



California Pacific  
Medical Center

A Sutter Health Affiliate

Community Based, Not For Profit

# Minimally Invasive Surgery for Morbid Obesity

## CALIFORNIA PACIFIC MINIMALLY INVASIVE SURGERY PROGRAM

At California Pacific Medical Center we are committed to caring for patients with morbid obesity. Our program, established in 1999, is comprehensive and our staff is experienced, treating over 1,000 patients with all levels of obesity. Through this procedure profile, our physicians illustrate the risks of obesity, the surgical options available for treating morbid obesity, and the outcomes that can be expected.

For patient referrals:  
(888) 637-2762

[www.cpmc.org/lapsurg](http://www.cpmc.org/lapsurg)

### Why surgery for obesity?

Morbid obesity is defined as being 100 pounds or more overweight. People with this level of obesity suffer numerous medical problems such as diabetes, sleep apnea, high blood pressure, joint disease, and high cholesterol. While medical therapy and dietary therapy can improve weight-related conditions, surgical weight reduction offers a more durable option to improve most weight-related medical conditions. The National Institutes of Health and numerous other medical organizations have endorsed surgical weight reduction as an effective method for treating morbid obesity.

### Who is a candidate for weight-loss surgery?

Individuals must meet the National Institutes of Health guidelines for morbid obesity surgery established in 1991, as well as additional criteria intended to make the surgery safe and yield good outcomes.

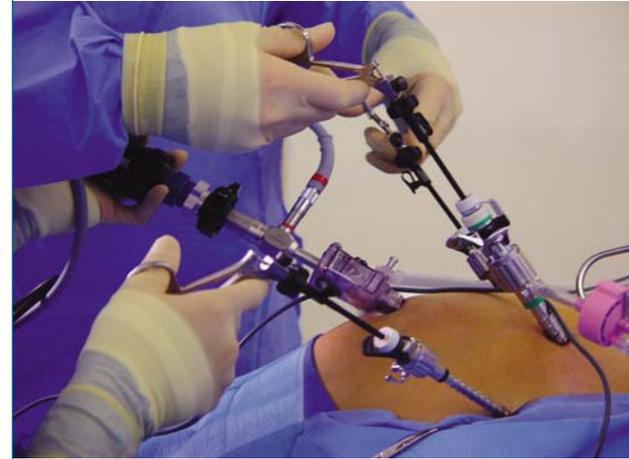
#### SURGERY CRITERIA:

- Candidates must have a BMI greater than 40 kg/m<sup>2</sup> (about 100 pounds overweight) or greater than 35 kg/m<sup>2</sup> with medical comorbidities, such as diabetes, hypertension, elevated cholesterol, degenerative joint disease, or sleep apnea.
- Age greater than 18 or less than 60 years old.
- Medically healthy enough to tolerate major surgery.
- No serious underlying psychiatric disorders, substance abuse, or narcotic dependency.

Complex medical conditions and limited mobility increase the risk of surgery and are considered on a patient-by-patient basis.

### How is the surgery done?

Weight-loss surgery has evolved rapidly over the last 10 years. The development of laparoscopic surgery has allowed us to perform these procedures through smaller incisions. The benefit for



patients is less pain, smaller scars and a quicker recovery. Weight loss is accomplished by caloric restriction, malabsorption, or both. Restriction involves altering the stomach to limit how many calories can be consumed. Malabsorption involves separating food from digestive juices by bypassing a portion of the intestines. Please reference the comparison table for a detailed analysis and illustration of each procedure.

### What are the risks of surgery?

As with any surgery, complications and even death can occur. Fortunately, however, serious complications happen in less than 10% of obesity surgery patients. Proper patient selection, preparation, and surgeon experience can markedly reduce the risk and complications of the surgery. A list of potential complications for each procedure is included in our comparison table.

### Insurance coverage

Most insurance policies cover some or all of the surgery expenses for morbid obesity. However, patients should be aware that there are often out-of-pocket expenses, depending on the procedure and their insurance carrier. Total patient expenses can vary greatly and some procedures may not be covered by insurance.

# Minimally Invasive Surgery for Morbid Obesity

## “Lori”



26 months after surgery  
Lost 103 pounds  
BMI 24

I was 11 when an aunt took me to a popular diet center because I was “too big.” I was on a diet for the next 15 years. I married when I was 19 years old, and after that I really put on the weight. I did every diet imaginable. Of course, I would lose some and then gain back twice as much. At age 26, I said “no more diets.” I happened to catch a TV show where a woman lost weight with weight-loss surgery. I was amazed and thought, “that’s a miracle.” I found out that bariatric surgery was offered at California Pacific Medical Center and met my surgeon in July of 2001. I felt very lucky to have such a caring, knowledgeable, and friendly surgeon in a great hospital. I decided to have weight-loss surgery in February 2002. My insurance approved the procedure and my surgery went very well. This has been a wonderful choice. Within the first year I lost almost 100 pounds and have maintained my weight loss. Most importantly, I am healthy and will live a longer, fuller, and more exciting life. It brings tears to my eyes to think how far I have come.



