awareness about the perioperative risks associated with smoking and marijuana use," the researchers write. In 84 patients who went on to have plastic surgery, nicotine levels were lower compared to patients who did not undergo surgery.

Although the study did not find increased complication rates among marijuana users or those with elevated nicotine levels, the findings raise concern that such risks could occur. The researchers emphasize the need for definitive studies of the effects of marijuana on surgical outcomes. Meanwhile, Dr. Ricci and co-authors conclude, "In real clinical settings, under-reporting of [nicotine](#)-containing product use, including marijuana, remains a concern for unrecognized surgical risk and affects decisions on offering elective procedures."

More information: Yi-Hsueh Lu et al, Patterns of Marijuana Use and Nicotine Exposure in Patients Seeking Elective Aesthetic Procedures, *Plastic & Reconstructive Surgery* (2023). [DOI: 10.1097/PRS.00000000000011145](#)

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