

# Treating Obesity with Gastric Bypass

## Obesity puts your health at risk

Living with excess weight has been shown to put your health at risk.<sup>1</sup> The risk increases sharply as your obesity becomes more severe.<sup>1</sup> Serious health problems may also result when dieting leads to “weight cycling” (the repeated loss and regain of body weight).<sup>2</sup> Obesity dramatically increases the risk of type 2 diabetes<sup>3</sup>, high blood pressure<sup>3</sup>, high levels of triglycerides<sup>1</sup> (a type of blood fat)<sup>3</sup>, heart disease and stroke<sup>3</sup>, arthritis<sup>3</sup>, and obstructive sleep apnea<sup>3</sup>. Higher body weights are also associated with cancer and early death.<sup>3</sup>

## Bariatric surgery is the most effective treatment for obesity

Without the medical intervention that bariatric surgery provides, many patients with severe obesity are not successful in managing their weight and related health conditions. Most nonsurgical weight loss programs are based on a combination of diet, behavior modification, and regular exercise. Published scientific papers report that these methods alone rarely resolve severe obesity because they fail to help people maintain weight loss.<sup>4</sup> In fact, more than 95% of people regain the weight they lose within a few years after treatment.<sup>5</sup> “[Bariatric surgery] is the most effective treatment to date, resulting in sustainable and significant weight loss along with resolution of weight-related health conditions in up to 80% [of people].”<sup>6</sup>

## References

1. American Society for Metabolic and Bariatric Surgery. Obesity in America. [http://www.asbs.org/Newsite07/media/asmb\\_fs\\_obesity.pdf](http://www.asbs.org/Newsite07/media/asmb_fs_obesity.pdf). Accessed November 30, 2009. 2. Weight-control Information Network. National Institute of Diabetes and Digestive and Kidney Diseases. Weight Cycling. Bethesda, MD: National Institutes of Health. 2008. NIH publication 01–3901. 3. Buchwald H. Consensus Conference statement. Bariatric surgery for morbid obesity: Health implications for patients, health professionals, and third-party payers. *Surg Obes Relat Dis.* 2005;(1):371–381. 4. American Society for Metabolic and Bariatric Surgery. Rationale for the surgical treatment of morbid obesity (updated November 23, 2005). Available at: [http://www.asbs.org/Newsite07/patients/resources/asbs\\_rationale.htm](http://www.asbs.org/Newsite07/patients/resources/asbs_rationale.htm). Accessed November 11, 2009. 5. American Society for Metabolic and Bariatric Surgery. Surgery for Morbid Obesity: What Patients Should Know. Toronto: FD Communications, Inc. 2007. 6. ASMBS/ASGE white paper, 2011. 7. [45% to 68% achieved partial or complete remission of diabetes (diabetes resolution based on HbA1c  $\leq$ 7.0).] Schauer PR, Sangeeta KR, Wolski K, et al. Bariatric surgery versus intensive medical therapy in obese patients with diabetes. *N Engl J Med.* 2012 Apr 26;366(17):1567–76. 8. Tice JA, Karliner L, Walsh J, et al. Gastric banding or bypass? A systematic review comparing the two most popular bariatric procedures. *Am J Med.* 2008 Oct;121(10):885–93. 9. Dorman RB, Serrot FJ, Miller CJ et al. Case-Matched Outcomes in Bariatric Surgery Treatment of Type 2 Diabetes in Morbidly Obese Patient. *Ann Surg.* 2012; 255:287–293. 10. Adams TD, Davidson LE, Litwen SE, et al. Health Benefits of Gastric Bypass Surgery After 6 Years. *JAMA* 2012;308(11):1122–1131. 11. Mingrone G, Panunzi S, De Gaetano A, et al. Bariatric Surgery versus Conventional Medical Therapy for Type 2 Diabetes. *N Engl J Med.* 2012;366(17):1577–85. 12. Buchwald H, Avidor Y, Braunwald E, et al. Bariatric surgery. A systematic review and meta-analysis. *JAMA.* 2004;292(14):172–37. 13. O'Brien PE, McPhail T, Chaston TB, et al. Systematic review of medium-term weight loss after bariatric operations. *Obes Surg.* 2006;16(8):1032–1040. 14. Pories WJ, Swanson MS, MacDonald KG, et al. Who would have thought it? An operation proves to be the most effective therapy for adult onset diabetes mellitus. *Ann Surg.* 1995;222:339–350.

