A newsletter from **EUGENE GASTROENTEROLOGY CONSULTANTS, P.C.**, the largest and most experienced digestive specialty group in Lane County.

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Bariatric Surgery: A primer of techniques and complications

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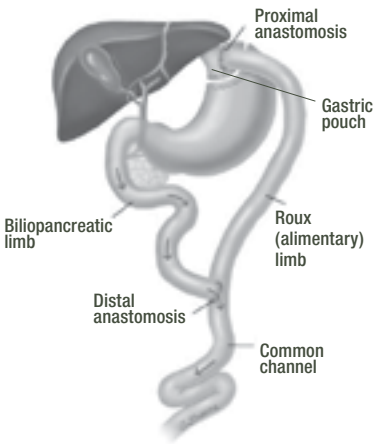
Obesity is defined as body mass index (BMI) of > 30 kg/square meter. Overweight individuals have BMI > 25 kg/square meter. A third of Americans (approximately 72 million) are obese, and nearly 65 percent are overweight, contributing to profound morbidity and early mortality. Everywhere there is abundant evidence of this phenomenon.

While eating less and exercising more is undoubtedly the best prescription for sustained weight reduction and control, this is not a successful strategy for many patients. Surgical intervention for weight loss has therefore emerged as a reasonable option for a small percentage of obese individuals. As the frequency of bariatric surgery increases, primary care providers (PCPs) will encounter more patients with complications. PCPs should have a basic working knowledge of these surgeries and their potential complications.

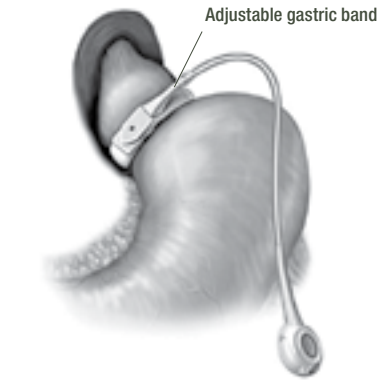
Roux-en-Y Gastric Bypass (RYGB)



A small gastric remnant (thumb-sized) is separated from the excluded stomach with a gastrojejunal anastomosis via a Roux-en-Y small bowel arrangement. The excluded stomach, duodenum and subsequent pancreatico-biliary secretions are returned into continuity with the small bowel via a bilio-pancreatic limb, as noted in the figure. The mechanism of weight loss is both restrictive (due to the small size of the gastric pouch) and malabsorptive.

RYGB is the most common bariatric surgery, largely because of its efficacy, relative technical simplicity (can be performed laparoscopically) and insurance coverage. Complications include bleeding from ulcers at the anastomoses; obstruction due to stomal stenosis, leading to nausea/vomiting; cholelithiasis; incisional or internal hernias; short bowel syndrome; dumping syndrome; hypoglycemia; diarrhea; and, rarely, gastric remnant distention and perforation.

Laparoscopic Adjustable Gastric Banding (LAGB)



A tight, adjustable prosthetic band is placed around the upper part of the stomach, creating a small compartment. The band tightness can be adjusted via the injection of fluid into a subcutaneous port connected to the band by tubing. The mechanism of action is entirely restrictive, and the capacity of the stomach is reduced to approximately 1 cup.

Advantages include technical simplicity; lower peri-operative complications, including mortality; and adjustability if necessary (e.g., pregnancy or LAGB complications). The LAGB can also potentially be removed with restoration of anatomy nearly back to normal.

Disadvantages include slower rate and less durability of weight loss, with high rate of revisional surgery; pouch dilation; stomal obstruction; band erosion/slippage; band infection; incisional hernias; port-tube disconnections; reflux esophagitis; and esophageal dilation from regurgitation.

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We invite your comments and suggestions for topics in future editions. Also, if you would rather receive this newsletter electronically or not at all, email newsletter@eugenegi.com.

