

Chapter 20: Surgery

1. Bariatric surgery is usually reserved for those patients who have attempted to make reasonable attempts to lose weight through lifestyle changes but were unsuccessful. Insurance companies typically require documentation of such efforts. These procedures are generally very effective. Diabetes and hypertension often resolve through a combination of the procedure itself and the diet following the procedure. However, with time, if the person undergoing such a procedure does not alter their lifestyle, much of the weight loss will be regained.
2. Bariatric surgery
 - a. **Laparoscopic adjustable gastric banding.** This procedure is the least invasive. It involves placing a removable band through the stomach wall and around the upper stomach using a laparoscope. The main drawback with these devices is that they have a removal rate of 25-40% during the following 5 years. One can expect 30-50% in excess body weight at 2 years. Persons with a lower BMI and no significant metabolic diseases are perhaps the best candidates for such a device.
 - b. **Vertical sleeve gastrectomy.** This is perhaps the most frequently performed bariatric procedure at the present time. The expected loss in percent excess body weight at 2 years is 50-70%. As the name implies, it involves most of the stomach so it resembles more of a tube like the small and large intestine rather than a sac.

- c. **Roux-en-Y gastric bypass.** It involves rerouting of the small intestine. The main drawback is an increased risk of complications due to malabsorption. The expected loss in percent excess body weight at 2 years is 60-75%. This is for those with higher BMIs, GERD and type 2 diabetes.
 - d. **Biliopancreatic diversion with duodenal switch.** This is perhaps the most extreme bariatric procedure. Although it can result in the greatest amount of weight loss and resolution of metabolic diseases. There is increased risk for malabsorption syndromes resulting in macronutrient vitamin and mineral deficiencies. The expected loss in percent excess body weight at 2 years is 70-80%. This procedure is generally for those with higher BMIs and type 2 diabetes.
- 3. Many vitamins and minerals need to be monitored and following bariatric procedures. Such vitamins include vitamins B1, P9, B12, and D. Minerals that need to be monitored include calcium and iron. For the biliopancreatic diversion with duodenal switch, other vitamins and minerals need to be monitored including vitamin A, vitamin D, vitamin K. Zinc and copper also need to be monitored following this procedure.
- 4. Chapter summary
- 5. Resources
 - a. Gastric Sleeve 2019-2020, 2 books in 1, The Ultimate Guide, Younan Campbell
 - b. Obesity algorithm, obesity medicine Association, 2020