

# Physician

*Treatment Options*

*Risks and Benefits*

*Experience and Skill*



# Patient

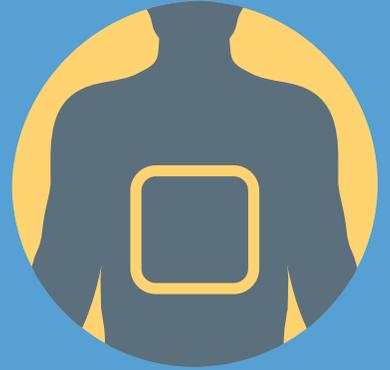
*Personal Preferences*

*Values and Concerns*

*Lifestyle Choices*

## BARIATRIC & METABOLIC SURGERY

## BARIATRIC & METABOLIC SURGERY



### Shared Decision Making

A process of open communication. The physician offers the patient personalized information about treatment options and their associated risks and benefits. The patient then communicates to the physician his or her values, preferences and concerns regarding these variables. The goal is to arrive at a joint decision regarding the best nonemergency surgical procedure.

Both parties benefit. Physicians are better able to manage patient expectations and develop higher patient trust. Patients are better informed, more likely to comply with the treatment plan and more likely to be satisfied with their outcome.

When the Physician and the Patient use this guide together, they will make

**A Mutually Acceptable Decision.**

**THIS GUIDE** will walk the **physician** and the **patient** through a bariatric and metabolic surgery discussion once the decision to have surgery has been made. The guide outlines questions and points for the **physician to discuss with the patient** and provides **information for the patient to review at home.**

Together,  
the physician  
and the patient  
will make a  
mutually  
acceptable  
decision.

## For the **PHYSICIAN**

- Put your patient's mind at ease
- Review the risks of severe obesity
- Reinforce the potential health benefits of weight loss
- Explain how the body's set point affects weight loss
- Discuss your patient's candidacy for surgery
- Emphasize the importance of behavioral and psychological readiness
- Describe bariatric and metabolic surgery
- Provide the potential benefits of surgery
- Address possible complications
- Manage long-term expectations
- Refer your patient to an accredited bariatric surgery program

## For the **PATIENT**

- Feel good about your decision
- Understand your surgery
- Know the potential complications
- Weigh your options
- Comparison of Bariatric Surgical Procedures chart
- Recovering after surgery
- Set realistic goals and expectations
- Find out if you qualify
- Check your insurance coverage

# Table of Contents

- Informational websites
- Ask your surgeon questions
- References

Bariatric surgery is used in morbidly obese adult patients for significant long-term weight loss. Results following bariatric surgery may vary. Bariatric surgery may be appropriate for some patients, and not for others depending on their specific weight, age, and medical history. Patients and doctors should review all available information on non-surgical and surgical options in order to make an informed treatment decision. This brochure was developed by Ethicon, a device manufacturer that markets general surgical instruments used in bariatric surgery.

## Physician and Patient Conversation Checklist

The checklist provided on the following four pages will help guide your discussion with patients about severe obesity, the risks associated with it and the potential health benefits of bariatric and metabolic surgery.

### □ Put your patient's mind at ease

- Help reduce your patient's stress. Recognize that they may have had a long battle. Emphasize that the decision to have surgery requires a lifelong commitment.
- Work through any preconceived notions and discuss the benefits of bariatric and metabolic surgery.
- Provide additional patient education information to further explain all aspects of the surgery.

### □ Review the risks of severe obesity

- Obesity multiplies the risk of developing other medical conditions by 2- to 5-fold.<sup>1</sup>
- An estimated 300,000 deaths per year are caused by obesity-related conditions.<sup>2</sup>

Many patients with severe obesity are not fully aware of their obesity-related conditions or of the relationship between these conditions and their weight.<sup>3</sup>

### □ Reinforce the potential health benefits of weight loss

Bariatric and metabolic surgery has been shown to be a highly effective means of achieving lasting weight loss in the majority of patients, resulting in significant reduction or resolution of:<sup>4-13</sup>

- |  |                                    |
|--|------------------------------------|
| ▶ Type 2 Diabetes (T2D)                  | ▶ Obstructive sleep apnea          |
| ▶ Insulin resistance                     | ▶ Female Sexual Dysfunction (FSD)  |
| ▶ Metabolic syndrome                     | ▶ Menstrual irregularity           |
| ▶ Hypertension                           | ▶ Polycystic Ovary Syndrome (PCOS) |
| ▶ Dyslipidemia                           | ▶ Obesity-related infertility      |
| ▶ Gastroesophageal Reflux Disease (GERD) | ▶ Hyperlipidemia                   |
| ▶ Asthma                                 |                                    |
| ▶ Arthritis/joint pain                   |                                    |
| ▶ Depression                             |                                    |

The most dramatic outcomes are seen in those who lose the most weight and maintain the loss.<sup>4</sup>

### □ Explain how the body's set-point affects weight loss

Recent research has shown that obesity isn't just an excess of adipose tissue or a lack of willpower. Obesity is a complex, multifactorial, chronic disorder involving genetic, environmental (social and cultural), behavioral, psychological, physiological and metabolic components.<sup>14</sup>

Once a person develops obesity, the body has adapted to identify this higher weight as normal, establishing and then attempting to maintain a metabolic "set-point." Reduced-calorie diets and their subsequent weight loss have been shown to trigger a defensive "starvation reaction" — a cascade of hormones (such as ghrelin) that encourages the body to regain the weight.<sup>15</sup>

For patients with obesity, the result can be a prolonged battle with their own bodily regulatory mechanisms — a vicious cycle in need of intervention.

This metabolic dysregulation cycle starts when the patient goes on a reduced-calorie diet, which forces weight loss, then their physiology reacts to the deviation from their metabolic set-point and their obesogenic hormone expressions are activated, which increases their appetite and causes weight regain.

