

# HealthGrades 2011 Bariatric Surgery Trends in American Hospitals

Bariatric surgery (weight-loss surgery) is the only option that effectively treats morbid obesity in people for whom more conservative measures, such as diet, exercise, and medication have failed. The long-term benefits of bariatric surgery include significant and sustainable long-term weight loss, resolution of diabetes, reduction in cardiovascular disease risk, and decreased mortality.<sup>1</sup>

While the benefits of bariatric surgery may outweigh many of the risks, as with all surgeries, there are considerations for the patient. The short-term risks of bariatric procedures include those associated with the procedure itself and the post-operative period, such as hemorrhage (bleeding) and infection. Long-term risks include nutritional deficiencies and device complications requiring a revision.

In order to have the best short-term and long-term outcomes, choosing the right provider is critical. To assist consumers with their provider selection, HealthGrades objectively evaluated the in-hospital complications associated with providers in 19 states where data are publicly available.

This report includes an analysis of 193,518 bariatric surgery discharges from 2007 through 2009 and an analysis of the risk-adjusted in-hospital complications of 468 hospitals in 19 states. Risk adjustment allows for a valid comparison of hospitals taking into account the types of patients treated. Hospitals are rated as 5-star (best), 3-star (average), and 1-star (poor). The individual hospital ratings can be found at [www.HealthGrades.com](http://www.HealthGrades.com) where you can also read the [full methodology](#).

To be included in the analysis, hospitals had to have a minimum of 30 cases over the three years and at least five cases in 2009. Of the 468 hospitals that met the volume criteria:

- 107 hospitals (22.86%) stand out as “best” performers (5-star rated)
- 261 hospitals (55.76%) were rated “as expected” performers (3-star rated)
- 100 hospitals (21.37%) were rated as “poor” performers (1-star rated)

## Weight Loss after Bariatric Surgery Shown to Improve Overall Health

The striking weight loss achieved after bariatric surgery (frequently equivalent to one-third of a patient’s body weight or more) has been shown to rapidly improve the patient’s overall health status. Many patients are noted to have either significant improvement or to be completely cured of a variety of major health problems including diabetes, high blood pressure, and sleep apnea.<sup>2</sup> Because of these favorable outcomes, the number of bariatric surgeries has continued to steadily increase in recent years. According to the American Society for Metabolic and Bariatric Surgery, in 2009, there were 220,000 bariatric surgeries performed in the United States.<sup>3</sup> This is 13 times the number performed in 1992.

## Assuring the Best Patient Outcomes

Like most major and invasive surgeries, bariatric surgery has many benefits that must be weighed against the associated risks. These risks include death, a variety of minor to serious complications, and nutritional absorption deficiencies (the inability to adequately absorb enough nutrients from the food consumed). In addition, patients who are appropriate candidates for bariatric surgery frequently have other conditions, such as heart disease, high blood pressure, diabetes, and lung problems, which increase their surgical risks. To assure the best outcomes for patients undergoing bariatric surgery, it is imperative that bariatric surgery programs:

- Ensure appropriate patient selection
- Identify individual patient risks
- Provide appropriate interventions to reduce these risks
- Have surgeons with adequate experience and appropriate supervision

## SUMMARY OF FINDINGS

From 2007 through 2009, across the 19 states studied:

**193,518**

in-hospital bariatric procedures performed

**5.88%**

of patients experienced one or more in-hospital complications

In-hospital mortality was rare with:

**1 death per 2,000 cases**

(0.05% mortality rate)

On average, bariatric surgery patients were charged:

**\$40,105**

for a laparoscopic procedure

**\$42,417**

for an open procedure

## CHOOSING THE RIGHT PROVIDER IS CRITICAL

Five-star rated hospitals, as a group, had higher quality, shorter hospital stays and charged less than all other hospitals. Patients having bariatric surgery at 5-star hospitals are:

**69.70%**

less likely to experience in-hospital complications than patients at 1-star programs

If all hospitals from 2007 through 2009 had performed at the level of 5-star hospitals:

**5,231**

patients could have potentially avoided a major in-hospital complication

## SHORTER STAY AT 5-STAR HOSPITALS

Patients having a bariatric procedure at a 5-star facility spent on average,

**1/2 day**

less in the hospital

than patients having their procedure at a 1-star facility (1.93 days versus 2.38 days respectively).

