

# Bariatric Surgery

Millions of individuals in the United States and around the world are overweight or **obese** (severely overweight). When weight increases to an extreme level, it is called **morbid obesity**. Obesity is associated with diabetes, heart disease, high blood pressure, some types of cancer, and other medical problems. **Bariatrics** is the field of medicine that specializes in treating obesity. **Bariatric surgery** is the term for operations to help promote weight loss. Bariatric surgical procedures are only considered for people with severe obesity (about 100 pounds overweight or a body mass index greater than 40) and not for individuals with a mild weight problem. The February 10, 2010, issue of *JAMA* includes an article about **laparoscopic** (surgery performed through tubes) adjustable gastric banding for severely obese adolescents. This Patient Page is based on one previously published in the October 19, 2005, issue of *JAMA*.

## OBSESITY

The **body mass index (BMI)** is a standard way to define overweight, obesity, and morbid obesity. The BMI is calculated based on a person's height and weight—weight in kilograms (2.2 pounds per kilogram) divided by the square of height in meters (39.37 inches per meter). A BMI of 25 or more is considered overweight; 30 or more, obese; and 40 or more, morbidly obese. Bariatric surgery may be offered to patients with severe obesity when medical treatments, including lifestyle changes of healthful eating and regular exercise, have not been effective.

## CONSIDERATIONS FOR BARIATRIC SURGERY

Individuals considering bariatric surgery must discuss risks and possible benefits with their doctor. Bariatric surgery has associated risks and long-term consequences and should be considered only one part of an approach to treating obesity. Most bariatric surgeons think that the operations work best when they help promote lifelong behavioral and dietary changes. Long-term follow-up with doctors experienced in the care of patients having these procedures, as well as lifelong vitamin supplementation, is essential to avoid life-threatening complications.

## FOR MORE INFORMATION

- American Society for Metabolic & Bariatric Surgery [www.asmb.org](http://www.asmb.org)
- Centers for Disease Control and Prevention, BMI Calculator [www.cdc.gov/nccdphp/dnpa/bmi/calc-bmi.htm](http://www.cdc.gov/nccdphp/dnpa/bmi/calc-bmi.htm)

## INFORM YOURSELF

To find this and previous *JAMA* Patient Pages, go to the Patient Page link on *JAMA*'s Web site at [www.jama.com](http://www.jama.com). Many are available in English and Spanish.

Sources: American Society of Bariatric Physicians, American Society for Metabolic & Bariatric Surgery, National Institute of Diabetes and Digestive and Kidney Diseases, American Obesity Organization, Centers for Disease Control and Prevention

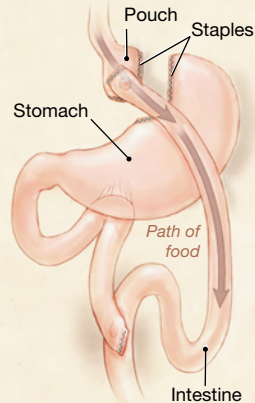
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### Types of Bariatric Operations

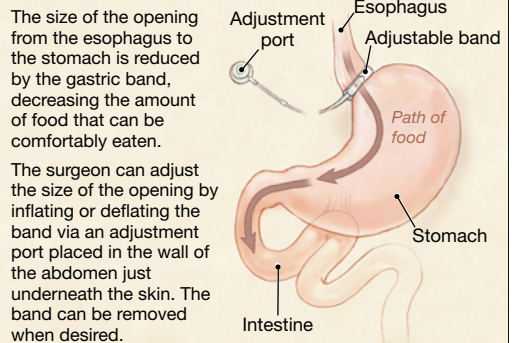
Bariatric surgery can be performed using an open (an 8- to 10-inch incision in the middle of the abdomen) approach or using a laparoscopic (several 1/2-to 2-inch incisions allowing cameras and instruments to enter the abdomen) approach.

#### Gastric Bypass (Roux-en-Y Gastric Bypass)



The size of the stomach is permanently reduced to an egg-sized pouch. The pouch is reattached to a 2-foot-long tube of intestine that bypasses the stomach. The amount of food taken in is restricted by the size of the pouch and the size of the connection of the pouch to the intestine.

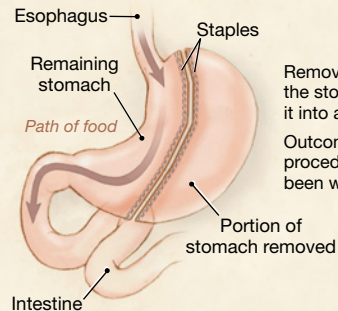
#### Adjustable Gastric Banding



The size of the opening from the esophagus to the stomach is reduced by the gastric band, decreasing the amount of food that can be comfortably eaten.

The surgeon can adjust the size of the opening by inflating or deflating the band via an adjustment port placed in the wall of the abdomen just underneath the skin. The band can be removed when desired.

#### Gastric Sleeve Resection



Removal of most of the stomach, turning it into a narrow tube. Outcomes from this procedure have not been well studied.

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