Recent preclinical research indicates that bariatric and metabolic surgery may alter the body's hormonal mechanisms and its ability to manage nutrients. This would mean that the vicious cycle is broken, hormonal triggers are reset and patients may be able to achieve weight loss without fighting their own hormonal regulatory mechanisms.<sup>16-19</sup>

Metabolic and bariatric surgery alters the metabolic set-point, which allows sustained weight loss by deactivating the obesogenic hormone expressions, which reduce appetite, giving the patient weight loss and improving obesity-related conditions without the fight.<sup>16-19</sup>

## □ Discuss your patient's candidacy for surgery

There are insurance requirements for surgery which may vary by health plan. Your patient should check with his or her insurance provider to obtain all requirements specific to his or her coverage. The bariatric program will work with your patient to help meet these requirements; however, it is important for the patient to understand these requirements ahead of time.

- Standard requirements include:
  - ▶ 18 years or older
  - ▶ BMI of 40 or greater
  - ▶ BMI of 35 or greater plus at least one serious obesity-related disease<sup>13</sup>
- There are emerging data suggesting that bariatric and metabolic surgery may also be considered as a treatment option for those with mild to moderate obesity and type 2 diabetes.<sup>13,20</sup>
- Most insurance plans require additional documentation that confirms:
  - ▶ Other methods of weight loss have been unsuccessful
  - ▶ Performance of daily activities is seriously impaired
  - ▶ Psychological evaluation demonstrating that the patient is able to adhere to post-surgical behavior management requirements
  - ▶ Patient demonstrates compliance with a 3- to 6-month presurgical weight reduction program
  - ▶ Patient is free of any substance abuse problems, including smoking
- Female candidates who are in their childbearing years — about 80 percent of adults with severe obesity in the U.S. — should be willing to wait at least 12 to 18 months after surgery before becoming pregnant.<sup>13</sup>

## □ Emphasize the importance of behavioral and psychological readiness

- Bariatric and metabolic surgery is an adjunct, not an alternative, to lifestyle changes.
  - ▶ Entails a lifetime commitment to following dietary restrictions, adhering to an exercise program, taking dietary supplements and complying with follow-up recommendations
  - ▶ There may be unpleasant side effects over a period of several years
- Determine whether your patient:
  - ▶ Is well-informed and highly motivated
  - ▶ Has a supportive family or social environment
  - ▶ Does not smoke or drink alcohol
  - ▶ Does not have untreated severe depression or other mental disease



*Bariatric surgery has been shown to be a highly effective means of achieving lasting weight loss in the majority of patients, resulting in significant reduction or resolution of obesity-related diseases.<sup>4-13</sup>*

## □ Describe bariatric and metabolic surgery

- Bariatric and metabolic surgery as a treatment for severe obesity is an accepted option for patients with severe obesity who do not respond to nonsurgical treatment.<sup>21,22</sup> Bariatric and metabolic surgery is comprised mainly of 4 types of procedures:
  - ▶ Gastric bypass
  - ▶ Sleeve gastrectomy
  - ▶ Gastric banding
  - ▶ Biliopancreatic diversion (BPD) — occurrence less than 1%
- Discuss the option of minimally invasive (laparoscopic) surgery.
  - ▶ Most bariatric procedures are now performed laparoscopically, with comparable efficacy to open procedures<sup>23</sup>
  - ▶ Advantages include fewer wound complications, less postoperative pain, a shorter hospital stay, decreased inpatient complication rate and quicker postoperative recovery<sup>13,24</sup>

## □ Provide the potential benefits of surgery

- Communicate the weight loss benefits: Potential excess weight loss at 3 years ranges from 41% to 66% depending on procedure chosen (refer to the Comparison of Bariatric Surgical Procedures chart in the Patient's section).
- Communicate the metabolic benefits of the surgery, especially for patients who have obesity-related diseases.

### Benefits of surgery specific to diabetes — bariatric and metabolic surgery may:

**Resolve or improve diabetes** (78.1% resolved, 86.6% improved or resolved) and other obesity-related diseases<sup>13</sup>

**Reduce medication** use for diabetes (down 75% after 12 months) and other obesity-related diseases<sup>25</sup>

Offer a more **cost-effective option** for patients with a BMI  $\geq 35$  than standard therapy for diabetes — with laparoscopic surgery costs fully recovered after 26 months<sup>26</sup>

- Communicate the latest surgery safety information. Bariatric and metabolic surgery can:
  - ▶ Offer a safety profile that has improved significantly in recent years, with increased safety associated with increased procedure volume<sup>24,27</sup>
  - ▶ Result in morbidity and mortality rates that are similar to well-established procedures such as gallbladder surgery and hysterectomy<sup>28,29</sup>
- To familiarize your patient with the surgery options available, consider introducing them to the Bariatric Surgery Comparison Tool at [www.realize.com/surgerycomparisontool](http://www.realize.com/surgerycomparisontool). Utilizing your patient's individual health inputs, the tool provides an overview of the potential weight loss and impact on obesity-related disease for patients similar to them who have had gastric bypass, sleeve gastrectomy and gastric banding procedures.

## □ Address possible complications

- Communicate the risks inherent in any surgery and the risks unique to abdominal surgery, bariatric and metabolic surgery and each procedure. Scientific literature has identified the following possible complications associated with bariatric surgery:
- 7.3% of patients overall had one or more perioperative complications, predominantly non-life-threatening, such as wound problems<sup>27</sup>
  - ▶ The rates of serious complications (potentially life-threatening, permanently disabling or fatal) were highest in gastric bypass procedures (3.1%) and lowest in adjustable gastric band procedures (0.78%)<sup>27</sup>
  - ▶ Complication rates are lowest in high-volume centers with surgeons experienced in bariatric surgery<sup>22</sup>
- Outline possible postoperative complications such as infections, seromas, dehiscence and hernias.
  - ▶ Laparoscopic techniques have reduced these risks substantially<sup>30</sup>
  - ▶ Problems specific to gastric banding procedures can include band intolerance, infection or migration and tubing-related complications, such as port discomfort or disconnection, tube kinking or tube or port leakage<sup>4</sup>
- Place these risks into perspective for your patient based on his or her health status.