Page Crenshaw, FNP, CGRN

Meet Page Crenshaw, FNP

Page Crenshaw, FNP, CGRN, was born in Memphis, Tenn. Like her father, who was in the Navy, she did a stint in the military. In her thirties, Page followed in her mother's footsteps and became a nurse. She joined Oregon Endoscopy Center in 2004, and received her certification in gastroenterology nursing the next year. While working full-time at OEC, Page earned her Nurse Practitioner degree in 2013, when she joined Eugene Gastroenterology Consultants. With extensive experience assisting in all endoscopic procedures and esophageal manometry, Page offers a unique perspective on gastroenterology care as she interacts with patients and sees them for a broad range of digestive issues.

After 20 years in nursing, Page is delighted she can mesh her love of knowledge with her passion for individualized compassionate care. When not working, Page and her partner enjoy camping and traveling, especially fun activities with their border collie, Jack, even if they must leave the cats at home.

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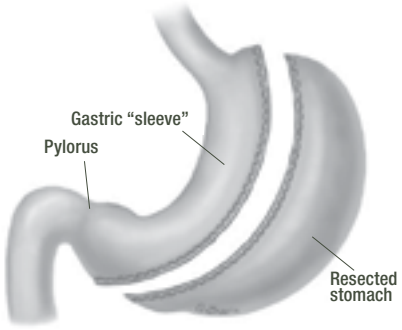
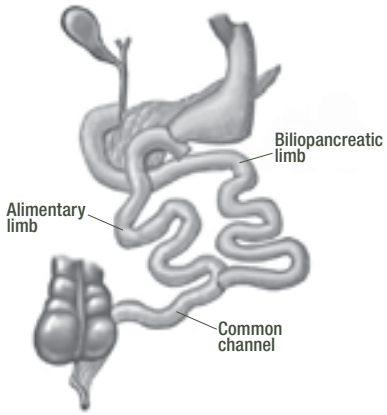
Sleeve Gastrectomy (SG)



A partial gastrectomy is completed, where the majority of the greater curvature is resected, creating a tubular stomach. Sometimes SG is offered to those who are super-obese (BMI > 60 kg/square meter) as the initial stage in surgical management, to be followed by RYGB or other surgery subsequently. The primary mechanism of action is restrictive, as there is no bypass of intestine.

SG is technically easier to perform and safer than RYGB, as it requires no anastomosis, and risk of internal hernias and malabsorption is eliminated. SG is quite effective with weight-loss results on a spectrum between LAGB and RYGB. Complications include bleeding; stenosis, causing obstruction of the esophagus or gastric outlet; esophageal reflux; and gastric leaking.

Biliopancreatic Diversion with Duodenal Switch (BPD/DS)



BPD/DS, a complicated surgery, is essentially a hybrid of SG and RYGB: A pylorus-sparing, partial-sleeve gastrectomy is connected to a Roux limb with a short common channel. The primary mechanism of weight loss is malabsorption, with a smaller contribution from restriction. This procedure is reserved for only a select minority of patients because of the complex surgery and the high risk of long-term malabsorption (nutritional derangements such as vitamin deficiency). It is performed laparoscopically less often than other bariatric surgeries, although technical expertise is increasing.

When referral is necessary

If a patient may be experiencing complications of bariatric surgery, primary care physicians should first encourage the patient to contact the bariatric surgeon who performed the procedure for follow up. With the emergence of "medical tourism," when patients may seek surgical procedures overseas, patients experiencing a complication from bariatric surgery may have no established relationship with a local bariatric center.

In this circumstance, the PCP should personally contact a trusted local bariatric surgeon to see if he/she is willing to accept the patient in referral, even if surgery was performed elsewhere. Post-bariatric surgical care is optimally provided by a bariatric center that routinely enlists the assistance of gastroenterology for complications such as bleeding, obstruction, pain, reflux, nausea, vomiting and nutritional deficiencies. Often, endoscopic intervention is not only diagnostic but therapeutic.

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