Before surgery  
BMI 43

## “Marie”



14 months after surgery  
Lost 221 pounds  
BMI 24

I have been overweight for my entire life. At six-feet tall, I was able to carry my weight, but I still felt self-conscious about being so big. As my weight went up, my health problems did too. I was diagnosed with sleep apnea and also had joint pain in my knees and ankles that made climbing stairs difficult. After much research, I felt that my only choice was to have weight-loss surgery. I found a surgeon who helped me choose the right procedure and decided to have the surgery at California Pacific Medical Center. I had a complication after surgery and I was scared, but the nurses and doctors caring for me were excellent. My surgeon was aggressive about investigating any problems I experienced. I don't feel weight-loss surgery is the answer for everyone, but it was exactly the right choice for me. It was truly a life-saving operation and the long-term support has been wonderful, too. I have lost over 200 pounds in the 14 months since surgery. All of my health problems have resolved and I have tons of energy. I have so many clothing choices when I go to stores; I have a hard time making up my mind!



Before surgery  
BMI 54

## For more information

Visit our Web site [www.cpmc.org/lapsurg](http://www.cpmc.org/lapsurg) or contact **Gregg Jossart, M.D.**, Medical Director, Minimally Invasive Surgery, [jossarg@sutterhealth.org](mailto:jossarg@sutterhealth.org).

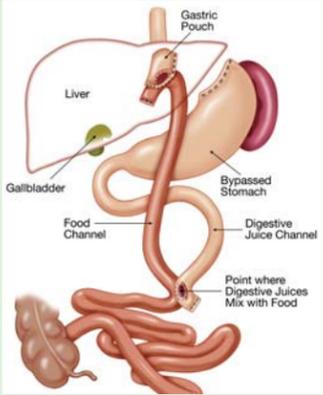
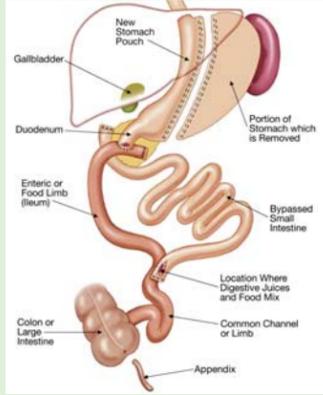
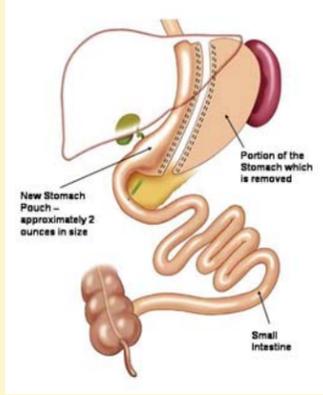
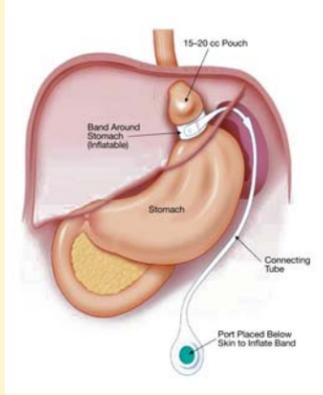
For patient referrals, please contact our specialty referral coordinators at 1 (888) 637-2762.