## LESS COST AT 5-STAR HOSPITALS

Patients having a bariatric procedure at a 5-star facility are charged, on average

**\$6,692**

less than patients having their procedure at a 1-star facility.

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## Trends and Outcomes in Bariatric Surgery Procedures

In this study, we evaluated trends in the number of procedures, cost by state, procedure types, and mortality and complication rates. We also compared overall performance between 5-star, 3-star and 1-star rated hospitals. An actual-to-expected ratio is used to compare the number of deaths or complications seen in a hospital to the number of deaths or complications expected at a hospital based on the types of patients treated at that hospital (considering age, gender, and other risk factors, such as chronic illnesses). The ratio indicates if the hospital has more deaths or complications than expected. A ratio of one shows the hospital is performing as expected. A ratio greater than one shows the hospital has more deaths or complications than expected. A ratio less than one shows the hospital has fewer deaths or complications than expected.

### Number of Inpatient Procedures Increased

In the 19 states studied, there was a total of 193,518 bariatric inpatient surgery procedures performed in 468 hospitals from 2007 through 2009. During this time, the number of inpatient procedures increased by 11.45%, with 60,242 procedures performed in 2007 and 67,139 procedures in 2009 (Table 1).

- **Washington** and **Massachusetts** showed large **increases** in the number of inpatient bariatric procedures with an increase of 61.51% and 43.63% respectively.
- **Colorado**, **Nevada**, and **New Jersey** experienced **declines** in the number of inpatient bariatric procedures (0.68%, 5.15%, and 8.45% respectively).

Table 1. Bariatric Surgery Hospital Volume Trends by State and Year

State	2007	2008	2009	2007-2009	Percent of Total Cases 2007-2009	Percent Change 2007 - 2009
California	12,052	13,420	13,521	38,993	20.15%	12.19%
New York	8,325	8,962	9,191	26,478	13.68%	10.40%
Texas	7,431	8,049	8,285	23,765	12.28%	11.49%
Pennsylvania	6,564	7,131	7,422	21,117	10.91%	13.07%
Florida	4,618	4,991	4,786	14,395	7.44%	3.64%
Massachusetts	3,291	3,771	4,727	11,789	6.09%	43.63%
New Jersey	3,870	3,684	3,543	11,097	5.73%	-8.45%
Virginia	2,824	3,166	2,957	8,947	4.62%	4.71%
Arizona	1,726	2,249	2,057	6,032	3.12%	19.18%
Maryland	1,567	1,687	1,717	4,971	2.57%	9.57%
Wisconsin	1,161	1,283	1,384	3,828	1.98%	19.21%
Nevada	1,204	1,391	1,142	3,737	1.93%	-5.15%
Colorado	1,170	1,196	1,162	3,528	1.82%	-0.68%
Washington	834	1,297	1,347	3,478	1.80%	61.51%
Oregon	1,127	1,087	1,156	3,370	1.74%	2.57%
Iowa	822	929	902	2,653	1.37%	9.73%
Utah	605	712	691	2,008	1.04%	14.21%
Maine	606	578	634	1,818	0.94%	4.62%
Rhode Island	445	554	515	1,514	0.78%	15.73%
<b>All</b>	<b>60,242</b>	<b>66,137</b>	<b>67,139</b>	<b>193,518</b>	<b>100.00%</b>	<b>11.45%</b>

### How Consumers are Paying for Services or Treatments

A payer is any third party entity that helps consumers pay for services or treatments. Patients with **commercial insurance** represent the majority of patients undergoing bariatric procedures (Table 2).

- Commercial insurance accounted for 74.37% of the patients undergoing the procedure, followed by government insurance at 20.27%, and self-pay at 5.20%.
- As coverage by commercial carriers has increased, the number of patients paying out of pocket for inpatient procedures has decreased by almost half.
- Medicare showed the greatest increase in patient coverage from 2007 to 2009 with a 59.10% increase.

