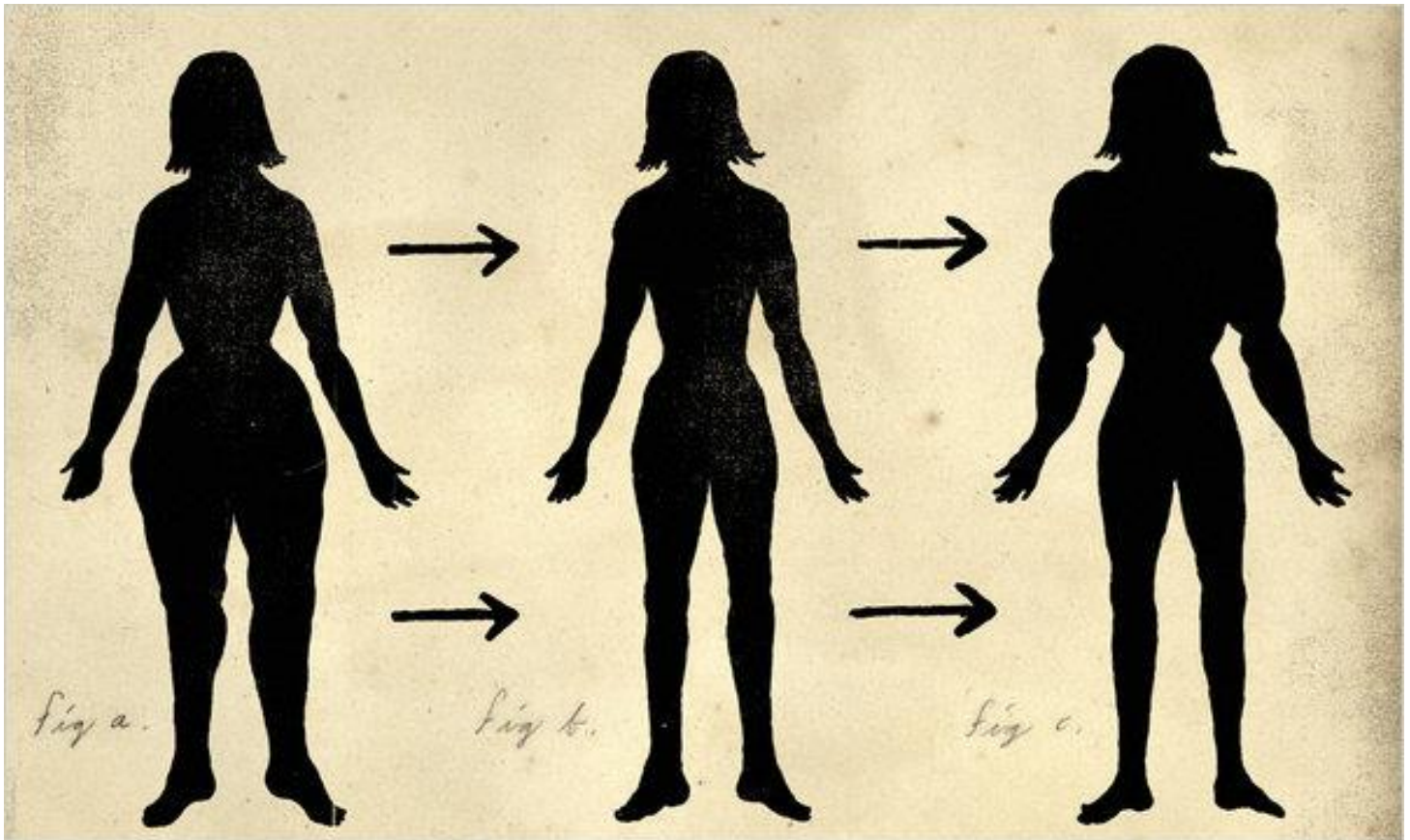


With Liposuction, the Belly Finds What the Thighs Lose

By GINA KOLATA APRIL 30, 2011



Credit Jonathon Rosen

The woman's hips bulged in unsightly saddlebags. Then she had [liposuction](#) and, presto, those saddlebags disappeared.

Photo after photo on [plastic surgery](#) Web sites make liposuction look easy, its results transformative. It has become the most popular plastic surgery, with more than 450,000 operations a year, each costing a few thousand dollars.

