# Patient Information

# **The Facts About Bariatric Surgery**

aving excess body fat puts a person at risk for health problems. And the more excess body fat a person has, the greater the health risk.

Percentage of body fat usually is estimated using a formula called body mass index, or BMI, that involves your height and weight. Generally, a BMI of 18.5 to 24.9 is considered normal, a BMI of 25 or more is considered overweight, and a BMI of 30 or more is considered *obese* (oh-**beese**)—or very overweight. Severe obesity, also called *morbid* (**more**-bid) obesity, is defined as a BMI of 40 or more. Morbid obesity has been linked to arthritis, diabetes, high blood pressure, heart disease, stroke, and other potentially serious conditions.

If you are overweight or obese and have been struggling to lose weight, you're not alone. Two thirds of all Americans are overweight or obese. While diet and exercise are the best weight loss methods, some people—especially those with morbid obesity—may not be able to lose enough weight with these methods. In such cases, a doctor may prescribe medication to help with weight loss. Or, if medication has failed or the health risks are particularly high, the doctor may recommend *bariatric* (baar-ee-**ah**-trick) surgery.

### What is bariatric surgery?

The two major types of bariatric surgery restrictive and combined—both alter the digestive process. Normally, your stomach stores the food you have eaten and breaks it down into a liquid form. Then the food passes through your small intestine's three parts—the *duodenum* (doo-uh-**dee**nuhm), the *jejunum* (ji-**joo**-nuhm), and the *ileum* (**ill**-ee-uhm)—which break the food down further and absorb it.

Restrictive surgery gives your stomach a much smaller space in which to store food. In adjustable *gastric* (**gas**-trick) banding, an inflatable band is placed around the upper part of your stomach, dividing the stomach into two pouches that are connected by a narrow opening. With the band in place, you can eat only enough food to fill the upper pouch, although this food eventually will make its way into the lower pouch. A less common type of restrictive surgery is restrictivevertical banded *gastroplasty* (**gas**-truhplas-tee), in which both a band and staples are used to divide the stomach.

Combined surgery not only gives your stomach less storage space but also changes the way in which food passes through your small intestine. In a procedure called *Roux-en-Y* (roo-en-**why**) gastric bypass, which is the most popular bariatric surgery in the United States, the surgeon creates a small stomach pouch, cuts the small intestine, and attaches the jejunum to the stomach pouch. As a result, food bypasses the lower stomach, the duodenum, and part of the jejunum-which hinders your ability to digest the food. In a less common combined procedure, called *biliopancreatic* (bill-ee-oh-pan-kree-at-ick) diversion, a large part of the stomach is removed and the remaining pouch is connected to the ileum—bypassing both the duodenum and the jejunum.

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# How do I know if it's right for me?

Bariatric surgery is a major surgery that is associated with certain risks. Generally, it is reserved for people with morbid obesity—or less severely obese people with a weight-related health condition—who have tried other weight loss methods without success.

If your doctor determines that bariatric surgery might be an option for you, he or she will need to make sure you don't have any health problems that would make surgery too dangerous. Then, your doctor will discuss with you the possible risks and expected benefits of the surgery, as well as lifestyle changes that will be needed after the surgery.

#### What are the risks?

Although the overall chance of death from bariatric surgery is relatively low (less than 1%), certain biliopancreatic diversion procedures have slightly higher death rates (up to 5%). More common complications of bariatric surgery involve problems that develop with the band or staples used to create your stomach pouch. A second operation is sometimes required to fix these problems. Gallstones-small clumps that develop in the gallbladderoften result from weight loss after bariatric surgery. They usually are treated through surgical removal of the gallbladder. Combined surgery can lead to dumping syndrome, in which food moves too quickly through your small intestine, causing nausea, weakness, sweating, faintness, and diarrhea.

### What lifestyle changes does it require?

For your surgery to be successful, you will need to change your eating and exercise habits and take nutritional supplements (such as calcium, iron, vitamin B12, and vitamin D) for the rest of your life. Working with a nutritionist or a psychologist might help you to make these changes.

During the first three months after the surgery, you may progress from eating and drinking nothing for a few days to drinking liquids, eating semi-liquid food, eating soft food, and, finally, eating solid food. Thereafter, you will need to eat smaller portions of food and chew thoroughly to avoid vomiting. If you have had combined surgery, you will need to eat slowly, choose foods that are low in fat and sugar, and avoid drinking liquids for 30 minutes before and after each meal to avoid dumping syndrome.

# How will it affect my health?

Bariatric surgery can improve many obesity-related conditions, including type 2 diabetes, high blood pressure, and high cholesterol. The overall benefits gained, however, depend largely on your postsurgical eating and exercise habits. If you follow your doctor's recommendations, you may be able to lose up to 60% of your excess weight in the two years after your surgery and keep most of it off over the long term.

To learn more about bariatric surgery, visit the web site of the National Institute of Diabetes and Digestive and Kidney Diseases (http://win.niddk.nih.gov /publications/gastric.htm).



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