## 19 STATES STUDIED

HealthGrades analyzed overall trends associated with bariatric surgery in the following **19 states** where data are publicly available:

- Arizona
- California
- Colorado
- Florida
- Iowa
- Maine
- Maryland
- Massachusetts
- Nevada
- New Jersey
- New York
- Oregon
- Pennsylvania
- Rhode Island
- Texas
- Utah
- Virginia
- Washington
- Wisconsin

## TOP STATES FOR BARIATRIC SURGERY PROCEDURES

The **most inpatient procedures** were performed in California, New York and Texas (20.15%, 13.68%, and 12.28% of the inpatient procedures respectively). The **fewest inpatient procedures** were performed in Utah, Maine, and Rhode Island. Collectively, these three states performed less than 3% of the inpatient procedures (Table 1).

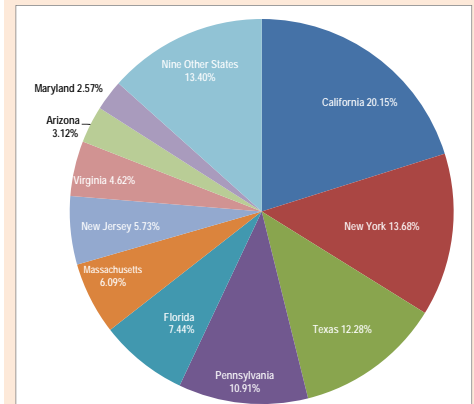


Table 2. Bariatric Volume Trends by Payer

Payer	Total Cases 2007-2009	Percent of Total Cases 2007-2009
<b>Commercial Insurance</b>		
Blue Cross	32,980	17.04%
Blue Cross HMO	11,517	5.95%
Commercial, Self-insured	22,771	11.77%
HMO/PPO	76,649	39.61%
<b>Government Programs</b>		
TRICARE	3,459	1.79%
Medicaid	12,361	6.39%
Medicare	21,135	10.92%
VA/Government	2,273	1.17%
<b>Other</b>		
Self-pay	10,055	5.20%
Unknown/Other	137	0.07%
Worker's Compensation	181	0.09%
<b>All</b>	<b>193,518</b>	<b>100.00%</b>

## Cost Variation by State

- **California** is the **most expensive state** for bariatric surgery with an average charge of \$65,251 per patient (\$74,929 for open procedures and \$55,573 for laparoscopic procedures) followed closely by **New Jersey** with an average charge of \$59,275 (\$78,100 for open procedures and \$40,449 for laparoscopic procedures) (Table 3).
- **Maryland** is the **least expensive state** for bariatric surgery with an average charge of \$16,390 (\$17,336 for open procedures and \$15,444 for laparoscopic procedures) (Table 3).

## Procedure Types and Surgical Methods

Two types of procedures work in different ways to reduce the number of calories available to the body. **Restrictive procedures** (sometimes known as gastric stapling, stomach stapling, or stomach banding) can help you lose weight by reducing the size of your stomach, which limits the amount of food that can be ingested.

**Malabsorptive procedures** (commonly known as gastric bypass) involve attaching the stomach directly to the middle of the small intestine, diverting food past most or all of the first section of the small intestine (the duodenum) where most calories are absorbed by the body.

Procedure types can be generally categorized by surgical method as **open**, meaning a large cut or incision in the abdomen, or **laparoscopic**, meaning many smaller cuts or incisions in the abdomen. Laparoscopic procedures are less invasive than open procedures.

Of the 193,518 procedures performed in hospital from 2007 through 2009 (Table 4):

- 90.93% were a restrictive procedure performed laparoscopically
- 8.50% were a malabsorptive (gastric bypass) procedure performed as an open surgery
- Less than one percent were a biliopancreatic diversion with duodenal switch (BPD-DS), which is a malabsorptive and restrictive procedure performed as an open surgery.

## Laparoscopic Procedures had Lowest Inhospital Complication Rate

The overall in hospital complication rate for patients undergoing a bariatric procedure was 5.88%. Laparoscopic procedures had the lowest complication rate of 5.28%, while malabsorptive (gastric bypass) procedures had a complication rate of 11.82%, and biliopancreatic diversion with duodenal switch procedures had a complication rate of 12.04% (Table 4).