But does the fat come back? And if it does, where does it show up?

Until now, no one knew for sure. But [a new study](#), led by Drs. Teri L. Hernandez and Robert H. Eckel of the University of Colorado, has answered those

questions. And what he found is not good news.

In the study, the researchers randomly assigned nonobese women to have liposuction on their protuberant thighs and lower abdomen or to refrain from having the procedure, serving as controls. As compensation, the women who were control subjects were told that when the study was over, after they learned the results, they could get liposuction if they still wanted it. For them, the price would also be reduced from the going rate.

The result, published in the latest issue of *Obesity*, was that fat came back after it was

suctioned out. It took a year, but it all returned. But it did not reappear in the women's thighs. Instead, Dr. Eckel said, "it was redistributed upstairs," mostly in the upper abdomen, but also around the shoulders and triceps of the arms.

Dr. Felmont Eaves III, a plastic surgeon in Charlotte, N.C., and president of the [American Society for Aesthetic Plastic Surgery](#), said the study was "very well done," and the results were surprising. He said he would mention it to his patients in the context of other information on liposuction.

The finding raises questions about plastic surgery.

Liposuction has been around since 1974 and is heavily advertised. Why did it take so long for anyone to do this study?

Maybe it's because such a study is very difficult, said Dr. Samuel Klein, director of the Center for Human Nutrition at the Washington University School of Medicine. It takes a team of researchers, and money. Fat must be measured precisely, with scans.

And surgery, said Jonathan Moreno, an ethicist at the University of Pennsylvania who has studied the field, is not like other areas of medicine.

"A lot of it has to do with the culture of surgery, which is literally hands-on," he said. Surgeons, he added, often feel a deep connection to their patients that makes it difficult for them to agree to clinical trials that involve randomizing patients.

Another problem, Dr. Moreno said, is that different surgeons have different skills and different techniques. Surgery is not like taking a drug, where one pill is just like every other.

So instead of doing rigorous studies, surgeons tend to innovate, inventing their own procedures and publishing

anecdotes about patients, a practice that can be misleading.

But in this case, the outcome did not depend on the surgeon. It depended on the biology of fat. And obesity researchers say they are not surprised that the women's fat came back. The body, they say "defends" its fat. If you lose weight, even by dieting, it comes back. And, the study showed, if you suck out the fat with liposuction, even if it's only a few pounds — it was about 5.8 pounds for subjects in the study — it still comes back.

"It's another chapter in the 'You can't fool Mother Nature' story," said Dr. Rudolph Leibel, an obesity researcher at Columbia University.

Some researchers have their own anecdotes. Dr. George Bray, a professor of medicine at Louisiana State University, once saw a young woman who was so distraught by her protruding abdomen that she had an operation to slice off some of her abdominal fat.

"Her lower abdomen was considerably thinner," Dr. Bray said. "But the areas above it picked up the extra fat."

Then there are the studies with laboratory rodents that had fat surgically removed. The fat

always came back. And, like the women in the new study, the rodents got their fat back in places other than the place where it was removed, Dr. Klein reported. They grow new fat cells to replace the ones that were lost.

The same thing happened to the women who had liposuction. It turns out, Dr. Leibel said, that the body controls the number of its fat cells as carefully as it controls the amount of its fat. Fat cells die and new ones are born throughout life. Scientists have found that fat cells live for only about seven years and that every time a fat cell dies, another is formed to take its place.

But why wouldn't the women grow new fat cells in their thighs? The answer, Dr. Klein said, may be that liposuction violently destroys the fishnet structure under the skin where fat cells live.

Nonetheless, the women in the study who had liposuction were happy, Dr. Eckel said. They had hated their hips and thighs and just wanted that fat gone.

As for the women in the control group, when the study ended and they knew the results, more than half still chose to have liposuction.

Correction: May 8, 2011

An article last Sunday about a study on liposuction that found that fat returned within about a year of being removed misstated the average amount of fat removed from study participants. It was about 5.8 pounds, not a pound.

A version of this article appears in print on May 1, 2011, on page WK5 of the New York edition with the headline: What Thighs Lose, Belly Finds. [Order Reprints](#) | [Today's Paper](#) | [Subscribe](#)