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## Male Breast Growth and Pot

Weed advocates call the link a myth lacking scientific support. But doctors see evidence in their practices.





Images of a patient before (l) and after breast reduction. Surgeon Adrian Lo says that of the 100 men who come to him for surgery each year, more than a third report regular marijuana use.

DAVID SWANSON / Philadelphia Inquirer Staff Photographer

By Melissa Dribben Philadelphia Inquirer Staff Writer

s legalized medical marijuana gains acceptance across the country, a long-smoldering question burns a little hotter.

In the vernacular, stoners ask, "Do doobies make boobies?" Plastic surgeons phrase it more scientifically. "Does marijuana cause gynecomastia?"

Speculation that men who smoke pot are prone to develop abnormal breast tissue or "man boobs" has been around for decades. The first scientific paper examining the clinical impact of the drug's active ingredient, THC, on hormonal systems was published in 1972 in the New England Journal of Medicine.

This was about the same time Brewer & Shipley stoked Spiro Agnew's ire with the hit single "One Toke Over the Line." The drug's ability to stoke controversy has not abated. The 1972 study found that the drug has "widespread effects on multiple hormonal systems, including gonadal, adrenal, prolactin, growth hormone, and thyroid hormone regulation." When the drug throws off the normal balance of hormones, estrogen levels rise and stimulate breast tissue growth.

Subsequent studies have been few and their findings conflicting. As a result, marijuana's advocates call the association a myth, asserting that there is no solid scientific proof.

They have a point, says Adrian Lo, a plastic surgeon at Pennsylvania Hospital who specializes in breast reduction for men. Because marijuana is illegal in most states, he explains, it's hard to conduct research. But this does not make the link a myth.

"What we're left with are doctors, endocrinologists, and surgeons with clinical acumen saying we notice a trend," he says. Of the 100 or

so patients who come to him for breast reduction surgeries each year, more than one-third report regular marijuana use.

"Some men are more susceptible to gynecomastia than others," he says. Smoking pot can lower testosterone levels for 24 hours, he says. After just one joint, patients have reported feeling swelling and puffiness around the nipple, while regular users may have no reaction, at least in their breast tissue.

"We can't predict who it's going to happen to," Lo says.

"I wouldn't say I was smoking seven days a week, but it was close," says a 23-year-old patient who recently underwent breast reduction. Worried about the legal ramifications and his job security as an actuary, he agreed to speak identified only by his middle name, Michael.

He first developed enlarged breasts when he was going through puberty, a few years before he started smoking. His mother took him to the pediatrician, who said the condition was normal and temporary. But Michael was among the small percentage who did not grow out of it.

For years, he would avoid baring his chest. "In games where the choice was shirts vs. skins, you never wanted to be skins," he says.

Once he started having relationships with women, he worried about how they judged his body. At 5-foot-11 and 190 pounds, he was not overweight, and worked out three or four times a week at the gym. "I benched and lifted," he says. "Underneath, I had pecs." But no amount of exercise made his breasts turn to muscle.

He had heard that pot could cause man boobs. "When I was high, they felt a little more noticeable," Michael says. "But I don't know if it was my state of mind at the time." Since he had had them for so long, he did not think quitting would make a difference.



Surgeon Adrian Lo discusses before and after images of a male breast-reduction patient.

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"This is, of course, an inflammatory topic. There is skepticism either way," says Lo. "But in my experience, it's very simple. If you're a guy and you're worried about gynecomastia, you shouldn't smoke pot because there's a link."

"That is the prevailing opinion," says Robert X. Murphy Jr., president of the American Society of Plastic Surgeons, noting that it matches his own clinical experience. With the recent increase in men seeking breast reduction surgery, he says, empirical evidence is mounting.

In 2012, the society reports, 20,723 gynecomastia procedures were performed, a 5 percent increase from the year before. The number of these surgeries had fallen from their peak in the late 1990s, when more insurers were willing to cover the procedure. Patients now pay between \$3,000 and \$8,000 out of pocket for the operation. Since 2006, it has been among the top five cosmetic surgical procedures for men.

Emily Pollard, head of plastic surgery for Lankenau Medical Center, now performs one gynecomastia surgery a month, twice as many as the year before. The increase, she believes, is partly driven by direct marketing by companies that manufacture liposuction equipment.

The largest percentage of gynecomastia cases have no clearly identifiable cause, says Murphy. The rest are caused by a constellation of conditions. It is common for boys like Michael to develop tender and enlarged breasts during puberty, although, as his pediatrician said, most outgrow the condition. Additionally, more than 90 drugs have been linked to gynecomastia, including some antidepressants and antibiotics and ulcer, heart, and HIV medications. Men who are obese are susceptible. So are bodybuilders who use anabolic steroids, men who use Propecia to prevent hair loss, and those who self-administer testoster-

one, which the body breaks down into two compounds, one of which is similar to estrogen. Because people may be exposed to multiple risk factors, it can be difficult to identify which are to blame.

"We can't paint with a broad stroke," says Murphy. But when young men come to him to remove their breasts, and they are neither overweight nor taking any other of the trigger medications, he says, it is reasonable to deduce that pot is the likely cause.

"It is one of those things that you ask about," he says. "Whether people admit it or not is another matter."

Living with gynecomastia can be a psychological burden. "I was scared of relationships," says a patient who gave his middle name, Andrew. "It really was a strain, every day."

A 26-year-old drug and alcohol counselor, he says he rarely took off his shirt at the beach and would layer T-shirts to hide his body. "My friends would tease me. They thought I could make it go away with exercise."

Unable to afford the surgery, Andrew borrowed the money for the \$5,500 procedure. He had his surgery last month. "I'm thrilled with it," he says. "It's such a relief."

The surgery is normally an outpatient procedure that takes about an hour to complete, says Lo. The surgeon cuts around the nipple, removes 90 to 95 percent of the glandular tissue, and contours the chest.

The remaining tissue can still be stimulated to grow, Lo says. "So we obviously advise to avoid the factors that caused it in the first place." Marijuana, he says, is one of them.

"I'm not hating on pot," Lo says. "Everyone who does what I do has seen it, whether you choose to believe it or not."