## □ Manage long-term expectations

Talk to your patient about the recovery process, including diet and activity.

- Immediate postoperative care is provided by the surgeon, preferably in conjunction with a multidisciplinary team.
- Long-term care and follow-up are provided by the primary care physician and the bariatric surgeon. The patient should see his or her PCP every three months for the first year and at least annually thereafter.<sup>30</sup> Discuss the timing of the follow-up with your patient and his/her surgeon.
  - ▶ Long-term complications may include nutritional deficiencies, bone loss, gallstones, GERD, incisional hernias, staple line failure, stricture, ulcers and excess skin folds.<sup>30</sup> Some complications may require additional surgical procedures.
- Most patients achieve an average excess body weight loss of 61% within 2 to 3 years of surgery, along with mitigation or resolution of related health problems such as metabolic syndrome, hyperlipidemia, type 2 diabetes and hypertension.<sup>13</sup>
- Quality of life scores for self-esteem, physical activity, social life, work conditions and sexual activity improve substantially and are strongly correlated with the amount of weight lost.<sup>4</sup>
- Success after surgery depends largely upon a patient's personal diligence in following dietary recommendations and complying with follow-up care.<sup>30</sup>

## □ Refer your patient to an accredited bariatric surgery program

- Explain to your patient the next steps with a referral.
- Instruct your patient to check with his or her current health insurance plan to determine specific requirements prior to having surgery.
- Refer your patient to an informational Bariatric & Metabolic Surgery Seminar conducted by a qualified surgeon in your area.
- In order to properly refer your patient, know which surgeons in your market are part of an accredited program or have them visit [www.mbsqip.org](http://www.mbsqip.org).



*Success after surgery depends largely upon a patient's personal diligence in following dietary recommendations and complying with follow-up care.<sup>30</sup>*

***Talk to your patient about options, concerns and expectations. An informed patient is a better patient.***

## Feel good about your decision

If you've been trying to lose and maintain weight but you haven't had any luck, you are likely fighting against the normal workings of your body. A complex system of signals in your body regulates your body weight and fat levels, and these signals control your appetite, digestion, energy balance and metabolism to keep your body weight and fat at a steady level, or "set-point." As you gain weight, your set-point is increased and your body works to defend the higher set-point. Your body doesn't realize it's overweight and it continues to store higher amounts of fat than necessary. When your body weight and fat levels fall below your set-point, your body activates defense mechanisms to maintain body weight and fat in order to prevent starvation, even in people with obesity.<sup>31</sup>

In order for a person with obesity to achieve significant long-term weight loss, the body's weight regulation system must be reset so that the body will stop storing excess fat. By altering the complex relationship your body has with food and its metabolism, bariatric surgery helps reset your body's ability to effectively manage weight. New research indicates that some types of bariatric surgery (gastric bypass, sleeve gastrectomy and biliopancreatic diversion) have metabolic impacts that enable a new lower body fat level. By altering the anatomy of the stomach and/or intestine, these surgeries affect hormonal signals, resulting in decreased appetite, increased feelings of fullness, increased metabolism and healthier food preferences.<sup>31</sup>

Without the medical intervention that bariatric surgery provides, many patients with severe obesity are not successful in managing their weight and related health conditions.

If you are considering bariatric surgery, you have most likely tried many other weight loss methods without success. You may already have begun the process of learning as much as you can about it, both from other patients and from the many patient education materials available — but is it right for you?

The best way to reach an informed decision is to engage in an open and frank discussion with your doctor in which you can express your concerns, explore all your options and have your questions answered. You should feel confident that you understand everything fully and that together, you and your doctor are making the decision that is best for you.

## Understand your surgery

Bariatric surgery is an operation that creates a smaller stomach, which will reduce the amount of food you can take in and/or reduce the absorption of calories. Surgery can often be performed using minimally invasive (laparoscopic) techniques, which may decrease surgery-related discomfort, reduce time and cost with the hospital stay, and allow you to return earlier to a full, productive lifestyle vs. an open procedure.<sup>4</sup>

No single procedure is right for everyone. Discuss the surgical options outlined in the Comparison of Bariatric Procedures chart (found on the following two pages) during your surgeon consultation so you can come to an informed agreement about which is the best choice for you.

The Comparison of Bariatric Procedures chart provides an overview of the differences between surgical weight loss options. Only you and your surgeon can evaluate the benefits and complications of weight loss surgery and choose the most appropriate procedure for you.

## Know the potential complications

As with any surgical procedure, bariatric and metabolic surgery, whether performed as an open procedure or a minimally invasive procedure, may present risks such as adverse reactions to medication, problems with anesthesia, excessive bleeding, breathing problems, blood clots, infection or inadvertent injury to nearby organs. The risk for serious complications depends on the type of surgery, your medical condition and your age, as well as the surgeon's and anesthesiologist's experience.

Bariatric and metabolic procedures have their own risks, which are outlined in the comparison chart on the following pages.

## Weigh your options

In addition to weight loss, bariatric and metabolic procedures have also been shown to potentially improve several medical conditions (see chart below). Your doctor will help you place the surgical risks in perspective based on your own health and medical status and weigh them against what you stand to gain:

- ▶ Increase life expectancy by 89%<sup>32</sup>
- ▶ Reduce risk of premature death by 23%<sup>33</sup>
- ▶ Reduce risk of death from diabetes by 92%<sup>34</sup>
- ▶ Reduce risk of death from cancer by 60%<sup>34</sup>
- ▶ Reduce risk of death from coronary artery disease by 56%<sup>34</sup>

To understand realistic weight loss and obesity-related disease resolutions/improvements for patients similar to you, go to [www.realize.com/surgerycomparisonstool](http://www.realize.com/surgerycomparisonstool).