Table 4. Frequency of Bariatric Surgery Procedure Types and Inhospital Complications

Procedure Type	Surgical Method	Total Cases 2007-2009	Average Percent Change 2007-2009	Actual Rate of Inhospital Complications
Restrictive	Laparoscopic	175,959	90.93%	5.28%
Malabsorptive (Gastric Bypass)	Open	16,454	8.50%	11.82%
Biliopancreatic Diversion with Duodenal Switch (BPD-DS)	Open	1,105	0.57%	12.04%
<b>Totals All Procedures</b>		<b>193,518</b>		<b>5.88%</b>

## Respiratory Complications Most Frequently Occurring Complication

The most frequently occurring complications among patients undergoing bariatric surgery were respiratory complications, including atelectasis (collapse of part or all of the lung, sometimes caused by anesthesia) and pulmonary insufficiency (lungs failing to function adequately after surgery) (Table 5).

Hemorrhage (excessive or uncontrolled bleeding), gastrointestinal complications, and operative lacerations (arteries, nerves, and/or other structures inadvertently cut or damaged during surgery) were also among the most frequent in hospital complications. In hospital mortality (death) was rare (0.05%) with one death occurring per two thousand cases (Table 5).

Table 3. Average Charge by State

State	Average Cost Laparoscopic Procedures	Average Cost Open Procedures	Average
California	\$55,573	\$74,929	\$65,251
New Jersey	\$40,449	\$78,100	\$59,275
Colorado	\$43,209	\$57,958	\$50,584
Pennsylvania	\$44,771	\$53,662	\$49,216
Arizona	\$37,134	\$61,037	\$49,086
Florida	\$44,546	\$49,879	\$47,213
Texas	\$47,744	\$40,721	\$44,232
Washington	\$36,456	\$38,729	\$37,593
Nevada	\$36,771	\$37,695	\$37,233
Rhode Island	\$24,106	\$47,767	\$35,936
Iowa	\$32,195	\$36,851	\$34,523
Wisconsin	\$29,903	\$38,221	\$34,062
Virginia	\$34,046	\$31,160	\$32,603
Oregon	\$27,693	\$33,900	\$30,796
Utah	\$24,367	\$36,819	\$30,593
Massachusetts	\$26,986	\$25,982	\$26,484
New York	\$24,532	\$21,731	\$23,132
Maryland	\$15,444	\$17,336	\$16,390
Maine	NA	NA	NA
<b>Average All Patients</b>	<b>\$40,105</b>	<b>\$42,417</b>	<b>\$41,261</b>

## COST VARIED BY STATE

### California

is the **most expensive state** for bariatric surgery with an average charge of \$65,251

### Maryland

is the **least expensive state** for bariatric surgery with an average charge of \$16,390

## RESPIRATORY AND BLEEDING COMPLICATIONS OCCURRED MOST OFTEN

Table 5. Inhospital Complications Associated with Bariatric Surgery

Complication	Rate
Hemorrhage Complicating a Procedure	0.83%
Surgical Complication of Gastrointestinal System	0.82%
Pulmonary Collapse/Atelectasis	0.79%
Accidental Operative Laceration	0.69%
Post-operative Pulmonary Insufficiency	0.64%
Mortality	0.05%

## Hospitals with Highest Volume had Lowest Complication Rates

Volume, or the number of bariatric procedures performed by a particular hospital, was an important indicator of in-hospital complications. As volume increased, risk-adjusted complications showed a statistically significant decrease. As mentioned above, risk adjustment makes comparisons of clinical outcomes by hospital more valid and meaningful by accounting for sicker patients.

- **Hospitals with the highest volume** (defined as hospitals performing 375 cases or more during the three years of study) had the lowest rate of risk-adjusted in-hospital complications overall with an actual-to-expected ratio of 0.97 (3% fewer complications than expected) (Table 6).
- **Hospitals with the lowest volumes** (defined as hospitals performing less than 75 cases during the three years) had the highest rate of risk-adjusted in-hospital complications with an actual-to-expected ratio of 1.41 (41% more complications than expected) (Table 6).

