

Laparoscopic Gastric Bypass Information

(Roux-en-Y Gastric Bypass)

What is gastric bypass surgery?

Gastric bypass surgery, a type of bariatric surgery (weight loss surgery), is a surgical procedure that alters the process of digestion. Bariatric surgery is the only option today that effectively treats morbid obesity in people for whom more conservative measures such as diet, exercise, and medication have failed. There are several types of gastric bypass procedures, but all of them involve bypassing part of the small bowel by greater or lesser degrees. For this reason, procedures of this type are referred to as malabsorptive procedures, because they involve bypassing a portion of the small intestine that absorbs nutrients. Some of these procedures also involve stapling the stomach to create a small pouch that serves as the “new” stomach or surgically removing part of the stomach. Although a gastric bypass procedure is malabsorptive, it may also be restrictive because the size of the stomach is reduced so that the amount of food that can be eaten is “restricted” due to the smaller stomach. While malabsorptive procedures are more effective in causing excess weight to be lost than procedures that are solely restrictive, they also carry more risk for nutritional deficiencies.

Roux-En-Y Gastric Bypass (RGB)

Roux-en-Y gastric bypass, the most commonly performed bariatric procedure, is both malabsorptive and restrictive. This surgery can result in two-thirds of extra weight loss within two years. The procedure involves stapling the stomach to create a small pouch that holds less food and then shaping a portion of the small intestine into a “Y”. The “Y” portion of intestine is then connected to the stomach pouch so that when food is being digested it travels directly into the lower part of the small intestine, bypassing the first part of the small intestine (called the duodenum) and the first part of the second section of the small intestine (called the jejunum). The effect of bypassing these sections of the intestine is to restrict the amount of calories and nutrients that are absorbed into the body. This laparoscopic procedure uses several small incisions and three or more laparoscopes - small thin tubes with video cameras attached - to visualize the inside of the abdomen during the operation. The surgeon performs the surgery while looking at a TV monitor. Persons with a Body Mass Index (BMI) of 60 or more or those who have already had some type of abdominal surgery are usually not considered for this technique. A laparoscopic method allows the physician to make a series of much smaller incisions. Laparoscopic gastric bypass usually reduces the length of hospital stay, the amount of scarring, and results in quicker recovery than an open procedure.

The digestive system:

Digestion is the process by which food and liquid are broken down into smaller parts so that the body can use them to build and nourish cells. Digestion begins in the mouth, where food and liquids are taken in, and is completed in the small intestine. The digestive tract is a series of hollow organs joined in a long, twisting tube from the mouth to the anus. The stomach is where the three mechanical tasks of storing, mixing, and emptying occur. Normally, this is what happens:

- First, the stomach stores the swallowed food and liquid, which requires the muscle of the upper part of the stomach to relax and accept large volumes of swallowed material.
- Second, the lower part of the stomach mixes up the food, liquid, and digestive juices produced by the stomach by muscle action.
- Third, the stomach empties the contents into the small intestine. The food is then digested in the small intestine and dissolved by the juices from the pancreas, liver, and intestine, and the contents of the intestine are mixed and pushed forward to allow further digestion.

Reasons for the procedure:

Bariatric surgery is performed because it is currently the best treatment option for producing lasting weight loss in obese patients for whom nonsurgical methods of weight loss have failed.

Potential candidates for bariatric surgery include:

- Persons with a Body Mass Index (BMI) greater than 40.
- Men who are 100 pounds over their ideal body weight or women who are 80 pounds over their ideal body weight.
- Persons with a BMI between 35 and 40 who have another condition such as obesity-related type 2 diabetes, sleep apnea, or other weight related conditions.

Because the surgery can have serious side effects, the long-term health benefits must be considered and found greater than the risk. Despite the fact that some surgical techniques can be done laparoscopically with reduced risk, all bariatric surgery is considered to be major surgery.

Although not all risks with each procedure are fully known, bariatric surgery does help many people to reduce or eliminate some health-related obesity problems. It may help to:

- Lower blood sugar
- Lower blood pressure
- Reduce or eliminate sleep apnea
- Decrease the workload of the heart
- Lower cholesterol levels

Surgery for weight loss is not a universal remedy, but these procedures can be highly effective in people who are motivated after surgery to follow their physician's guidelines for nutrition and exercise and to take nutritional supplements. There may be other reasons for your physician to recommend a gastric bypass procedure.

Risks of the procedure:

As with any surgical procedure, complications may occur. Some possible complications include, but are not limited to, the following:

- Infection
- Blood clots
- Pneumonia
- Bleeding ulcer
- Development of gallstones

With Roux-en-Y gastric bypass procedures, malabsorptive symptoms may be more serious with an increased risk of anemia and loss of fat-soluble vitamins (vitamins A, D, E, and K). Adequate amounts of iron, calcium, and vitamin B12 may not be absorbed. This can cause metabolic bone disease and osteoporosis.

Stomal stenosis occurs when there is a stricture (tightening) of the opening between the stomach and intestine after a Roux-en-Y procedure. When this occurs, vomiting after eating and sometimes after drinking may occur. Stomal stenosis can be treated easily but should be treated immediately.

“Dumping syndrome” is also more likely to occur with these procedures because the food in the stomach moves to the intestines quickly. Symptoms include nausea, sweating, fainting, weakness, and diarrhea.

