

# Bariatric Surgery Guide

**Understand your surgical options.  
Choose the right procedure for you.**



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# Overview

**Overview**

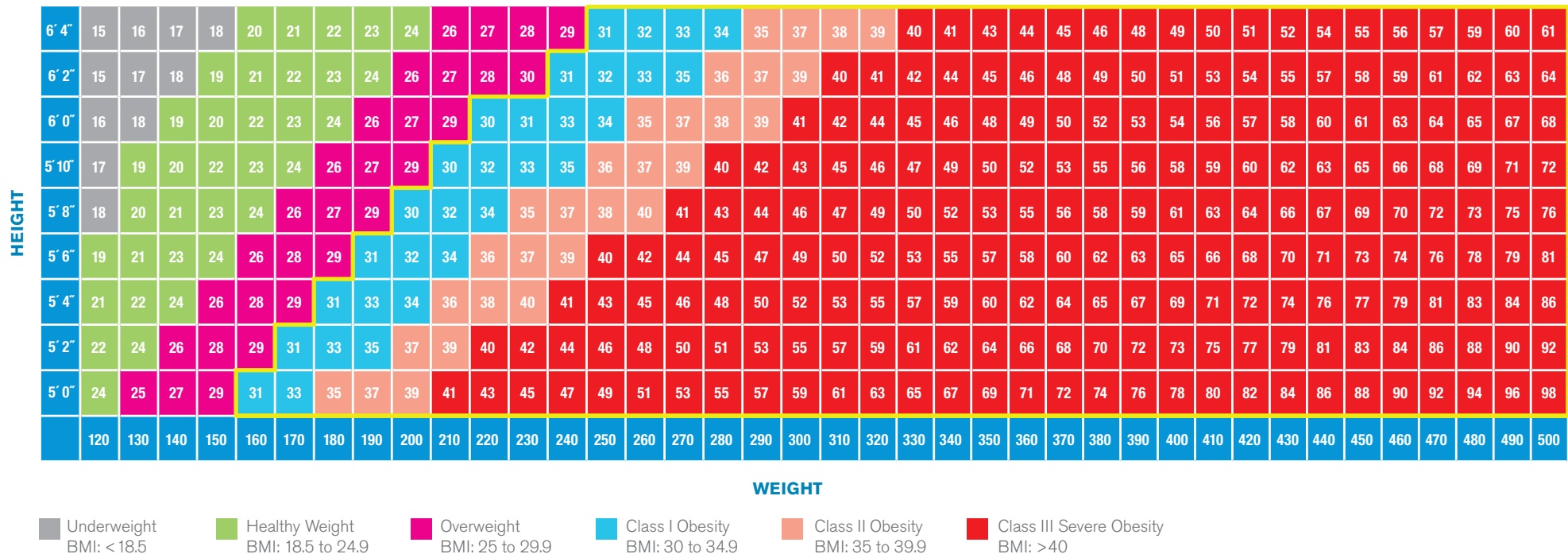
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## Body Mass Index (BMI) guidelines

Your BMI may help you and your doctor determine if bariatric surgery is right for you.



Patients with high BMI ( $\geq 30$ ), as highlighted above, are at risk for many obesity-related health conditions, including<sup>1,2</sup>:

- Type 2 diabetes
- Cancer
- High blood pressure and other heart conditions
- Depression
- Asthma
- Arthritis
- Heartburn
- Sleep disorders (sleep apnea)
- Pregnancy complications/menstrual irregularity
- Involuntary urinating (incontinence)