Table 6. In-hospital Complication Rates by Volume of Procedures Performed

Procedure Volume Range 2007 – 2009	Total Cases of all Hospitals in Volume Range	Actual Rate of In-hospital Complications	Expected Rate of In-hospital Complications	Actual-to-Expected Ratio
< 75	5,488	8.69%	6.16%	1.41
75-149	9,439	7.15%	5.80%	1.23
150-374	41,380	5.87%	5.78%	1.02
375 +	133,474	5.76%	5.93%	0.97

## Fewer Complications, Shorter Stays, and Lower Charges at 5-star Rated Hospitals

- After adjusting for patient risk factors, patients having bariatric surgery at 5-star hospitals were, on average, 69.70% less likely to experience complications than patients having bariatric surgery at 1-star programs and 45.93% less likely to experience complications compared to 3-star programs (Table 7).
- This means that if all hospitals performed at the level of the 5-star programs across the 19 states, 5,231 bariatric patients could have avoided an in-hospital complication (Table 7).
- Patients having a procedure at a 5-star hospital spent, on average, almost half a day less compared to patients treated at 1-star hospitals (1.93 days versus 2.38 days respectively) (Table 7).
- Despite having higher rates of in-hospital complications, 1-star hospitals charged on average \$6,692 more per patient than 5-star programs. All programs had equal percentages of laparoscopic procedures (Table 7).

Table 7. Bariatric Surgery Complications and Lengths of Stay

Hospital Bariatric Surgery Star Rating	Actual In-hospital Complication Rate	Expected In-hospital Complication Rate	Actual-to-Expected Complication Ratio	Average Length of Stay (Days)	Total Billed Charges
1-star	11.28%	6.48%	1.74	2.38	\$45,193
3-star	5.45%	5.59%	0.98	2.05	\$39,258
5-star	3.11%	5.90%	0.53	1.93	\$38,501
U.S. Average*	5.88%	5.88%		2.08	\$40,315
Relative difference between 5-star compared to 1-star			69.70%		
Relative difference between 5-star compared to 3-star			45.93%		
Complications Potentially Avoided if all Hospitals Performed at 5-star Level			5,231		

## MINIMIZING YOUR RISK FOR COMPLICATIONS

- 1 **Learn more about your own personal risks.**  
Our report found that almost 6% of individuals undergoing the surgery experienced an in-hospital complication. Discuss your individual surgical risks with your physician and understand:
  - What the clinical team will be doing to minimize those risks.
  - What you can do before surgery and during your hospitalization to minimize your risks.
- 2 **Ask questions and be your own advocate.**
  - Be sure to ask your health care provider to explain your condition and your medications every step of the way.
  - Ask for the results of all your tests and know your goal result for that test.
  - Write down the name of the doctors and other health care providers participating in your care. During a hospitalization, you may see many doctors and this can lead to uncoordinated and fragmented care.
  - Prior to checking in, make a list of all your medications, why you take them, and the dosage. Be sure to ask who to call if you have a question about your medication.
  - Ask the specific clinical goals you must meet to be discharged.

## CHOOSING THE RIGHT PROVIDER IS CRITICAL

To choose a provider, patients can:

- 1 **Look for a facility that has a 5-star rating** or other objective quality information. Do not rely solely on a recommendation from a friend.
  - Results showed that a typical patient had, on average, an almost 70% lower chance of experiencing an in-hospital complication at a 5-star facility.
- 2 **Ask about the number of procedures performed** both at the facility and by the surgeon.
  - The lowest in-hospital complication rates were found among facilities that had performed 125 surgeries or more during the three year period.
- 3 **Look for Center of Excellence Accreditation.**
  - Accredited facilities must undergo a rigorous evaluation process, meet minimum volume requirements, and participate in long-term outcomes research.
  - Physicians and staff at accredited facilities are required to meet specific training requirements.

Find ratings for hospitals in your area.