### Health Benefits Shown in Clinical Trials\*

	Gastric Banding	Sleeve Gastrectomy	Gastric Bypass	BPD/DS (Biliopancreatic Diversion with or without Duodenal Switch)
<b>Type 2 diabetes</b>	59% resolved <sup>1</sup>	45% resolved <sup>4*</sup>	68% resolved <sup>4*</sup>	98.9% resolved <sup>3</sup>
<b>High blood pressure</b>	42% resolved <sup>2</sup>	50% resolved <sup>5</sup>	66% resolved <sup>8</sup>	83.4% resolved <sup>3</sup>
<b>High cholesterol</b>	71% improved <sup>3**</sup>	77% improved <sup>6**</sup>	94% improved <sup>3**</sup>	99.1% improved <sup>3</sup>
<b>Obstructive sleep apnea</b>	45% resolved <sup>1</sup>	60% resolved <sup>5</sup>	76% resolved <sup>1</sup>	91.9% resolved <sup>3</sup>
<b>Average surgery time</b>	1 to 2.5 hours <sup>1</sup>	1.5 to 3.5 hours <sup>7</sup>	2 to 3.7 hours <sup>1</sup>	2 to 6 hours <sup>9</sup>
<b>Length of hospital stay</b>	1 to 3 days <sup>1</sup>	2 to 12 days <sup>7</sup>	2 to 8 days <sup>1</sup>	4 to 5 days <sup>9</sup>

\*Discuss the risks and benefits of each procedure with your physician.

# Comparison of Bariatric Surgical Procedures

	Procedure description	How it works to help you lose weight	How it affects digestion	Total percent excess body weight lost (at 3 years)
<p><b>Gastric Banding</b></p> 	<p>The laparoscopic adjustable gastric band wraps around the upper part of the stomach, dividing the stomach into a small upper pouch that holds about ½ cup of food, and a larger lower stomach. The degree of band tightness affects how much food you can eat and the length of time it takes for food to leave the stomach pouch.</p>	<p>By creating a smaller stomach pouch, the laparoscopic adjustable gastric band limits the amount of food that can be eaten at one time, so you feel full sooner and stay full longer. As you eat less food, your body will stop storing excess calories and start using its fat supply for energy.</p>	<p>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.</p>	<p>16%-66% with average of 41%<sup>10</sup></p>
<p><b>Sleeve Gastrectomy</b></p> 	<p>During the sleeve gastrectomy procedure, a thin vertical sleeve of stomach is created using a stapling device. The sleeve is about the size of a banana. The rest of the stomach is removed.</p>	<p>By creating a smaller stomach pouch, a sleeve gastrectomy limits the amount of food that can be eaten at one time, so you feel full sooner and stay full longer. As you eat less food, your body will stop storing excess calories and start using its fat supply for energy.</p>	<p>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.</p>	<p>60%-78% with average of 66%<sup>11</sup></p>
<p><b>Gastric Bypass</b></p> 	<p>In this procedure, the surgeon creates a small stomach pouch using a stapling device and attaches a section of the small intestine directly to the pouch. This allows food to bypass a portion of the small intestine.</p>	<p>By creating a smaller stomach pouch, a gastric bypass limits the amount of food that can be eaten at one time, so you feel full sooner and stay full longer. By bypassing a portion of the small intestine, your body also absorbs fewer calories. As you eat less food and absorb fewer calories, your body will stop storing excess calories and start using its fat supply for energy.</p>	<p>Reduces the amount of calories (in the form of nutrients) absorbed.</p>	<p>57%-80% with average of 62%<sup>8</sup></p>
<p><b>BPD/DS</b> (Biliopancreatic Diversion with or without Duodenal Switch)</p> 	<p>During this procedure, the surgeon reduces the stomach using a stapling device, then attaches a section of the small intestine to the stomach. The excised, unused portion of the stomach is removed.</p>	<p>By creating a smaller stomach pouch, the stomach holds less food. Your food bypasses most of the small intestine where calories and nutrients are normally absorbed.</p>	<p>Reduces the amount of calories (in the form of nutrients) absorbed.</p>	<p>66%-74% with average of 70%<sup>3</sup></p>

## Advantages

- Limits the amount of food that can be eaten at a meal.
- The surgery can be reversed.
- No part of the stomach or digestive system is stapled, cut or removed; food passes through the digestive tract in the usual order, allowing it to be fully absorbed into the body.
- In a clinical trial, the laparoscopic adjustable gastric band\* patients lost an average of 38% of excess weight at 1 year and nearly 43% at 3 years.<sup>11</sup>
- Shown to help resolve other conditions, such as type 2 diabetes (59%), obstructive sleep apnea (45%) and high cholesterol (71%).<sup>1,3</sup>

- Limits the amount of food that can be eaten at a meal.
- Allows the body to adjust to its new, healthier set-point.<sup>3</sup>
- Food passes through the digestive tract in the usual order, allowing vitamins and nutrients to be fully absorbed into the body.
- No postoperative adjustments are required.
- In clinical studies, patients lost an average of 66% of their excess weight.<sup>4</sup>
- Shown to help resolve high blood pressure (49%) and obstructive sleep apnea (60%), and to help improve type 2 diabetes (45%) and high cholesterol (77%).<sup>3-5</sup>

- Limits the amount of food that can be eaten at a meal and reduces the desire to eat.
- Allows the body to adjust to its new, healthier set-point.<sup>3</sup>
- 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 4,204 patients.<sup>8</sup>
- Shown to help resolve type 2 diabetes (68%), high blood pressure (66%) and obstructive sleep apnea (76%), and to help improve high cholesterol (95%).<sup>1,3,4</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>5</sup>