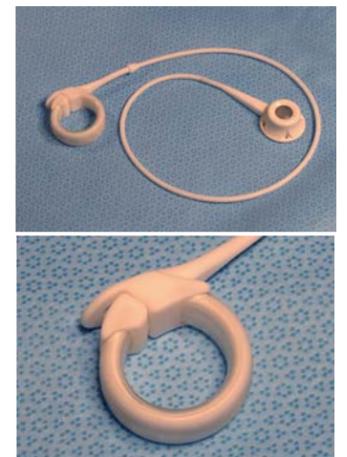
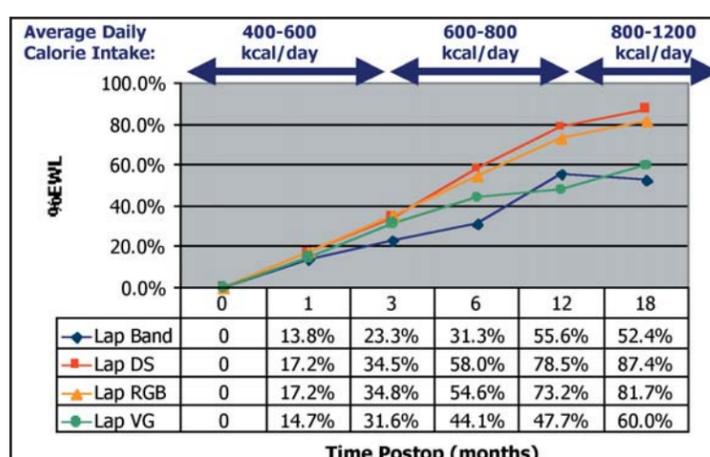
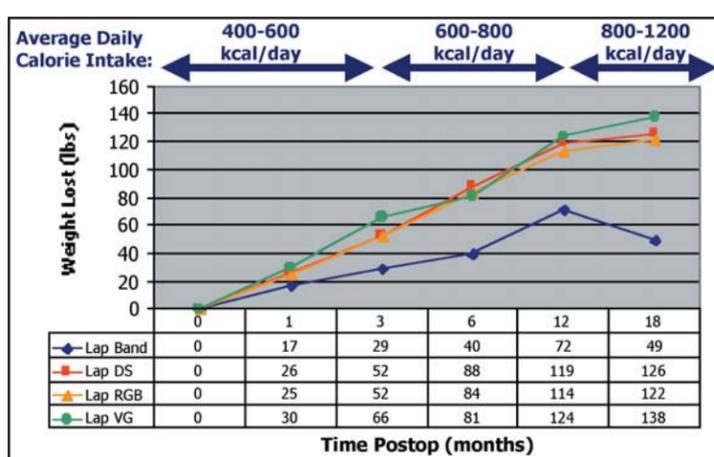
Sponsored in part by a grant from the Joseph H. Friend Laparoscopy Education Center.

All images, tables, and illustrations are copyrighted and made available courtesy of Laparoscopic Associates of San Francisco™. Copyright © Laparoscopic Associates of San Francisco.

Copyright © California Pacific Medical Center. All rights reserved.  
SURG-obesitypro-2004