## Surgical Treatments for Obesity

Bariatric surgery (weight-loss surgery) can be a life-saving treatment option for people whose obesity seriously threatens their health and who have tried unsuccessfully to lose weight using nonsurgical methods, including diet, exercise, behavioral and nutritional counseling, and medication. There are a variety of bariatric surgery procedures that can help you achieve weight loss. These procedures incorporate one or two of the following surgical techniques that work in different ways to reduce the number of calories available to your body. These include:

- **Restrictive procedures** (sometimes known as gastric stapling, stomach stapling, or stomach banding) can help you lose weight by reducing the size of your stomach, which limits the amount of food you can eat at a given time.
- **Malabsorptive procedures** (commonly known as gastric bypass) can help you lose weight by altering the normal process of digestion. In gastric bypass surgery, the stomach is attached directly to the middle of the small intestine. This allows food to bypass most or all of the first section of the small intestine (the duodenum), reducing the amount of calories and nutrients that are absorbed by the body.

### Restrictive Bariatric Surgery Procedures

#### Adjustable Gastric Banding (ABG)

ABG (Lap-Band surgery, gastric band surgery) is a restrictive procedure that reduces the amount of food you can eat at given time. This procedure involves attaching an inflatable band around the top portion of the stomach and tightening it like a belt to form a small pouch that serves as a new, much smaller stomach. The diameter of the inflatable band and size of the stomach can be adjusted by your physician by adding or removing saline (salt water).

ABG generally has a high weight-loss success rate initially, but some people are not able to maintain weight loss, because it requires a life-long commitment to healthy dietary and lifestyle changes. ABG is usually performed laparoscopically, using minimally invasive techniques and very small incisions instead of one large one, reducing the risks of certain serious surgical complications. In addition, the stomach and small intestine still function normally, reducing the risk of poor nutrition, which can occur with malabsorptive (gastric bypass) procedures.

#### Vertical Banded Gastroplasty (VBG)

VBG is a restrictive procedure that reduces the amount of food you can eat at one time by reducing the size of the stomach. This procedure uses a combination of staples and a band to create a small stomach pouch. There is a dime-sized opening at the bottom of the "new" stomach that opens into the rest of the larger stomach. Plastic tissue or mesh is wrapped around the opening to help prevent the opening from stretching, which helps you feel fuller longer by allowing food to stay in the stomach longer.

VBG has a higher rate of complications compared to adjustable gastric banding (ABG) and is not as effective as malabsorptive (gastric bypass) procedures.

#### Vertical Sleeve Gastrectomy (VSG)

VSG (gastric sleeve surgery, gastric sleeve resection, tube gastrectomy) is a restrictive procedure that reduces the amount of food you can eat at one time. This procedure involves removing part of the stomach and using staples to create a smaller tube-shaped stomach. VSG was developed as a first step of a two-step surgery. The second surgery is a biliopancreatic diversion with a duodenal switch (BPD-DS), which is performed after the patient has lost sufficient weight and recovered from the VSG procedure to be healthy enough to undergo this second, more complex procedure.

VSG by itself has been shown to be effective in achieving significant and fast weight loss and may eliminate the need for the second surgery (BPD-DS) in some cases. VSG also controls hunger better than other restrictive procedures. VSG is performed laparoscopically with a minimally invasive technique that uses several small incisions instead of one large incision, and does not leave a foreign object in the body, reducing the risks of certain serious surgical complications. In addition, the stomach and small intestine still function normally, reducing the risk of poor nutrition, which can occur with malabsorptive (gastric bypass) procedures.

## OBESITY BASICS: WHAT IS IT? HOW IS IT TREATED?

There is an epidemic of obesity in this country, health experts say. But **what is obesity?** How is it measured? [Take this quiz](#) and see how much you know about obesity.

### CALCULATE YOUR BMI

Body mass index (BMI) is another way to determine candidates for bariatric surgery. [Calculate your BMI.](#)

### COULD WEIGHT-LOSS SURGERY SAVE YOUR LIFE?

If you are obese, surgery to lose weight may be safer than carrying around those extra pounds. But is losing weight worth the risks associated with surgery? [Take a look at the latest research.](#)

### LIVING WITH OBESITY

The latest studies conclude that a successful weight-loss plan is a mind and body undertaking that not only involves monitoring calorie intake and expenditure, but dealing with the psychological side of weight loss and habit change. [Learn more about living with obesity.](#)

### FOR OBESE TEENS, SURGERY IS THE LAST RESORT

Extreme obesity plagues more than a million teens and young adults, experts estimate. [What can you do as a parent of an obese teenager?](#)

### SURGICAL TREATMENT FOR OBESITY

[Read more about bariatric surgery](#), including gastric bypass surgery, and gastric stapling surgery.