- Does not restrict types of food that can be eaten and allows for larger meals.
- In a clinical study of 102 BPD/DS patients, 94% had 70% of EWL at 1 year, 62% lost 75% of EWL at 3 years, and 31% lost 81% of EWL at 5 years.<sup>13</sup>
- Shown to help resolve type 2 diabetes, high blood pressure, obstructive sleep apnea, and to improve high cholesterol.<sup>3</sup>

## Complications

- Gastric perforation or tearing in the stomach wall may require an additional operation
- Access port leakage or twisting may require an additional operation
- May not provide the necessary feeling of satisfaction that one has had enough to eat
- Nausea and vomiting
- Outlet obstruction
- Pouch dilatation
- Band migration/slippage

- Complications due to stomach stapling
- Gastric leakage
- Ulcers
- Dyspepsia
- Esophageal dysmotility
- Nonreversible since part of the stomach is removed

- Potential for heightened bone calcium loss
- Possible metabolic bone disease
- Chronic anemia due to Vitamin B12 deficiency and/or lowering of total body iron
- Dumping
- Reduced effectiveness due to stomach pouch irregularities
- Intestinal irritation and ulcers
- The lower stomach pouch and segments of the small intestine cannot be easily visualized if problems such as ulcers, bleeding or malignancy should occur

- Intestinal adaptation when bowel movements can be very liquid and frequent
- Bloating, malodorous stool or excess gas
- Lifelong vitamin supplementation is required
- Increased risk of gallstone formation
- Intestinal irritation and ulcers
- Dumping

## Recovering after surgery

Your bariatric healthcare team should include not only your surgeon and nurses but also other health professionals who will participate in your follow-up care, such as a dietitian, psychologist or counselor, exercise physiologist and your primary care physician. You will most likely remain in the hospital for the first day or two following surgery, where you will consume a clear liquid diet and will be monitored for any immediate complications. Upon discharge you will be given strict dietary instructions. About 10 to 14 days after surgery, you will be allowed to add soft or puréed protein sources to your liquid diet and will then gradually build up to a solid food diet at 5 to 6 weeks post-surgery. As you begin to lose weight and gain strength, members of your team will help you take the next steps to full health and recovery. They may refer you to support groups or exercise facilities in your community. Studies have shown that patients who have frequent, face-to-face contact with their healthcare team are most successful in achieving and maintaining their goals.<sup>4</sup>

## Set realistic goals and expectations

Bariatric and metabolic surgery can help you lose approximately 41% to 66% of your excess weight, depending on the procedure that is used. Your success will ultimately depend on your own commitment to follow lifelong dietary restrictions, adhere to an exercise program, take dietary supplements and comply with follow-up recommendations.

You may experience new challenges and life changes after surgery. As with any surgery, there is a risk of having complications that require subsequent procedures or potential for unpleasant side effects over a period of several years. You may also want to consider cosmetic surgery to eliminate skin folds that can result from dramatic weight loss. By continuing to work with your bariatric healthcare team, you will be able to work through any challenges and adapt to lifestyle changes.

An important criteria consideration is to choose a surgeon from an accredited program to ensure excellent preoperative and postoperative care.

In addition to great surgical outcomes, accredited providers offer a comprehensive approach to weight loss. Your care team will be comprised of professionals who will help you with behavior modification, nutrition and diet advice and guidance, exercise program development and all other aspects of support you will need to be successful. Accredited providers recognize that surgery is just a tool and they are prepared to help you through this lifestyle change.

One simple way to evaluate an institution is to ask if it is accredited by the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP). Insurance companies also designate accredited bariatric programs. Bariatric surgery accreditation not only promotes uniform standard benchmarks but also supports continuous quality improvement.