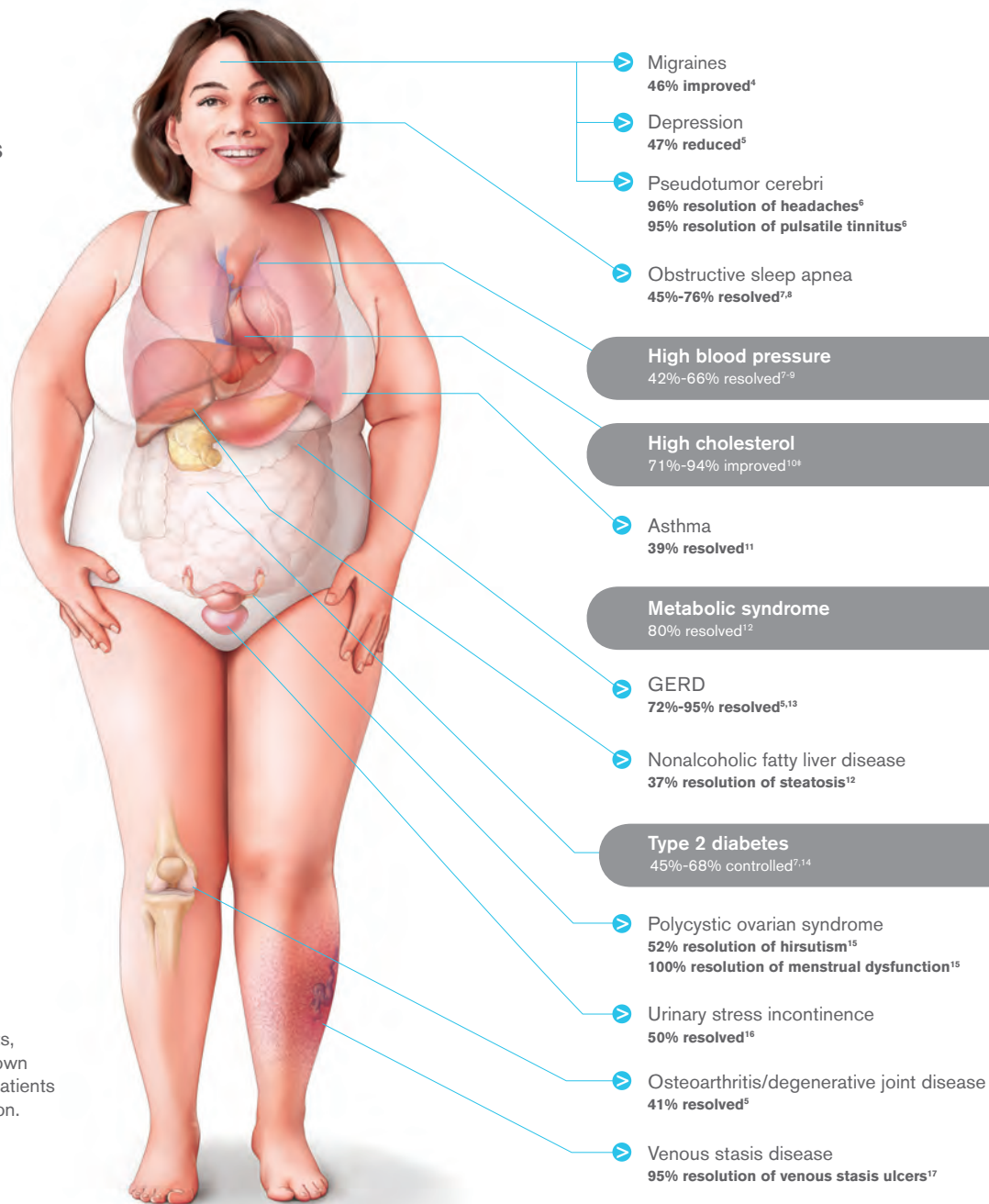
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## Benefits of bariatric surgery

People who have bariatric surgery (also known as weight loss surgery), experience improvements in many areas of their life, including physical functioning, appearance and social and economic opportunities. Bariatric surgery can also improve many obesity-related health conditions.<sup>3†</sup>



\*Outcomes vary depending on type of procedure. Talk to your physician about potential surgical outcomes related to yours.

†Outcomes for obesity-related health conditions based on data for sleeve gastrectomy, gastric bypass, and gastric banding.

\*Figure is for hyperlipidemia. Hyperlipidemia is a general term for high fats in blood, which may include cholesterol and/or triglycerides.

**IMPORTANT SAFETY INFORMATION:** There are risks with any surgery, such as adverse reactions to medication, problems with anesthesia, problems breathing, bleeding, blood clots, inadvertent injury to nearby organs and blood vessels, even death. Bariatric surgery has its own risks, including failure to lose weight, nutritional or vitamin deficiencies, and weight regain. Patients should consult their physicians to determine if this procedure is appropriate for their condition.