### WHAT IS GASTRIC BYPASS SURGERY?

Gastric bypass surgery involves bypassing a part of the small intestine that absorbs nutrients. For this reason, these surgeries are referred to as malabsorptive procedures. [Learn more about gastric bypass surgery.](#)

## Malabsorptive/Restrictive Bariatric Surgery Procedures

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

RGB is both a malabsorptive and restrictive procedure. The procedure involves stapling the stomach to create a small pouch that holds less food. The new stomach pouch is attached directly to the middle of the small intestine. This allows food to bypass much of the stomach and the first section of the small intestine (the duodenum), reducing the amount of calories and nutrients that are absorbed by the body.

In some cases, RGB may be performed laparoscopically with a minimally invasive technique that uses several small incisions instead of one large incision, reducing the risks of serious surgical complications. RGB helps most people lose weight quickly and successfully. Risks include vitamin and mineral deficiencies that require ongoing nutritional supplementation and can lead to long-term complications, such as osteoporosis and anemia. Extremely obese people or those who have already had some type of abdominal surgery are not usually considered for this procedure.

### Biliopancreatic Diversion with a Duodenal Switch (BPD-DS)

BPD-DS is both a restrictive and malabsorptive procedure. In this complex procedure, a large part of the stomach is removed using the vertical sleeve gastrectomy procedure (see above) and a bypass is created around a large part of the small intestine, resulting in significant weight loss. Bile and other digestive juices are also diverted to reduce digestion.

BPD-DS can result in weight loss that is longer lasting than some other procedures. Like the RGB procedure, risks include vitamin and mineral deficiencies that require ongoing nutritional supplementation and can lead to long-term complications, such as osteoporosis and anemia.

## Bariatric Surgery is Not a Quick or Easy Fix for Obesity

Bariatric surgery is only one part of a comprehensive obesity treatment plan that includes a lifelong commitment to healthy dietary and exercise habits, vitamin supplementation, and regular follow-up medical care. Each bariatric procedure is a major surgical procedure that has benefits as well as disadvantages and the potential for serious risks, such as infection, bleeding, and blood clots. Common risks of bariatric surgery include nausea and vomiting and the development of gallstones.

## Who is a Good Candidate for Bariatric Surgery?

Bariatric surgery may be an option for men who are at least 100 pounds overweight or women who are at least 80 pounds overweight. Body mass index (BMI) is another way to determine candidates for bariatric surgery. In general, people with a BMI of 40 or higher are considered candidates. People who are not severely obese but have serious health problems, such as diabetes, heart disease, or sleep apnea, may also be considered for bariatric surgery. People with a BMI between 35 and 40 with serious health problems fall into this category.

Depending on a variety of factors, it might be possible to perform your procedure laparoscopically, using minimally invasive techniques and very small incisions instead of one large one used in an open procedure. Your surgeon will determine if you are a good candidate for bariatric surgery and advise you on which procedures and approach are best for you based on your specific circumstances.

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## Acknowledgements

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## HealthGrades Bariatric Surgery Excellence Award Recipients 2011 by Designated Market Area

The following hospitals are recipients of the HealthGrades Bariatric Surgery Excellence Award\* in 2011. Some of the Bariatric Surgery Excellence Award recipients have multiple locations. In these cases, results for all locations were used in the analysis and each of the facilities is designated as a recipient of the award.