There is a risk that additional surgery may be necessary because of complications, including gallstones. One of the most serious complications of gastric bypass is a stomach leak that can cause peritonitis to develop. Peritonitis is an inflammation of the peritoneum, the smooth membrane that lines the cavity of the abdomen.

There may be other risks depending upon your specific medical condition. Be sure to discuss any concerns with your physician prior to the procedure.

Before the procedure:

- Your physician will explain the procedure to you and offer you the opportunity to ask any questions that you might have about the procedure.
- You will be asked to sign a consent form that gives your physician permission to perform the procedure. Read the form carefully and ask questions if something is not clear.
- In addition to a complete medical history, your physician may perform a complete physical examination to ensure you are in good health before undergoing the procedure. You may undergo blood tests or other diagnostic tests.
- You will be asked to fast for eight hours before the procedure, generally after midnight.
- If you are pregnant or suspect that you are pregnant, you should notify your physician.
- Notify your physician if you are sensitive to or are allergic to any medications, latex, iodine, tape, or anesthetic agents (local and general).
- Notify your physician of all medications (prescription and over-the-counter) and herbal supplements that you are taking.
- Notify your physician if you have a history of bleeding disorders or if you are taking any anticoagulant (blood-thinning) medications, aspirin, or other medications that affect blood clotting. It may be necessary for you to stop these medications prior to the procedure.
- You may be asked to begin exercising and alter your diet several weeks before surgery.
- If you are a woman of child-bearing age, you may receive birth control counseling so that you do not become pregnant in your first year after surgery due to the risk to the fetus from rapid weight loss.
- You may receive a sedative prior to the procedure to help you relax.
- The area around the surgical site may be shaved.
- Based upon your medical condition, your physician may request other specific preparation.

During the procedure:

Gastric bypass surgery requires a stay in the hospital. Procedures may vary depending on which type of procedure is performed and your physician’s practices. Gastric bypass surgery will be performed while you are asleep under general anesthesia. Your physician will discuss this with you in advance.

Generally, gastric bypass surgery follows this process:

1. You will be asked to remove clothing and will be given a gown to wear.
2. An intravenous (IV) line will be started in your arm or hand.

3. You will be positioned lying on your back on the operating table.
4. A urinary catheter may be inserted into your bladder.
5. The anesthesiologist will continuously monitor your heart rate, blood pressure, breathing, and blood oxygen level during the surgery.
6. The skin over the surgical site will be cleansed with an antiseptic solution.
7. A series of small incisions in the abdomen will be made. Carbon dioxide gas will be introduced into the abdomen to inflate the abdominal cavity so that the appendix and other structures can easily be visualized with the laparoscope.
8. The physician will insert the laparoscope and other small instruments.
9. For a Roux-en-Y gastric bypass, the physician will staple the stomach across the top to create a new small pouch for a stomach. The rest of the stomach will be separated from the new pouch and closed off by the staples; however, the remaining stomach will continue to produce digestive juices that will be used in digestion. A portion of the small intestine will be shaped like a "Y" and connected to the pouch.
10. A drain may be placed in the incision site to remove fluid.
11. The incision will be closed with stitches or surgical staples.

After the procedure:

After the procedure, you will be taken to the recovery room for observation. Once your blood pressure, pulse, and breathing are stable and you are alert, you will be taken to your hospital room. Malabsorptive stomach surgery usually requires an in-hospital stay of several days. You may receive pain medication as needed, either by a nurse or by administering it yourself through a device connected to your intravenous line. You will be encouraged to move around as tolerated while you are in bed, and then to get out of bed and walk around as your strength improves. This is very important, as it helps to prevent blood clots from forming. At first you will receive fluids through an IV. After a day or two you will be given liquids, such as broth or clear juice, to drink. As you are able to tolerate liquids, you will be given thicker liquids, such as pudding, milk, or cream soup, followed by foods that you do not have to chew, such as hot cereal or pureed foods. Your physician will instruct you about how long to eat pureed foods after surgery. By one month after your procedure, you may be eating solid foods. You will be instructed about taking nutritional supplements to replace the nutrients lost due to the reconstruction of the digestive tract. Before you are discharged from the hospital, arrangements will be made for a follow-up visit with your physician.

At home:

Once you are home, it will be important to keep the surgical area clean and dry. Your physician will give you specific bathing instructions. The stitches or surgical staples will be removed during a follow-up visit. The incision and abdominal muscles may ache, especially with deep breathing, coughing, and exertion. Take a pain reliever for soreness as recommended by your physician. Aspirin or certain other pain medications may increase the chance of bleeding. Be sure to take only recommended medications. You should continue the breathing exercises used in the hospital. You should gradually increase your physical activity as tolerated. It may take several weeks to return to your previous levels of stamina. You may be instructed to avoid lifting heavy items for several months in order to prevent strain on your abdominal muscles and surgical incision.

Weight loss surgery can be emotionally difficult because you will be adjusting to new dietary habits and a body in the process of change. You may feel especially tired during the first month following surgery. Exercise and attending a support group may be helpful at this time.

1. Fever and/or chills
2. Redness, swelling, or bleeding or other drainage from the incision site

3. Increased pain around the incision site
4. Heart rate faster than 120 beats per minute while at rest
5. Trouble breathing
6. Feeling that something is 'not right'

Following gastric bypass surgery, your physician may give you additional or alternate instructions, depending on your particular situation.