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## What is bariatric surgery?

Bariatric surgery makes surgical changes to your stomach and/or digestive system. These changes limit how much food you can eat and how many nutrients you absorb, leading to weight loss. By making these changes, bariatric surgeries may also reset your body's "set point," or weight regulation system, by affecting hormonal signals, resulting in decreased appetite, increased feelings of fullness, increased metabolism, and healthier food preferences.

Depending on the type of surgery you have, you can expect to lose between 55% to 75% of your excess weight by 3 years post-surgery.<sup>19-21</sup>

### There are four main types of bariatric surgeries:

- Vertical sleeve gastrectomy
- Gastric bypass
- Biliopancreatic diversion with duodenal switch (BPD/DS)
- Gastric banding

Most bariatric surgeries are performed using minimally invasive techniques, called laparoscopic surgery. Laparoscopic surgery is done with video cameras and thin instruments inserted through small incisions in the abdomen. Depending on the procedure, surgery can last between 1.5 and 6 hours.<sup>7,22-27</sup> You can expect to stay in the hospital between 1 and 8 days after the surgery.<sup>7,22-27</sup>

### How safe is bariatric surgery?

With more bariatric procedures being performed in recent years, safety has improved significantly. The overall death rate is 0.1%—less than gallbladder (0.7%) and hip replacement (0.93%) surgery. The overall likelihood of major complications is 4%.<sup>3</sup>

Each type of bariatric surgery has unique benefits, as well as potential risks. We will work together to help you understand your options and choose the right procedure for you.



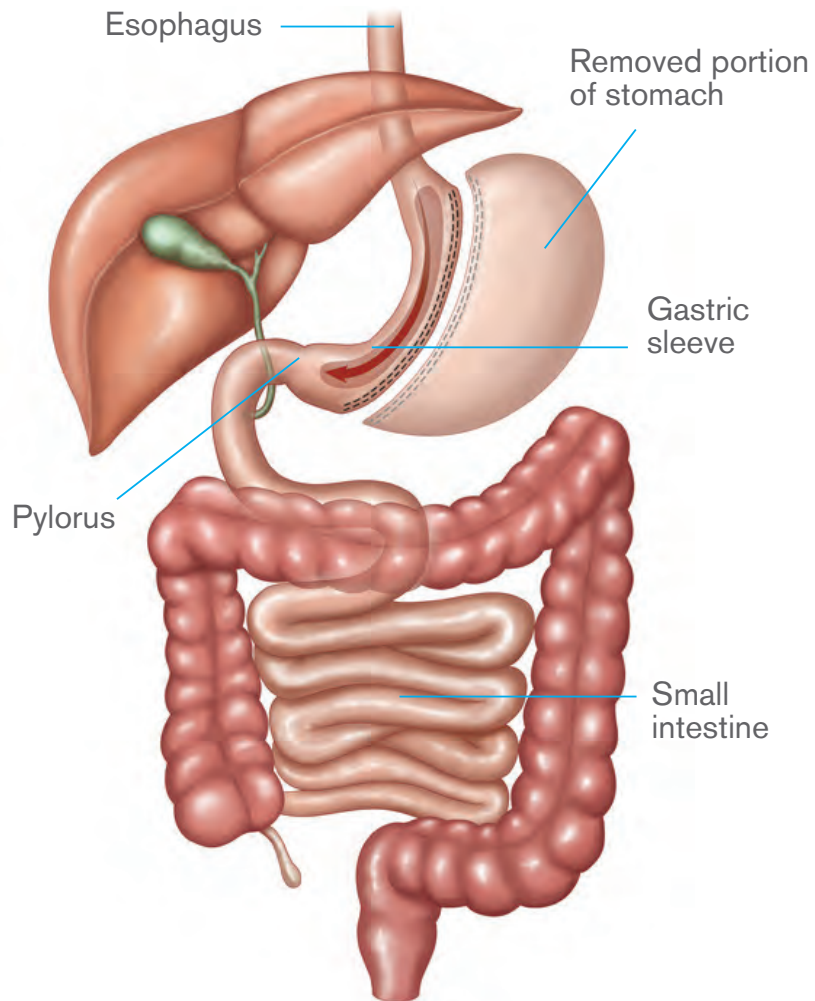
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# Surgery Options