Designated Market Area	Bariatric Surgery Excellence Award Recipients 2011*	City	State
<b>Mobile, AL-FL Florida Hospitals</b>	Sacred Heart Hospital	Pensacola	FL
<b>Phoenix, AZ</b>	Flagstaff Medical Center	Flagstaff	AZ
	Surgical Specialty Hospital of Arizona	Phoenix	AZ
<b>Bakersfield, CA</b>	Delano Regional Medical Center	Delano	CA
<b>Chico-Redding, CA</b>	Enloe Medical Center	Chico	CA
<b>Fresno-Visalia, CA</b>	Fresno Heart and Surgical Hospital	Fresno	CA
<b>Los Angeles, CA</b>	Providence Saint Joseph Medical Center	Burbank	CA
	Southwest Healthcare System - Rancho Springs Medical Center	Murrieta	CA
	<i>including:</i> Southwest Healthcare System - Inland Valley Medical Center	Wildomar	CA
<b>Sacramento, CA</b>	Mercy San Juan Medical Center	Carmichael	CA
<b>San Diego, CA</b>	Pomerado Hospital	Poway	CA
	Scripps Mercy Hospital	San Diego	CA
	<i>including:</i> Scripps Mercy Hospital Chula Vista	Chula Vista	CA
<b>San Francisco, CA</b>	California Pacific Medical Center - Pacific	San Francisco	CA
	<i>including:</i> California Pacific Medical Center - California	San Francisco	CA
	El Camino Hospital	Mountain View	CA
	<i>including:</i> El Camino Hospital Los Gatos	Los Gatos	CA
	Good Samaritan Hospital	San Jose	CA
	Kaiser Permanente Oakland Medical Center	Oakland	CA
	Kaiser Permanente South San Francisco Medical Center	South San Francisco	CA
	Mills - Peninsula Health Services	Burlingame	CA
	<i>including:</i> Mills Health Center	San Mateo	CA
<b>Denver, CO</b>	Rose Medical Center	Denver	CO
<b>Washington, DC-MD</b>	Inova Fair Oaks Hospital	Fairfax	VA
<b>Miami-Ft. Lauderdale, FL</b>	Hialeah Hospital	Hialeah	FL
	Palmetto General Hospital	Hialeah	FL
<b>Orlando, FL</b>	Ocala Regional Medical Center	Ocala	FL
	<i>including:</i> West Marion Community Hospital	Ocala	FL
<b>Tampa, FL</b>	Heart of Florida Regional Medical Center	Davenport	FL
<b>Boston, MA-NH</b>	Lowell General Hospital	Lowell	MA
<b>Las Vegas, NV</b>	Saint Rose Dominican Hospital - Rose de Lima Campus	Henderson	NV
<b>Buffalo, NY</b>	Sisters of Charity Hospital	Buffalo	NY
	<i>including:</i> Sisters of Charity Hospital - St. Joseph Campus	Cheektowaga	NY

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Designated Market Area	Bariatric Surgery Excellence Award Recipients 2011*	City	State
New York, NY New Jersey Hospitals	Hackensack University Medical Center	Hackensack	NJ
	Mountainside Hospital	Montclair	NJ
New York, NY New York Hospitals	Brookdale Hospital Medical Center	Brooklyn	NY
	John T. Mather Memorial Hospital	Port Jefferson	NY
	Mercy Medical Center	Rockville Centre	NY
	New York Methodist Hospital	Brooklyn	NY
	Saint Luke's Roosevelt Hospital	New York	NY
	<i>including:</i> Roosevelt Hospital	New York	NY
	Westchester Medical Center	Valhalla	NY
Syracuse, NY	University Hospital SUNY Upstate Medical University	Syracuse	NY
Utica, NY	Faxton - Saint Luke's Healthcare	Utica	NY
Philadelphia, PA	Albert Einstein Medical Center	Philadelphia	PA
	Barix Clinics of Pennsylvania	Langhorne	PA
	Temple University Hospital	Philadelphia	PA
	<i>including:</i> Temple University Hospital - Episcopal	Philadelphia	PA
Dallas-Ft. Worth, TX	Pine Creek Medical Center	Dallas	TX
	Vista Hospital of Dallas	Garland	TX
Houston, TX	Bayshore Medical Center	Pasadena	TX
	<i>including:</i> East Houston Regional Medical Center	Houston	TX
Lubbock, TX	University Medical Center	Lubbock	TX
Victoria, TX	Citizens Medical Center	Victoria	TX
Wichita Falls, TX-OK	United Regional	Wichita Falls	TX
Norfolk, VA	Bon Secours - Maryview Medical Center	Portsmouth	VA
	Sentara Careplex Hospital	Hampton	VA
La Crosse-Eau Claire, WI	Gundersen Lutheran Medical Center	La Crosse	WI

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