## How it works to help you lose weight

The gastric bypass is a bariatric and metabolic procedure that works in two ways: it creates a physical change in your body and a chemical change. The physical change reduces the amount of food you eat at one time and where the calories are absorbed during digestion. The chemical changes affect the signals in your body that control your blood sugar levels, whether you feel hungry or full and how your body processes food.

Gastric bypass has been shown to resolve or improve:

- Type 2 diabetes – 60-84% resolved<sup>7,8,9,10,11,12,†</sup>
- sleep apnea – 76% resolved<sup>8</sup>
- High blood pressure – 66% resolved<sup>7</sup>
- High cholesterol – 94% resolved<sup>12</sup>

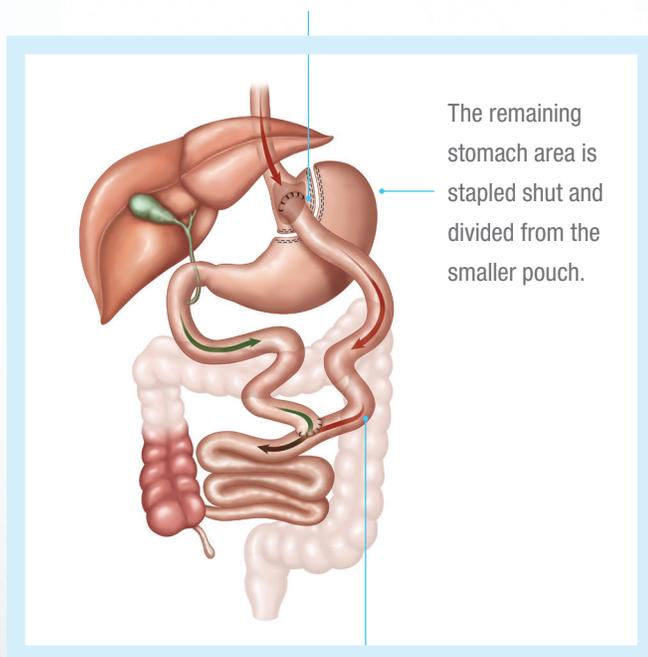
Bariatric and metabolic surgery has helped thousands of people discover life at a healthier weight and resolve many of the health risks associated with severe obesity.

† Diabetes controlled in patients without medication. Control of diabetes is defined as HbA1c  $\leq$ 7.0%.



## The procedure

The surgeon creates a small stomach pouch using staples, then attaches a section of the small intestine directly to the pouch.



The remaining stomach area is stapled shut and divided from the smaller pouch.

This allows food to bypass a portion of the small intestine where calories and nutrients are normally absorbed.

When surgeons do a gastric bypass, they make physical changes by creating a small stomach pouch and bypassing, or going past, a section of small intestine.

- The surgeon creates a stomach pouch that makes the stomach a lot smaller and reduces the amount of food it can hold. The smaller stomach size helps you feel full more quickly, which reduces the amount of calories you eat.
- The stomach pouch is then surgically attached to the middle of the small intestine, skipping the rest of the stomach and the upper portion of the small intestine (duodenum). Going past part of the intestine may also limit the amount of calories that are absorbed and sends messages to your brain so you feel full.

## Advantages

- Limits the amount of food that can be eaten at a meal and reduces the desire to eat.
- Average excess weight loss is generally higher than with gastric banding or sleeve gastrectomy.
- No postoperative adjustments are required.
- An analysis of clinical studies reported an average excess weight loss of 62% in 4204 patients.<sup>13</sup>
- Shown to help resolve type 2 diabetes (60-84%),<sup>7,8,9,10,11,12</sup> high blood pressure (66%),<sup>7</sup> obstructive sleep apnea (76%),<sup>9</sup> and to help improve high cholesterol (94%).<sup>12</sup>
- In a study of 608 gastric bypass patients, 553 maintained contact for 14 years; the study reported that significant weight loss was maintained at 14 years.<sup>14</sup>