## Vertical Sleeve Gastrectomy



### The procedure

- The surgeon creates a small stomach “sleeve” using a stapling device
- The sleeve is about the size of a banana
- The rest of the stomach is removed

### What does the procedure do?

- Permanently reduces the size of your stomach, which limits how much food you can eat
- Allows food to pass normally through your digestive tract, letting the body fully absorb vitamins and nutrients

### What results can I expect from the surgery?

- You will feel fuller with less food, and stay satisfied longer
- Your body will function at a lower, healthier body-fat set point<sup>18</sup>

Vertical Sleeve  
Gastrectomy

Gastric Bypass

Biliopancreatic Diversion  
with Duodenal Switch

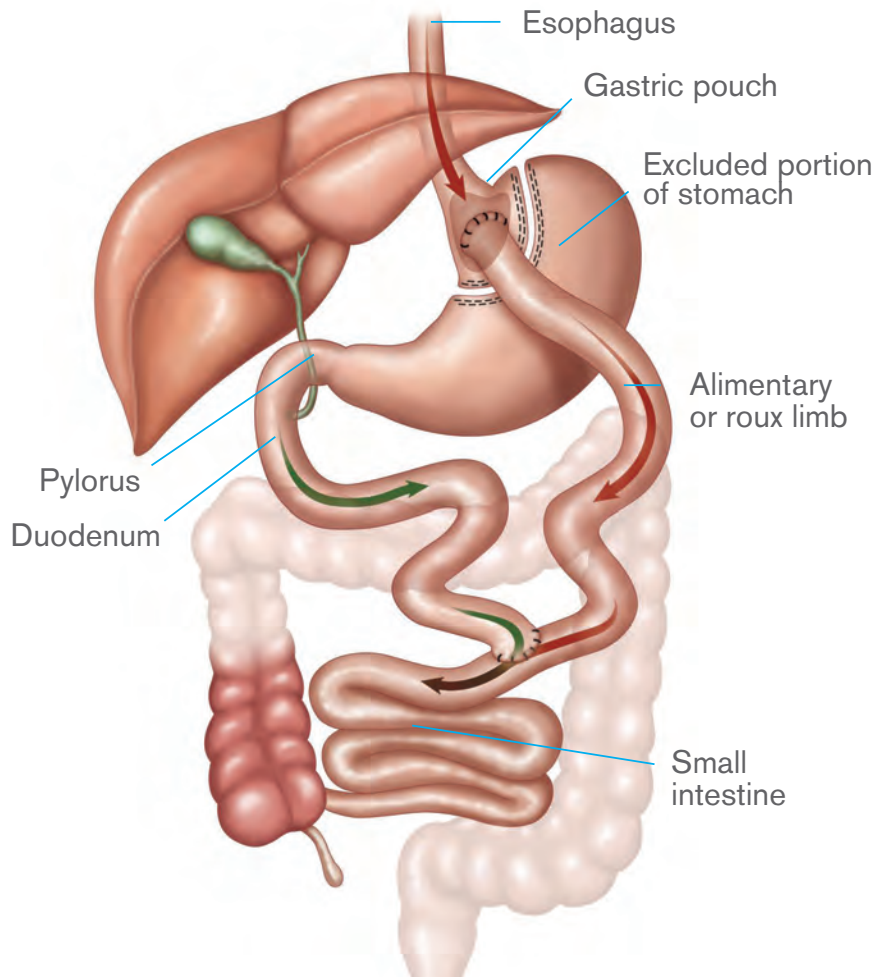
Adjustable Gastric  
Banding

Risk of  
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## Gastric Bypass (also referred to as Roux-en-Y gastric bypass [RYGP] surgery)



### The procedure

- The surgeon creates a small stomach pouch
- The remaining stomach area is sealed and divided from the pouch
- The pouch is surgically attached to the middle of the small intestine, thereby bypassing the rest of the stomach the upper portion of the small intestine (duodenum)