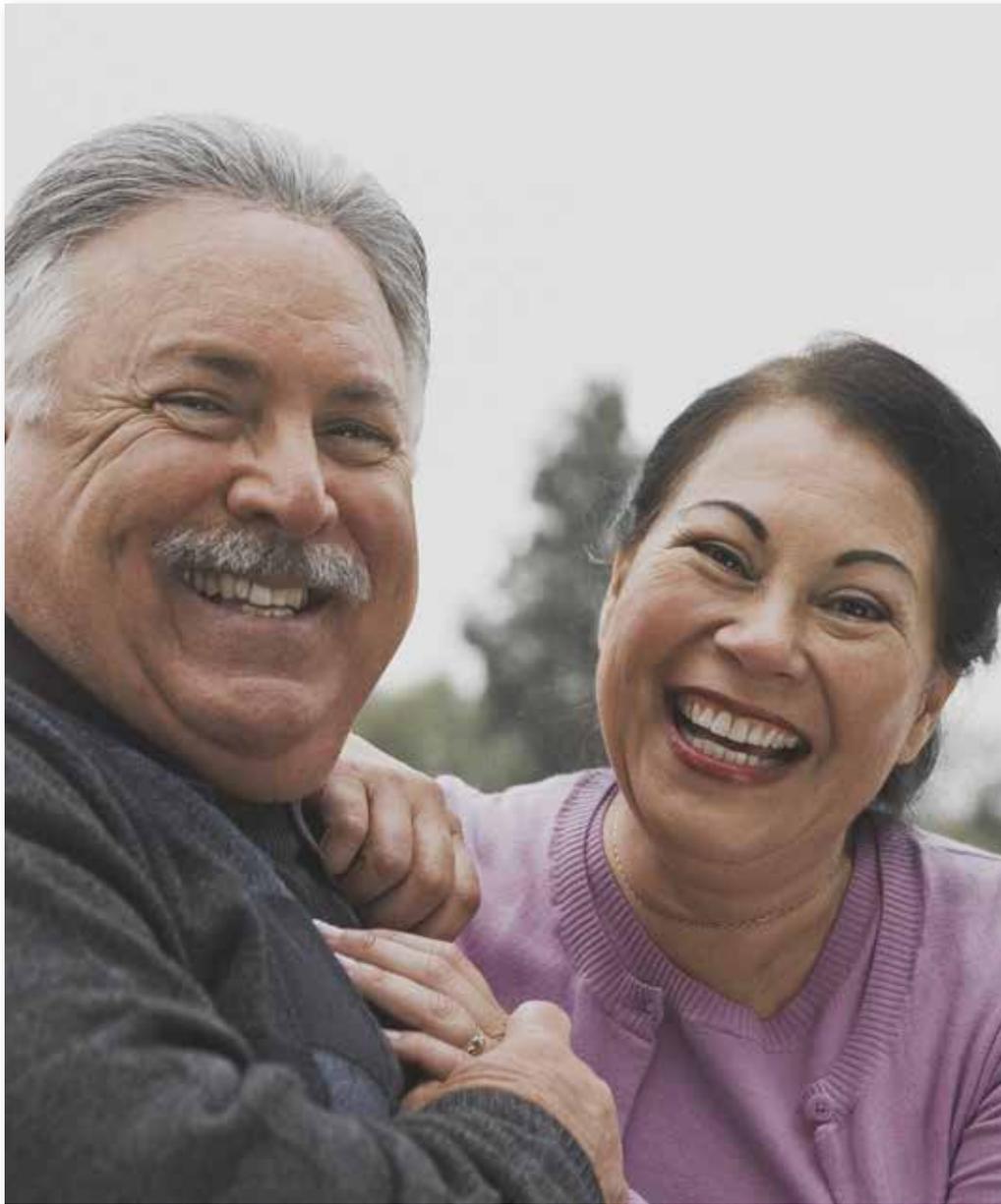
More information can be found under Participating Centers at: [www.mbsaqip.org](http://www.mbsaqip.org) or check with your insurance carrier.

## Find out if you qualify

To be eligible for bariatric surgery you must:

- ▶ Be age 18 or older
- ▶ Have a BMI of 40kg/m<sup>2</sup> or greater without weight-related medical problems OR have a BMI of 35kg/m<sup>2</sup> or greater with at least one serious weight-related medical problem
- ▶ Have tried unsuccessfully to lose weight via supervised diet and lifestyle modification

Beyond these criteria, your doctor will consider your age, medical history and behavioral and psychological readiness. You must be ready to change the way you relate to food, nutrition and physical activity for the rest of your life. This will involve changes in your usual routines, and since these often involve other people, it is a good idea to enlist the support of your family and friends. If you are a woman of childbearing age, you should also agree not to become pregnant for at least 12-18 months after the surgery.



*Insurance plans differ in their requirements for coverage of bariatric surgery. In addition to being medically fit for surgery, you will probably need documentation that you have tried other weight loss methods, are mentally healthy and able to understand what is involved and are free of drug and alcohol dependencies.*

## **Check your insurance coverage**

Insurance plans differ in their requirements for coverage of bariatric surgery. In addition to being medically fit for surgery, you will probably need documentation that you have tried other weight loss methods, are mentally healthy and able to understand what is involved and are free of drug and alcohol dependencies.

***Talk to your Physician and Surgeon. Become an active partner to develop the surgical plan that's right for you.***

*Informational websites:*

[www.asmb.org/patients](http://www.asmb.org/patients)

[www.cdc.gov/obesity](http://www.cdc.gov/obesity)

[www.ethicon.com/obesity](http://www.ethicon.com/obesity)

[www.mbsaqip.org](http://www.mbsaqip.org)

[www.obesity.org/publications/obesity-journal.htm](http://www.obesity.org/publications/obesity-journal.htm)

[www.obesityaction.org](http://www.obesityaction.org)

[www.realize.com](http://www.realize.com)

[www.realize.com/surgerycomparisontool](http://www.realize.com/surgerycomparisontool)

[www.stopobesityalliance.org](http://www.stopobesityalliance.org)

[www.win.niddk.nih.gov/publications/gastric.htm](http://www.win.niddk.nih.gov/publications/gastric.htm)



## AMERICAN ASSOCIATION *of* CLINICAL ENDOCRINOLOGISTS 2011

The beneficial effect of surgery on reversal of existing DM and prevention of its development has been confirmed in a number of studies.<sup>35</sup>

## AMERICAN COLLEGE *of* PHYSICIANS 2005

Surgery should be considered as a treatment option for patients with a BMI of 40kg/m<sup>2</sup> or greater who instituted but failed an adequate exercise and diet program...and who present with obesity-related comorbid conditions, such as hypertension, impaired glucose tolerance, diabetes mellitus, hyperlipidemia and obstructive sleep apnea.<sup>22</sup>

## AMERICAN DIABETES ASSOCIATION 2009

Bariatric surgery should be considered for adults with BMI  $\geq 35$ kg/m<sup>2</sup> and type 2 diabetes, especially if the diabetes is difficult to control with lifestyle and pharmacologic therapy.<sup>36</sup>

## AMERICAN HEART ASSOCIATION 2011

When indicated, surgical intervention leads to significant improvements in decreasing excess weight and comorbidities that can be maintained over time.<sup>37</sup>

## DEPARTMENT *of* VETERANS AFFAIRS, U.S. DEPARTMENT *of* DEFENSE 2006

Bariatric surgery to reduce body weight, improve obesity-associated comorbidities and improve quality of life may be considered in adult patients with a BMI >40kg/m<sup>2</sup> and those with a BMI >35kg/m<sup>2</sup> with at least one obesity-associated chronic health condition (i.e., hypertension, type 2 diabetes, dyslipidemia, metabolic syndrome and sleep apnea)... There is good evidence that...surgical weight loss interventions may improve cardiovascular risk factors, such as hypertension, dyslipidemia and diabetes mellitus.<sup>38</sup>

## INTERNATIONAL DIABETES FEDERATION 2011

Bariatric surgery is an appropriate treatment for people with type 2 diabetes and obesity not achieving recommended treatment targets with medical therapies.<sup>28</sup>



## BARIATRIC & METABOLIC SURGERY

*If you and your physician have decided to explore surgery as a possible next step, take this page with you to your appointment with the surgeon. This will ensure you receive helpful information to make an informed decision.*

### Ask your surgeon questions ■

Never be afraid to ask questions if there is something you don't understand. In addition to the topics covered here, you should know that minimally invasive surgery requires special training and expertise.

