

# Study finds gastric band and weight management therapies offer similar benefits

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Weight loss is never easy, but it's important for overweight people with type 2 diabetes seeking to control their blood sugar levels and optimize their health. A small clinical trial among such patients led by Joslin Diabetes Center and Brigham and Women's Hospital researchers now has shown that two approaches—adjustable gastric band surgery and an intensive group-based medical diabetes and weight management program—achieved similar improvements in controlling blood sugar levels after one year.

"We can anticipate long-term health benefits from both of these approaches, but they do require some investment of time and energy by the patient," says trial leader Allison Goldfine, M.D., head of Joslin's Section of Clinical Research and an Associate Professor of Medicine at Harvard Medical School.

Reported in the *Journal of Clinical Endocrinology & Metabolism*, the SLIMM-T2D (Surgery or Lifestyle with Intensive Medical Management in Treatment of Type 2 Diabetes) trial enlisted 45 volunteers who had long-duration [type 2 diabetes](#), struggled to manage their [diabetes](#) and had a body mass index (BMI) of 30 or higher.

The study randomly divided the participants into two groups.

One group received an adjustable gastric band procedure, which inserts a band around the upper stomach whose tightness can be adjusted. "With the band, you put a device around the top portion of the stomach, people

get full more quickly, and that fullness signals them to stop eating," Dr. Goldfine notes. (She adds that some studies suggest that over time, people with the band learn to change their behaviors to eat less even when the band is no longer fully restricted.)

The other group of participants underwent Joslin's Why WAIT (Weight Achievement and Intensive Treatment), a clinically available program built on behavioral interventions that have been proven to be effective.

After one year, the two groups achieved similar lowering of [blood sugar](#) levels—average levels of hemoglobin A1C (a standard measurement of [blood sugar levels](#) over several months) dropped by 1.2 for patients with the gastric band and by 1.0 for patients in the IMWM program. The groups also saw similar-magnitude improvements in their levels of blood sugar when fasting, another standard metric for type 2 diabetes management.

Weight loss was similar between the two arms at three months. At one year, however, the participants given the band achieved greater average loss (30 pounds compared to 19 pounds) and were continuing to lose weight. The Why WAIT group saw greater reductions in blood pressure than the band group, but other measures of cardiovascular health were generally comparable between the two groups.

Participants in both arms of the trial reported that their health had been improved on a number of measures and that they were enjoying better quality of life.

Gastric bands are inserted laparoscopically, via small incisions in the belly, and clamped around the top of the stomach. Gastric bypass procedures, more invasive forms of surgery that route digestion around parts of the stomach, affect digestion metabolism more drastically than bands and typically result in greater [weight loss](#). A previous SLIMM-

T2D study led by Joslin and reported last year in the *Journal of the American Medical Association* compared the use of the most common gastric bypass surgery, called Roux-en-Y, to Why WAIT treatment. In that earlier trial, participants who underwent Roux-en-Y gastric bypass lost significantly more weight and achieved better diabetes control than those in the medical treatment arm of the trial.

In addition to these two Joslin-led trials, several other research institutions have run small studies studying various gastric procedures and medical programs. A consortium called ARMMS-T2D (Alliance of Randomized Trials of Medicine versus Metabolic Surgery in the Treatment of Type 2 Diabetes) aims to follow up on the roughly 300 patients in all these trials.

"It's really important to have a variety of different approaches available to treat a complex medical problem like diabetes, and we need to understand the relative merits of each approach," Dr. Goldfine sums up. "There are people for whom remembering to take their medications is highly problematic, and there are people for whom the idea of surgical risk is unbearable. One size does not fit all."

Provided by Joslin Diabetes Center

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