# Comparison of Weight Loss Procedures Performed at California Pacific Medical Center

Modality of Weight Loss	Restrictive and Malabsorptive (stomach and intestines)		Restrictive (stomach only)	
Type of Operation	Roux-en-Y Gastric Bypass (RNY, RGB)	Vertical Gastrectomy with Duodenal Switch (DS)	Vertical Gastrectomy (VG)	Lap-Band® Adjustable Gastric Banding (LAGB) System
<b>Anatomy</b>	 <p>Small 1-oz pouch (20–30cc) connected to the small intestine. Food and digestive juices are separated for 3–5 feet.</p>	 <p>Long vertical pouch measuring about 4–5 oz (120–150cc). The duodenum (first portion of the small intestine) is connected to the last 6 feet of small intestine. Food and digestive juices are separated for more than 12 feet.</p>	 <p>Long narrow vertical pouch measuring 2–3 oz (60–100cc). Identical to the duodenal switch pouch but smaller. No intestinal bypass performed.</p>	 <p>An adjustable silicone ring (band) is placed around the top part of the stomach creating a small 1–2 oz (15–30cc) pouch.</p>
<b>Mechanism</b>	<ul style="list-style-type: none"> <li>Significantly restricts the volume of food that can be consumed</li> <li>Mild malabsorption</li> <li>“Dumping Syndrome” when sugar or fats are eaten</li> </ul>	<ul style="list-style-type: none"> <li>Moderately restricts the volume of food that can be consumed</li> <li>Moderate malabsorption of fat causing diarrhea and bloating</li> </ul>	<ul style="list-style-type: none"> <li>Significantly restricts the volume of food that can be consumed</li> <li>NO malabsorption</li> <li>NO dumping</li> </ul>	<ul style="list-style-type: none"> <li>Moderately restricts the volume and type of foods able to be eaten</li> <li>Only procedure that is adjustable</li> <li>Delays emptying of pouch</li> <li>Creates sensation of fullness</li> </ul>
<b>Weight Loss—United States average statistical loss at 10 years</b>	<ul style="list-style-type: none"> <li>70% loss of excess weight</li> <li>More failures (loss of &lt;50% excess weight) than the DS</li> </ul>	<ul style="list-style-type: none"> <li>80% loss of excess weight</li> <li>More patients lose too much weight or develop nutritional problems than the RNY</li> </ul>	<ul style="list-style-type: none"> <li>60–70% excess weight loss at 2 years</li> <li>Long term results not available at this time</li> </ul>	<ul style="list-style-type: none"> <li>60% excess weight loss</li> <li>Requires the most patient effort of all procedures to be successful</li> </ul>
<b>Long-Term Dietary Modification (Excessive carbohydrate/high calorie intake will defeat all procedures)</b>	<ul style="list-style-type: none"> <li>Patients must consume less than 800 calories per day in the first 12–18 months; 1000–1200 thereafter</li> <li>3 small high protein meals per day</li> <li>Must avoid sugar and fats to prevent “Dumping Syndrome”</li> <li>Vitamin deficiency/protein deficiency usually preventable with supplements</li> </ul>	<ul style="list-style-type: none"> <li>Must consume less than 1000 calories per day in the first 12–24 months; 1200–1500 thereafter</li> <li>Consumption of fatty foods causes diarrhea and malodorous gas/stool</li> <li>Failure to adhere to vitamin supplement regimen and consumption of high protein meals more likely to result in deficiency than RNY</li> </ul>	<ul style="list-style-type: none"> <li>Must consume less than 600–800 calories per day for the first 12–24 months; 1000–1200 thereafter</li> <li>No dumping, no diarrhea</li> <li>Weight regain may be more likely than in other procedures if dietary modifications not adopted for life</li> </ul>	<ul style="list-style-type: none"> <li>Must consume less than 800 calories per day for 18–36 months; 1000–1200 thereafter</li> <li>Certain foods can get “stuck” if eaten (rice, bread, dense meats, nuts, popcorn) causing pain and vomiting</li> <li>No drinking with meals</li> </ul>
<b>Nutritional Supplements Needed (Lifetime)</b>	Multivitamin, vitamin B <sub>12</sub> , calcium, iron (menstruating women)	Multivitamin, ADEK vitamins, calcium, iron (menstruating women)	Multivitamin, calcium	Multivitamin, calcium
<b>Potential Problems</b>	<ul style="list-style-type: none"> <li>Dumping Syndrome</li> <li>Stricture</li> <li>Ulcers</li> <li>Bowel obstruction</li> <li>Anemia</li> <li>Vitamin/mineral deficiencies (iron, vitamin B<sub>12</sub>, folate)</li> <li>Leak</li> </ul>	<ul style="list-style-type: none"> <li>Nausea and vomiting</li> <li>Heartburn</li> <li>Severe diarrhea</li> <li>Kidney stones</li> <li>Stricture</li> <li>Ulcers (less than RNY)</li> <li>Bowel obstruction</li> <li>Nutritional/vitamin deficiencies (vitamins A,D,E,K)</li> <li>Loss of too much weight requiring reoperation</li> <li>Leak</li> </ul>	<ul style="list-style-type: none"> <li>Nausea and vomiting</li> <li>Heartburn</li> <li>Inadequate weight loss</li> <li>Weight regain</li> <li>Additional procedure may be needed to obtain adequate weight loss</li> <li>Leak</li> </ul>	<ul style="list-style-type: none"> <li>Slow weight loss</li> <li>Slippage</li> <li>Erosion</li> <li>Infection</li> <li>Port problems</li> <li>Device malfunction</li> </ul>
<b>Hospital Stay</b>	2–3 days	3–4 days	1–2 days	Overnight (<1 day)
<b>Time off Work</b>	2–3 weeks	2–3 weeks	1–2 weeks	1 week
<b>Operating Room (OR) Time</b>	2 hours	3 hours	1.5 hours	1 hour
<b>Our Recommendation</b>	Most effective for patients with a BMI of 35-55 kg/m <sup>2</sup> and those with a “sweet-tooth.” Virtually all insurance companies will authorize this procedure.	Best for patients with a BMI of >50 kg/m <sup>2</sup> . Those with BMI of <45 kg/m <sup>2</sup> may lose too much weight. Higher overall incidence of complications than other procedures. Most insurance companies will NOT authorize this procedure.	Utilized for high risk or very heavy (BMI >60 kg/m <sup>2</sup> ) patients as a “first-stage” procedure. Very low complication rate due to quicker OR time and no intestinal bypass performed. Insurance companies authorize this procedure in select patients.	Best for patients who enjoy participating in an exercise program and are more disciplined in following dietary restrictions. Many insurance companies will NOT authorize this procedure.



Lap-Band® adjustable gastric band

## Weight Lost over 18 Months