### You should feel free to ask your surgeon:

- ▶ Have you received advanced training for bariatric surgery?
- ▶ How many bariatric surgeries have you done? How many bypass procedures? Sleeve procedures? Band procedures? (Use the procedure of interest to you.)
- ▶ Who assists you with a bariatric surgery? (resident, surgical physician assistant, another surgeon)
- ▶ What have you seen in terms of patient outcomes with these procedures?
- ▶ What complications/risks may be associated with bariatric surgery?
- ▶ Will my procedure be performed as minimally invasive or open?
- ▶ How long do you expect my hospital stay to be?
- ▶ How long do you expect my recovery to be?
- ▶ What special considerations should I be thinking about as I prepare to undertake this life-changing event?

Use the opposite side to write down any additional questions or concerns you want to discuss with your surgeon.







*Never be afraid to  
ask questions if  
there is something  
you don't understand.*

## References

1. Bhojral S, et al. The physical and fiscal impact of the obesity epidemic: the impact of comorbid conditions on patients and payers. *J Managed Care Med.* 2008;11(4):10–17.
2. Allison DB, Fontaine KR, Manson JE, Stevens J, VanItallie TB. Annual deaths attributable to obesity in the United States. *JAMA.* 1999;282(16):1530–1538.
3. Brancatisano A. Improvement in comorbid illness after placement of the Swedish Adjustable Gastric Band. *Surg Obes Relat Dis.* 2008;4:S39–S46.
4. Steffen R, et al. Successful multi-intervention treatment of severe obesity: a 7-year prospective study with 96% follow-up. *Obes Surg.* 2009;19(1):3–12.
5. Sjostrom L, et al. Lifestyle, diabetes, and cardiovascular risk factors 10 years after bariatric surgery. *New Engl J Med.* 2004;352:2683–2693.
6. Brethauer SA, et al. Systematic review of sleeve gastrectomy as staging and primary bariatric procedure. *Surg Obes Relat Dis.* 2009;5:469–475.
7. Buchwald H, Estok R, Farbach K, et al. Weight and type 2 diabetes after bariatric surgery: systematic review and meta-analysis. *Am J Med.* 2009;122(3):248–256.
8. Bond DS, et al. Significant resolution of female sexual dysfunction after bariatric surgery. *Surg Obes Relat Dis.* 2011;7:1–7.
9. Maggard MA, et al. Pregnancy and fertility following bariatric surgery: a systematic review. *JAMA.* 2008;300(19):2286–2296.
10. Teitelman M, et al. The impact of bariatric surgery on menstrual patterns. *Obes Surg.* 2006;16(11):1457–1463.
11. Jamal M, Wegner R, Heitshusen D, Liao J, Samuel I. Resolution of hyperlipidemia follows surgical weight loss in patients undergoing Roux-en-Y gastric bypass surgery: a 6-year analysis of data. *Surg Obes Relat Dis.* 2011;7(4):473–479.
12. Eid GM, et al. Effective treatment of polycystic ovarian syndrome with Roux-en-Y gastric bypass. *Surg Obes Relat Dis.* 2005;1(2):77–80.
13. Mechanick JI, et al. American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery. Bariatric Surgery Clinical Practice Guidelines. *Endocr Pract.* 2013;19(No. 2).
14. American Association for the Treatment of Clinical Obesity. Clinical Obesity Fact Sheet: Obesity in the U.S. May 2, 2005. Available at: [http://www.aatco.org/clinical\\_obesity\\_fact\\_sheet.htm](http://www.aatco.org/clinical_obesity_fact_sheet.htm). Accessed March 2014.
15. Sumithran P, Prendergast LA, Delbridge E, et al. Long-term persistence of hormonal adaptations to weight loss. *N Engl J Med.* 2011;365(17):1597–1604.
16. Chambers AP, Jessen L, Ryan KK, et al. Weight-independent changes in blood glucose homeostasis after gastric bypass or vertical sleeve gastrectomy in rats. *Gastroenterology.* 2011;141(3):950–958.
17. Shin AC, Zheng H, Townsend RL, Townsend RL, Sigalet DL, Berthoud HR. Meal-induced hormone responses in a rat model of Roux-en-Y Gastric bypass surgery. *Endocrinology.* 2010;151(4):1588–1597.
18. Peterli R, Wolnerhanssen B, Peters T, et al. Improvement in glucose metabolism after bariatric surgery: comparison of laparoscopic Roux-en-Y gastric bypass and laparoscopic sleeve gastrectomy. *Ann of Surg.* 2009(2);250:234–241.
19. Stylopoulos N, Hoppin AG, Kaplan LM. Roux-en-Y gastric bypass enhances energy expenditure and extends lifespan in diet-induced obese rats. *Obesity.* 2009;17(10):1839–1847.
20. Dixon JM, et al. Adjustable gastric banding and conventional therapy for type 2 diabetes. A randomized controlled trial. *JAMA.* 2008;299:316–323.
21. National Heart, Lung and Blood Institute. National Institutes of Health. NHLBI Obesity Education Initiative Expert Panel on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults. Clinical guidelines on the identification, evaluation and treatment of overweight and obesity in adults: the evidence report. *NIH Publication.* 1998;98–4083.
22. Snow V, et al. Pharmacologic and surgical management of obesity in primary care: a clinical practice guideline from the American College of Physicians. *Ann Int Med.* 2005;142(7):525–531.
23. Data on file. Ethicon, Inc. Thomson-Reuters 2010.
24. Encinosa WE, Bernard DM, Du D, Steiner CA. Recent improvements in bariatric surgery outcomes. *Med Care.* 2009;47:531–535.
25. Segal JB, Clark JM, Shore AD, et al. Prompt reduction in use of medications for comorbid conditions after bariatric surgery. Effective Healthcare Research Report No. 28. Rockville, MD. Agency for Healthcare Research and Quality. 2010.
26. Klein S, Ghosh A, Cremieux PY, Eapen S, McGavock TJ. Economic impact of the clinical benefits of bariatric surgery in diabetes patients with BMI  $\geq 35$ kg/m<sup>2</sup>. *Obesity.* 2011;19:581–587.
27. Birkmeyer NJO, Dimick JB, Share D, et al. Hospital complication rates with bariatric surgery in Michigan. *JAMA.* 2010;304(4):435–442.
28. International Diabetes Federation Consensus Panel. Bariatric surgical and procedural interventions in the treatment of obese patients with type 2 diabetes: a position statement from the International Diabetes Federation Taskforce on Epidemiology and Prevention. 2011.
29. CMS MedPAR data on file. Ethicon, Inc.
30. Presutti RJ, et al. Primary care perspective on bariatric surgery. *Mayo Clin Proc.* 2004;79:1158–66.
31. Kaplan, Lee M. MD, PhD; Seeley, Randy J., PhD and Harris, Jason L., PhD. Myths Associated with Obesity and Bariatric Surgery—Myth 1—Weight can be reliably controlled by voluntarily adjusting energy balance through diet and exercise: *Bariatric Times.* 2012;9(4):12–13.
32. Christou NV, et al. Surgery decreases long-term mortality, morbidity and health care use in morbidly obese patients. *Ann Surg.* 2004;240:416–423.
33. Sjöström L, Narbro K, Sjöström CD, et al. Effects of bariatric surgery on mortality in Swedish obese subjects. *N Engl J Med.* 2007;357:741–752.
34. Adams TD, Gress RE. Long-term mortality after gastric bypass surgery. *N Engl J Med.* 2007;357(8):753–61.
35. Handelsman Y, Mechanick JI, Blonde L, et al. American Association of Clinical Endocrinologists Medical Guidelines for clinical practice for developing a diabetes mellitus comprehensive care plan. *Endocr Pract.* 2001;17 suppl 2:1–53.
36. Executive Summary: Standards of Medical Care in Diabetes—2014 *Diabetes Care.* January 2014 vol. 37 no. Supplement 1 S5–S13.
37. Poirier P, Cornier MA, Mazzone T, et al. Bariatric surgery and cardiovascular risk factors: a scientific statement from the American Heart Association. *Circulation.* 2011;123(15):1683–1701.
38. Department of Veterans Affairs, Department of Defense, VA/DoD clinical practice guideline for screening and management of overweight and obesity. National Guideline Clearinghouse. 2006. [www.guideline.gov](http://www.guideline.gov).

