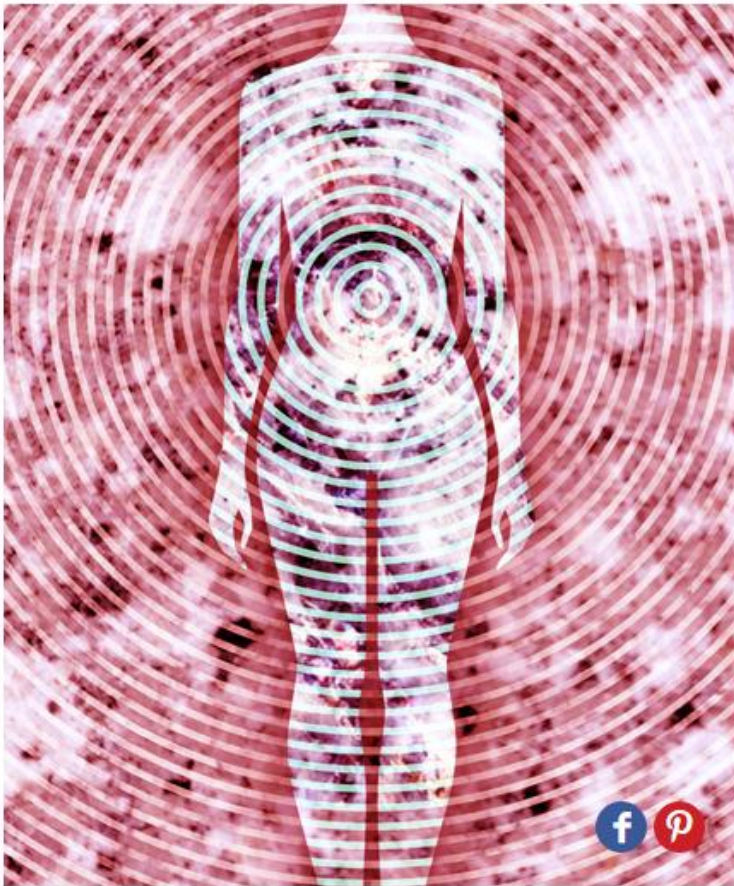




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Can You Really Kill Your Fat Cells?



Let's get this out there right off the bat: We are all about body positivity, and support whatever makes you feel most comfortable and happy in your own skin. It's your body, and it's your choice.

These days, a lot of people are choosing non-surgical fat reduction treatments that use devices to kill fat cells, as more and more of them enter the market. The number of treatments performed in the U.S. has more than doubled since 2012, according to the American Society for Aesthetic Plastic Surgery. So we set out to find out what this growing trend is all about.

While liposuction is still king — **crowned the most popular cosmetic surgical procedure of 2015** — non-surgical procedures are on the rise for different reasons. Many of us have

certain spots we feel particularly self-conscious about, and these devices are made for just that. “Tumescent and laser liposuction are still the only ways to truly change your contour or clothing size,” says **Paul Jarrod Frank, MD**, a dermatologist in New York City. “Lipo can make you look five to 15 pounds thinner; with non-invasive devices, it's more like three to five pounds.”

So, it's important to note that these procedures aren't intended as weight-loss tools. "They're most effective for those who are near their ideal weight and shape, but can pinch about an inch of fat in the targeted areas," says Dr. Frank. All take six to 12 weeks to show results. And while prices vary based on the specific technology and the doctor administering it, count on spending at least two or three grand.

Ahead, our experts answer the questions that may have just popped into your head.

So, how does it work?

People are born with a certain amount of fat cells, and that number fluctuates until you hit puberty — after that point, the number stays constant. Fat cells can expand due to things like a high-fat diet, caloric intake, and hormones, and this expansion causes weight gain. These surgery-free fat-busters use either extreme cold or heat to decrease the number of fat cells. "The fat is then drained through the lymphatic system and eliminated in waste," says dermatologist [Vivian Bucay, MD](#).

What are the options?

In the external-device realm, "the first and most well-studied [tool] to truthfully kill fat cells was **CoolSculpting**," says Beverly Hills dermatologist [Karyn Grossman, MD](#) — a technology inspired by a phenomenon called Popsicle panniculitis, a loss of cheek fat (and subsequent dimpling) seen in kids sucking on ice pops. CoolSculpting scientists "developed a way to control the freeze of fat cells, causing them to crystallize and die," she explains, adding that you can get "a greater kill rate" by following the freeze with some form of manual massage or acoustic-wave therapy to break up the crystallized fat cells. While one treatment yields a 10-to-20% reduction in fat, most people need two or three for wowing results.