### What does the procedure do?

- Creates a smaller stomach pouch, which limits the amount of food you can eat while making you feel full sooner and stay full longer
- Allows food to bypass part of the intestine, limiting calorie absorption

### What results can I expect from the surgery?

- You may experience discomfort as food moves rapidly through your small intestine. This is called “dumping syndrome” and is a warning sign that you’re consuming too much sugar or food
- You’ll need to take dietary supplements (including daily multivitamin, calcium, and sometimes vitamin B12 and/or iron)

Gastric Bypass

Biliopancreatic Diversion  
with Duodenal Switch

Adjustable Gastric  
Banding

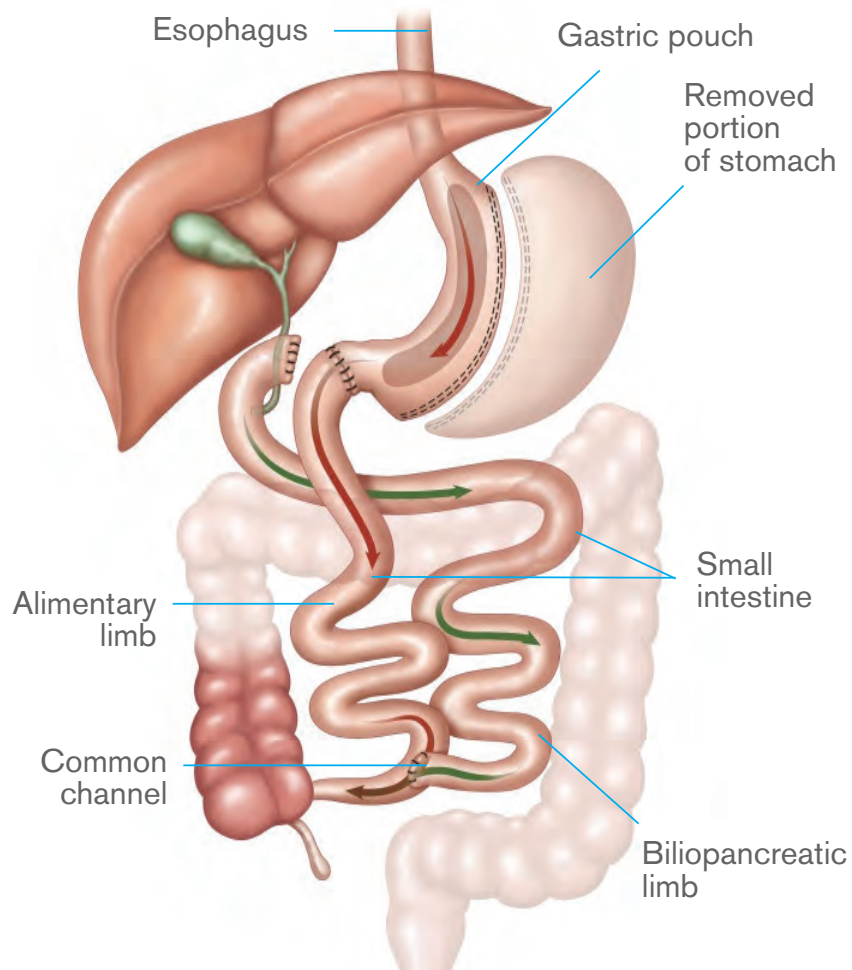
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## Biliopancreatic Diversion with Duodenal Switch (BPD/DS)



### The procedure

- The surgeon removes part of the stomach, leaving a sleeve with the beginning of the duodenum intact
- The small intestine is then divided with one end attached to the stomach pouch to create what is called an “alimentary limb”

### What does the procedure do?

- Permanently alters the normal digestive process
- Allows food to bypass most of the small intestine, limiting calorie absorption

### What results can I expect from the surgery?

- Your body will absorb fewer calories (this is called “malabsorption”)
- Changes to the intestinal structure can result in the increased risk of gallstone formation and the need for removal of the gallstone
- You may experience “dumping syndrome” as food moves rapidly through your small intestine
- You will need to take dietary supplements (daily multivitamin, calcium, and sometimes vitamin B12 and/or iron); lifelong monitoring for protein malnutrition, anemia, and bone disease is recommended