## Health Benefits Shown in Clinical Trials and Comparison of Bariatric Surgical Procedures Chart References

1. 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;121(10):885–893.
2. EES analysis of data from U.S. Clinical Trial PMA 070009.
3. Buchwald H, Avidor Y, Braunwald E, et al. Bariatric surgery. A systematic review and meta-analysis. *JAMA.* 2004;292(14):1724–1737.
4. Schauer PR, Kashyap SR, Wolski K, et al. Bariatric surgery versus intensive medical therapy in obese patients with diabetes. *N Engl J Med.* 2012;366(17):1567–1576.
5. Brethauer SA, Hammel JP, Schauer PR. Systematic review of sleeve gastrectomy as staging and primary bariatric procedure. *Surg Obes Rel Dis.* 2009;5(4):469–475.
6. Weiner RA, Weiner S, Pomhoff I, et al. Laparoscopic sleeve gastrectomy — influence of sleeve size and resected gastric volume. *Obes Surg.* 2007;17(10):1297–1305.
7. Cottam D, Qureshi FG, Mattar SG, et al. Laparoscopic sleeve gastrectomy as an initial weight-loss procedure for high-risk patients with morbid obesity. *Surg Endosc.* 2006;20(6):859–863.
8. 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.
9. Resa JJ, Solano J, Fatás JA, et al. Laparoscopic biliopancreatic diversion: technical aspects and results of our protocol. *Obes Surg.* 2004; Mar;14(3): 329–33; discussion 333.
10. Phillips E, Ponce J, Cunneen SA, et al. Safety and effectiveness of REALIZE. adjustable gastric band: 3-year prospective study in the United States. *Surg Obes Rel Dis.* 2009;5(5):588–597.
11. Fischer L, Hildebrandt C, Bruckner T, et al. Excessive weight loss after sleeve gastrectomy: a systematic review. *Obes Surg.* 2012;22(5):721–731.
12. REALIZE Adjustable Gastric Band: Summary of safety and effectiveness data.
13. Baltasar A, Bou R, Bengochea M, et al. Duodenal switch: an effective therapy for morbid obesity—intermediate results. *Obes Surg.* 2001; Feb;11(1):54–8.

\*Based on STAMPEDE population which consisted of predominantly female, moderately obese patients with long-standing and uncontrolled T2DM.

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

If you and your physician have decided to explore bariatric surgery as a possible next step, please visit [www.realize.com](http://www.realize.com) or access it by scanning the QR code to the right.