## Risks

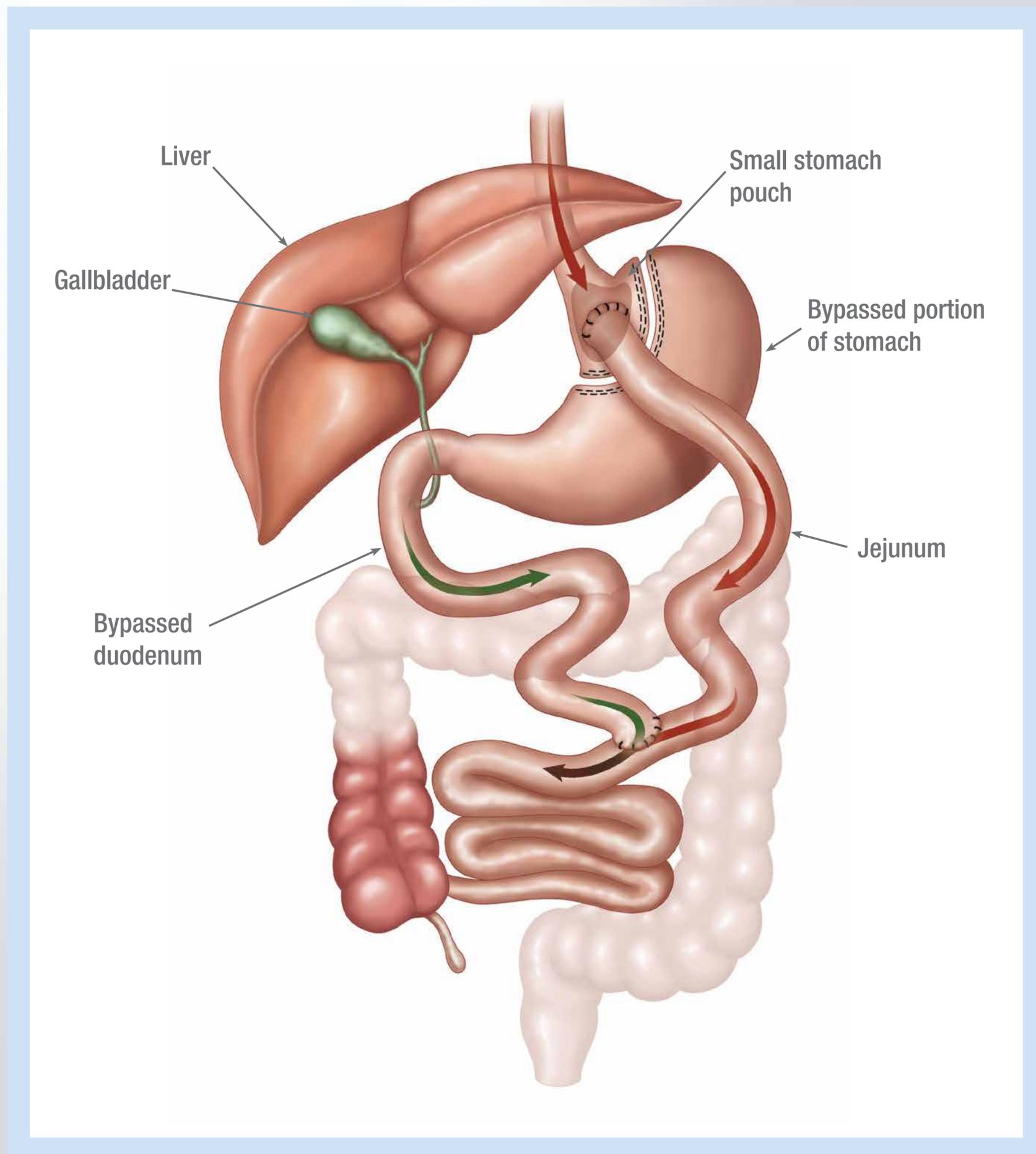
The following are in addition to the general risks of surgery:

- A condition known as dumping syndrome can occur as the result of rapid emptying of stomach contents into the small intestine. This is sometimes triggered when too much sugar or large amounts of food are consumed. While generally not considered to be a serious risk to your health, the results can include nausea, weakness, sweating, faintness and, on occasion, diarrhea after eating.
- Rerouting of bile, pancreatic and other digestive juices beyond the stomach can cause intestinal irritation and ulcers.
- The lower stomach pouch and segments of the small intestine cannot be easily visualized using x-ray or endoscopy if problems such as ulcers, bleeding or malignancy should occur.
- In some patients, bypassing the duodenum has caused:
  - Poor absorption of iron and calcium resulting in the lowering of total body iron and a predisposition to iron deficiency anemia. Women should be aware of the potential for heightened bone calcium loss.
  - Metabolic bone disease, resulting in bone pain, loss of height, humped back and fractures of the ribs and hip bones.
  - Chronic anemia due to vitamin B12 deficiency.

\*The deficiencies mentioned above can be managed through proper diet and vitamin supplements.

**Talk with your surgeon about the possible surgical risks.**

# Gastric Bypass



## Procedure Overview

The surgeon creates a small stomach pouch using staples, then attaches a section of the small intestine directly to the pouch. The remaining stomach area is stapled shut and divided from the smaller pouch, allowing food to bypass a portion of the small intestine where calories and nutrients are normally absorbed.