

Gastric bypass surgery associated with improved health outcomes

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Gastric bypass surgery appears to lead to better long-term results including greater weight loss, resolution of diabetes and improved quality of life compared with sleeve gastrectomy and "lap-band" surgery, according to two reports in the February issue of *Archives of Surgery*.

"Obesity and [type 2 diabetes](#) mellitus are currently two of the most common chronic, debilitating diseases in Western countries," the authors write as background information in one of the articles. The most common surgical procedure for treating diabetes in the United States is the laparoscopic Roux-en-Y gastric bypass, more commonly referred to as [gastric bypass surgery](#). In 2001, the laparoscopic adjustable gastric band, also known as lap-band, was introduced as a less invasive alternative to gastric bypass. Sleeve gastrectomy is another surgical weight-loss procedure, which involves surgical removal of a large portion of the stomach.

To evaluate differing outcomes of bariatric surgeries, Guilherme M. Campos, M.D., now of the University of Wisconsin School of Medicine and Public Health, Madison, formerly of the University of California, San Francisco, and colleagues examined 100 morbidly obese patients (having a body mass index greater than 40) who underwent lap-band surgery. These patients were matched by sex, race, age and initial [body mass index](#) (BMI) with 100 patients who underwent gastric bypass surgery.

All weight loss outcomes were significantly greater for patients who

underwent gastric bypass. Average excess weight loss for this group was 64 percent, compared to 36 percent for lap-band patients. Additionally, 86 patients in the gastric bypass group successfully lost more than 40 percent of their excess weight compared with 29 (31 percent) of lap-band patients.

Each group had 34 patients with type 2 diabetes mellitus. Resolution or improvement of type 2 diabetes was significantly better after gastric bypass (26 patients or 76 percent) compared to lap-band (17 patients or 50 percent). At the one-year follow-up, six of eight gastric bypass patients (75 percent) who were using insulin had discontinued its use, while only one patient of six (17 percent) in the lap-band group had done so.

The overall rate of complications was similar in both groups, with 11 patients (12 percent) in the lap-band group and 14 patients (15 percent) in the gastric bypass group experiencing complications. Early complications (within the first 30 days post-surgery) were higher in the gastric bypass group (11 patients or 11 percent) than the lap-band group (2 patients or 2 percent), however the rate of re-operation was higher in lap-band patients (12 patients or 13 percent) compared to gastric bypass patients (2 patients or 2 percent). No deaths occurred in either group.

"Our study shows that laparoscopic Roux-en-Y gastric bypass, when performed in high-volume centers by expert surgeons, has a similar rate of overall complications and lower rate of re-operations than laparoscopic adjustable gastric band," the authors conclude. "Because it achieves greater weight loss, increased resolution of diabetes, and better improvement in quality of life, we conclude that, in the setting we studied, laparoscopic Roux-en-Y gastric bypass has a better risk-benefit profile than laparoscopic adjustable gastric band."

In a second report, Wei-Jei Lee, M.D., Ph.D., of the Min-Sheng General

Hospital, Taiwan, Republic of China, and colleagues conducted a double-blind randomized controlled trial of 60 moderately obese patients (BMI between 25 and 35) between the ages of 30 and 60, who had poorly controlled type 2 diabetes after conventional treatment. Between September 2007 and June 2008, half of the patients were randomized to undergo gastric bypass with duodenum exclusion (bypassing the first 12 inches of the small intestine) and half were randomized to have a sleeve gastrectomy without duodenum exclusion.

Overall, 42 patients (70 percent) had remission of type 2 diabetes 12 months after surgery. However, this resolution was significantly greater for gastric bypass patients (28 patients or 93 percent) than sleeve gastrectomy patients (14 patients or 47 percent). Both groups also had significant weight loss at the one- and three-month post-surgery follow-up, but gastric bypass patients had better weight loss results at the six- and 12-month follow-ups.

In addition to greater weight loss, patients who underwent gastric-bypass achieved a lower waist circumference and had lower glucose HbA1c and blood lipid levels than patients in the sleeve gastrectomy group. Late complications occurred in two patients (3 percent), one patient in each group, and required hospitalization for treatment, but no major adverse events were observed.

"Although more clinical trials are needed, this study and other previous studies have strongly recommended that laparoscopic gastric bypass as a metabolic surgery should be included in the armament of diabetes mellitus treatments in less obese populations (BMI of 25-35) and in the morbidly obese population (BMI greater than 35)," the authors conclude.

More information: Arch Surg. 2011;146[2]:143-148, 149-155

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