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## Weight-Loss Surgery, No Cutting Required

By [DENISE GRADY](#)

On a recent Wednesday, Karleen Perez lay unconscious on an operating table in Upper Manhattan while her surgeons and two consultants from a medical device company peered at an overhead monitor that displayed images from inside her digestive tract.

The surgeons, Dr. Marc Bessler and Dr. Daniel Davis, had just stapled her stomach to form a thumb-sized tube that would hold only a small amount of food. The operation resembled others done for weight loss, with one huge difference. In Ms. Perez's case, there was no cutting. Instead, the surgeons had passed the stapler down her throat and stapled her stomach from the inside.

Inspecting their handiwork, Dr. Bessler said, "I don't think you'll get much better than that."

The operation, meant to make people feel full after eating very little, is strictly experimental. Only a few patients have tried it in this country, as part of a study paid for by Satiety Inc., which makes the staplers and hopes the [Food and Drug Administration](#) will approve them.

Ms. Perez, a 25-year-old graduate student in social work, was the second patient at NewYork-Presbyterian Hospital/Columbia to enter the study. Satiety employees advised her surgeons throughout the operation.

The procedure is part of a trend to make surgery less painful and invasive, to minimize risks and speed recovery. Many operations that once required big incisions are now performed through small slits, with cameras inserted to let surgeons see what they are doing on video screens. Ms. Perez's doctors took the next step: using a natural opening to avoid cutting through the abdominal wall. Dr. Bessler and other surgeons have used similar techniques to remove the appendix through the mouth, and the gallbladder through the vagina.

In Mexico and Europe over the past two to three years, 98 patients have had the new weight-loss surgery, named Toga (for transoral gastroplasty). On average, those who have passed the one-year mark have lost about 40 percent of their excess weight. Only time will tell whether they will be able to avoid gaining it back.

There are older, well-established operations that produce more weight loss, and in the United States 200,000 people have them each year. Known as bariatric surgery, it is often done through slits.

But even the slits leave scars and slice through abdominal muscles, which causes pain, Dr. Bessler said. The operations can have complications, too, like [hernias](#) and leaks in the digestive tract.

"Most people don't want the risk," he said, adding that only about 2 percent of those who might be helped by bariatric surgery actually have it.

### *A Patient's Progress*

This is the first in a series of articles that will periodically chronicle Karleen Perez's efforts to lose weight.

About 15 million Americans are morbidly obese, meaning their body mass index — a type of weight/height ratio — is at least 40 (overweight begins at 25). Medical guidelines recommend surgery when the index reaches 40, or 35 if there are also complications like diabetes or heart disease.

Ms. Perez is 5-foot-9 and weighs 289 pounds, for a body mass index of 42 — though her height and generous frame help hide the weight. Her family, friends and boyfriend say she looks just fine.

But she has mixed feelings about her appearance. She weighed 175 or 180 pounds in high school and was comfortable with that weight. But she gained 90 pounds in college and could not take it off. She hopes the operation will help her lose 60 pounds, maybe even in time for her graduation this coming spring from Stony Brook University.

"I don't feel like it's a big issue, but of course it is," she said. "If I go out with my sorority sisters or friends to buy clothes, I probably can't buy where they do. I'm the one who comes out with accessories. That's a bummer."

More important, she said, is her health. She becomes winded too easily, and her blood pressure "is not great," she said, adding, "I just want to live healthy and not be borderline anything."

Bariatric operations typically work far better than diet, exercise or drugs, and they often cure diabetes and reduce the risk of dying from heart disease or cancer. But there is also a risk — albeit small, less than 1 percent at experienced centers — of dying from the surgery itself.

The idea behind Toga is to offer something safer and less invasive. Dr. Bessler said he thought it would appeal to many people who feared the other operations.

"It has a lot of promise," he said. "I deal with a lot of new technologies. This, I'm really excited about." Dr. Bessler said that he and Dr. Davis had no financial interest in Satiety but that the company did pay for their work on the study.

Other companies are also developing new devices and minimally invasive operations to cash in on America's booming obesity epidemic, but Satiety is among the first to start testing its products in people.

A surgeon not involved in the Toga study, Dr. Philip Schauer, director of bariatric surgery at the Cleveland Clinic, called the new operation very promising and said that so far it seemed to offer "a drastic reduction in side effects and risk."

Though she wanted surgery, Ms. Perez did not want a gastric bypass, the most common bariatric operation, which shrinks the stomach and rearranges the small intestine. Her aunt had it and lost 150 pounds, but suffered from a hernia, intestinal problems and other serious complications.

So Ms. Perez considered gastric banding, a less extreme and increasingly popular operation that inserts a loop around the top of the stomach and tightens it to form a small pouch.

But Toga, which she discovered on the Internet, seemed less invasive. Also, the price was right: the operation would be free as part of the study. She did not mind if it produced less weight loss than the other methods.

"To me, it's not about being completely skinny," she said. "I'm told I could lose 40 percent of my excess

weight."

If she exercises and diets after the operation, she said, "I'll probably lose, like, 60 pounds, and that's realistic to me."

Temporarily, she kept her plans a secret from most of her friends and impishly told some that she was having her tonsils out. She took down her [Facebook](#) page and put a note in [MySpace](#) saying that there would be some changes made.

The operation is not as simple as it might sound. To begin, Ms. Perez was given general [anesthesia](#) and put on a respirator. Then the surgeons pushed a dilator, a formidable-looking tube about three-quarters of an inch wide, down her throat to stretch her esophagus.

Next came another wide tube, this one about two feet long, containing the stapler. The surgeons inflated her stomach with carbon dioxide to create space in which to work. Dr. Bessler struggled for 5 or 10 minutes to position the stapler properly, and then activated controls that opened it, like a miniature spaceship, inside Ms. Perez's stomach.

A sail and curving wire emerged from the stapler to help push aside the folds of her stomach. Then Dr. Bessler turned on a vacuum pump to draw parts of the front and back walls of the stomach into the device to be stapled together.

Three rows of staples were needed, but the stapler holds only one row, so the whole apparatus had to be withdrawn, rinsed, reloaded, pushed back down Ms. Perez's throat and painstakingly repositioned for each row. The Satiety consultants stood close by to coach, at one point warning Dr. Bessler that if he inflated Ms. Perez's stomach too much, her first row of staples could pop. The surgery took three hours.

"Every operation has its learning curve," Dr. Bessler said. "We saw a doctor in Brussels who took an hour and a half, but he had done 70."

The next morning at the hospital, Ms. Perez was in good spirits despite a horrendous [sore throat](#) from the operation. She said she had awakened during the night wondering what she had done, and had thought, "This is going to be super life-changing."

She would be on a liquid diet for several weeks. A nutritionist had given her a pamphlet that commanded, "Don't Stretch Your Stomach!" warned that eating too much or too fast could cause [vomiting](#), and advised that the best time to lose weight would be in the next 6 to 12 months, because the body would try to fight the surgery by absorbing more nutrients.

She thought she could do it. She would start slowly, by taking longer and longer walks. She hoped to join a gym, start running, eventually finish a marathon. She wanted to look cool for her graduation.

"My friends are going to be shocked," she said. "Through struggle comes success."