The device works best on bulges on the belly, flanks, back, inner and outer thighs, and front and back of the bra area. A new attachment called the Cool Mini targets tighter spots, like under the chin and above the knees. While the procedure itself isn't painful, the preliminary sucking up of fat into the applicator can be uncomfortable, and according to New York dermatologist Heidi Waldorf, MD, some short-lived cramping can occur during the thawing-out phase. Potential side effects include mild bruising, numbness, and occasional nerve pain.

Most other devices destroy fat with heat derived from ultrasonic waves, radiofrequency energy, or lasers. Ultrasound-based technologies like **Liposonix** and **UltraShape** work better on flat, thick areas of fat — mainly bellies, thighs, and sides — rather than on bulges. Liposonix uses high-intensity focused ultrasound to deliver intense heat deep into the fat layer. “It’s one treatment, maybe two, and you start to see an improvement after about a month — with full results at 12 weeks — but it’s painful,” says Dr. Waldorf. “Only a select group of my patients can tolerate it.” It generally creates some bruising, redness, and swelling. Dr. Frank “universally provides prescription pain relievers” to Liposonix patients, and says it takes about an hour to treat the belly and waist (he also uses the device on rear ends and upper arms). Studies show an average decrease in waist size up to 1.8 inches after three months, he notes.

A milder alternative, UltraShape relies on pulsed ultrasound to painlessly kill fat using far less heat. “The temperature elevation is minimal — it’s the quick bursts of ultrasound waves that mechanically stress the fat cells by causing them to move rapidly against each other, inducing damage and, inevitably, death,” explains Dr. Bucay. It demands a series of three treatments, spaced two weeks apart. After which, “we see at least a two-inch reduction in the abdomen,” she adds, and no black-and-blues or tenderness.

Achieving a similar payoff, the **BTL Vanquish ME** hovers above the body emitting multipolar radiofrequency energy to heat and destroy fat in the abdomen, flanks, upper back, and thighs — and has a special “flex applicator” for treating inner and outer thighs at the same time, notes Dr. Bucay. Most people need a series of four to six sessions, done every 10 to 14 days, and suffer no side effects save for mild pinkness after.

The newest fat-blaster to join the rotation is **SculpSure**, the first laser FDA-cleared to zap fat in the abdomen and flanks. Popular off-label treatment zones include the thighs, back, and under the arms, says [Arash Akhavan, MD](#), a dermatologist in New York City. “It’s a 25-minute, no-downtime treatment, during which you feel cycles of cooling followed by heating of the fat,” he explains, adding that most people need only one or two treatments. In Dr. Frank’s estimation, SculpSure is “the fastest and least painful [option], and equally as effective as other devices, delivering up to a 20% reduction in the fat layer.”

With all the options hitting the market, your doctor should ultimately make the call of which one is best for you. (Emphasis on the word doctor — don't go to a spa for this.) At this time, there's really no way of knowing who will respond better to cold versus heat, but derms say future studies may bear that out.

In the meantime, seek a board-certified dermatologist or cosmetic surgeon with multiple fat-reduction devices at her disposal, so she can customize a plan for you — rather than using her one-and-only tool on every patient and trouble spot. Dr. Bucay stocks CoolSculpting, Vanquish, and UltraShape, as “each offers a distinct advantage depending on a patient's needs and medical history,” she says.

This is where that all-important medical degree comes in: “People with pacemakers cannot have radiofrequency treatments, so Vanquish is out; those with abdominal hernias can't have CoolSculpting, because of the vacuum suction,” she says. If someone doesn't want to bruise before a wedding or beach vacation, Dr. Bucay will choose Vanquish or UltraShape over CoolSculpting. And she often uses two devices in tandem, hitting larger areas first with Vanquish, and then fine-tuning with CoolSculpting. In short: More options beget better results.

Can the fat cells come back?

Once fat cells are killed and flushed out of the body, they cannot grow back. But if you gain weight after treatment, your remaining fat cells can increase in size. Say, you treat your thighs with one of these machines. If you later put on a few pounds, “you'll redistribute that fat in a more even pattern over your body as opposed to preferentially gaining it in your thighs,” explains Dr. Grossman.

Most importantly, is it safe?

Beyond the minor aforementioned risks — bruising, discomfort, swelling — there are a few potential pitfalls: “Any heat-based technology can burn the skin if it doesn't penetrate deep enough,” says Dr. Grossman. Nurses usually monitor patients during treatment to avoid this. Freeze-induced burns can occur with CoolSculpting if the device isn't applied correctly. Another rare CoolSculpting side effect is a paradoxical *growth* of fat cells, which, according to Dr. Grossman, took several years worth of case reports to become evident. Can it happen with heat? Those devices haven't been around long enough to generate the same feedback, but we can't rule it out. “[You] have to be aware that when freezing fat, there's a very small risk of hyperplasia of fat — treating an area and getting a growth of fat, which can then be treated with lipo,” says Dr. Waldorf. “We haven't seen it yet with heating, but I'd be surprised if it didn't happen with that, too.”