Biliopancreatic Diversion  
with Duodenal Switch

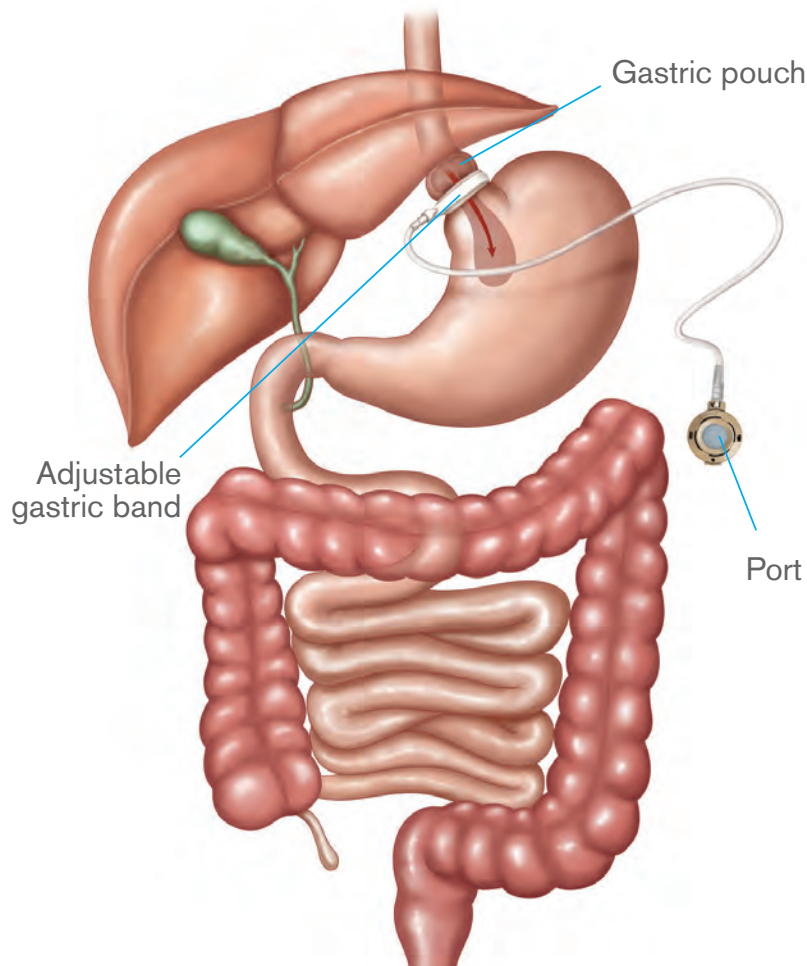
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## Adjustable Gastric Banding



### The procedure

- A silicone band is placed at the top of your stomach dividing it into two parts: a small upper pouch and a lower stomach
- Saline is added to the band to restrict food passage. The saline is delivered through a port that is connected to the band and attached to the abdominal wall
- The surgery can be reversed. No part of the stomach or digestive system is stapled, cut or removed

### What does the procedure do?

- Creates a small, upper stomach pouch with an adjustable band that restricts how much food you can eat and the length of time it takes for food to exit the pouch
- Allows healthcare team to adjust the band tightness and size of stomach pouches, depending on your needs
- Does not significantly alter normal digestion and absorption. Food passes through the digestive tract in the usual order, allowing it to be fully absorbed in the body

### What results can I expect from the surgery?

- You will feel satisfied and full with minimal discomfort (if the band fits and is adequately filled)
- There are risks of band erosion, leakage, migration/slippage, or displacement from the port
- There could also be tubing-related complications, such as kinking or disconnection from the port
- There is also the risk of port-site infection

Adjustable Gastric  
Banding

Risk of  
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## Risks of Abdominal Surgery

### Risks associated with general abdominal surgery

- Bleeding
- Pain
- Shoulder pain
- Pneumonia
- Complications due to anesthesia and medications
- Deep vein thrombosis (blood clot)
- Infection
- Injury to the stomach, esophagus, or surrounding organs
- Pulmonary embolism (blockage of the lung artery by material circulating in the blood)
- Stroke or heart attack
- Death

### Risks associated with bariatric surgery

- Abdominal hernia
- Chest pain
- Collapsed lung
- Indigestion, constipation, or diarrhea
- Dehydration
- Enlarged heart
- Gastrointestinal inflammation or swelling
- Stomach ulcers
- Gallstones, pain from passing a gallstone, inflammation of the gallbladder, or surgery to remove the gallbladder
- Stoma obstruction
- Stretching of the stomach
- Surgical procedure repeated
- Dehiscence (stitched or stapled tissue that becomes separated)
- Leaks from staple lines
- Esophageal dysmotility (problems pushing food from the esophagus to the stomach)
- Gastric fluids leaking through an opening in the lining of the stomach (fistula)

IMPORTANT SAFETY INFORMATION: Bariatric surgery is used in morbidly obese adult patients for significant long-term weight loss. It may not be right for individuals with certain digestive tract conditions. All surgery presents risks. Weight, age and medical history determine your specific risks. Ask your doctor if bariatric surgery is right for you.

Risk of  
Abdominal Surgery

Compare Procedures

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# Compare Procedures



## Compare Procedures

|   | Vertical sleeve<br>gastrectomy | Gastric bypass            | BPD/DS               | Gastric banding     |
|---|--------------------------------|---------------------------|----------------------|---------------------|
| Total % of excess<br>weight lost at 3 years | 66% <sup>19</sup>              | 71% <sup>20</sup>         | 75% <sup>21</sup>    | 55% <sup>20</sup>   |
| Type 2 diabetes<br>controlled               | 45% <sup>14*†</sup>            | 68% <sup>14*†</sup>       | 99% <sup>10*†</sup>  | 59% <sup>7*†</sup>  |
| Resolution of<br>high blood pressure        | 56% <sup>8</sup>               | 66% <sup>7</sup>          | 81% <sup>10</sup>    | 42% <sup>9</sup>    |
| Improvements in<br>high cholesterol         | 77% <sup>31</sup>              | 94% <sup>10</sup>         | 99% <sup>10</sup>    | 71% <sup>10</sup>   |
| Resolution of<br>obstructive sleep apnea    | 54% <sup>8</sup>               | 76% <sup>7</sup>          | 95% <sup>10</sup>    | 45% <sup>7</sup>    |
| Average surgery<br>time (hours)             | 1.5-2 <sup>22,23</sup>         | 2-4.5 <sup>7,24</sup>     | 2-6 <sup>25-27</sup> | 1-2.5 <sup>7</sup>  |
| Average length of<br>hospital stay (days)   | 2-3 <sup>22,23,28</sup>        | 2-8 <sup>7,24,29,30</sup> | 4-5 <sup>25-27</sup> | 1-3 <sup>7,28</sup> |

\*Diabetes controlled in patients without medication. Control of diabetes is defined as HbA1C ≤7%.

†To learn more about 3- and 5-year results see: Schauer, P. R., Bhatt, D. L., Kirwan, J, et al. Bariatric Surgery versus Intensive Medical Therapy for Diabetes—3-Year Outcomes. *N Engl J Med.* 2014; 370(21):2002-2013. Schauer P, Bhatt D, Kirwan J, et al. Bariatric surgery versus intensive medical therapy for diabetes - 5-year outcomes. *N Engl J Med.* 2017; 376: 641-51.

Resolution statistics above reflect observations in the confines of studies; Ethicon Endo-Surgery (EES) has no independent data to suggest permanent resolution.

Next Steps

# Next Steps

## Next Steps

Following today's meeting, review the materials provided, and visit the recommended online resources. Remember, you can always discuss your thoughts, questions, and ideas as you prepare for this life-changing journey.

Visit [TheHealthPartner.com/WLS](https://TheHealthPartner.com/WLS) to learn more about the journey to fight against obesity.

Download HealthPartner from your AppStore to start your journey today.

### Next steps you can take to prepare for bariatric surgery

- Check your insurance coverage for bariatric surgery
- Make an appointment with our nutritionist for diet planning pre- and post-surgery
- Share the learnings and your thoughts about the procedure with your family and friends



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