

*Module 2, Lesson 10 Handout:*

## Weight Loss Procedures Cheat Sheet

Weight loss procedure interventions are changing and improving fairly rapidly and it can be hard to keep up with all of the changes. It's important to be able to differentiate between the different types of weight loss procedures (also referred to as bariatric metabolic surgery), be up to date on the latest research around weight loss procedures and understand a few quick facts about what each of these procedures consists of. You may have clients who've had a weight loss procedure in the past or may be considering one, so it's important to understand the discussions they are having with the rest of their healthcare team.

### The Basics

While some weight loss surgeries are very invasive and irreversible, some are done using minimally invasive procedures and are even reversible. To understand the mechanisms and tools used during these surgeries, it helps to first understand the difference between a laparoscopic and endoscopic procedure.

A **laparoscopy** is a minimally invasive surgical procedure performed in the abdomen or pelvis using small incisions and a camera.

An **endoscopy** is a nonsurgical procedure using a flexible tube with a light and camera attached at the end to view the digestive tract.

### Weight Loss Procedures

Here are a few common weight loss procedures and some quick need to know facts about each.

#### **Roux-En-Y Gastric Bypass (RYGB)**

Type of surgery: Laparoscopic

How it works: A small pouch is made on the upper portion of the stomach, known as the gastric pouch, which serves as the new, smaller stomach. Then the small intestine is re-attached to this gastric pouch. The food bypasses the duodenum (the first part of the small intestine) and enters at the jejunum (the second part of the small intestine). Essentially, creating a smaller stomach reduces the overall volume of food a person is able to eat, leads to caloric restriction and ultimately results in weight loss.

## Key facts:

- Considered the gold standard of bariatric surgeries
- There has been a decrease in the number of RYGBs performed as the sleeve gastrectomy (SG) becomes increasingly popular
- Long term weight loss after RYGB ranges from 50%-72%
- Vitamin and mineral deficiencies are common with this procedure. Most people have to take supplements and follow a strict diet. Iron, folate and vitamin B12 are some of the most commonly supplemented vitamins and minerals in those who undergo a RYGB
- Pre-surgery it's usually recommended to lose weight
- Post-surgery, the person will follow a phase by phase diet that starts with liquids and gradually increases over a period of a few weeks to avoid dumping syndrome. If you're not specifically trained in this area, you should refer your client to an RDN who is
- After about 4 months on the phase diet, the client can begin working on a stabilization diet that focuses on portion controlled, balanced eating habits

## **Sleeve Gastrectomy (SG)**

Type of surgery: Laparoscopic

How it works: Similar to the RYGB except there is no reconnection of the stomach to the small intestine. When you hear SG, think banana. Most of the stomach is removed, leaving a banana shaped pouch that's about 20%-25% the size of the original stomach. The duodenum remains intact to the distal end of the stomach. Just like the RYGB, a smaller stomach leads to quicker satiety and less intake, which results in weight loss. This procedure also reduces ghrelin (the hormone that stimulates appetites), increases GLP-1 (the hormone that stimulates insulin production after a meal) and increases PYY3-36 (the hormone that inhibits gut motility and causes a sense of satiety).

## Key facts:

- Total weight loss is typically 60% over 12 to 18 months
- Compared to the RYGB there fewer long term complications
- Similar to RYGB, pre-surgery it's usually recommended to lose weight and the post surgery diet will follow a phase system that starts with a liquid diet and gradually increases. If you are not specifically trained in this area, you should refer your client to an RDN who is

## Endoscopic Sleeve Gastroplasty (ESG)

Type of surgery: Endoscopic version of the SG

How it works: A long flexible tube called an endoscope is inserted down the throat into the stomach, with a light and camera attached at the end to view the intestines. Then the stomach is sutured to the small banana pouch shape.

Key Facts:

- Total weight loss after ESG ranges from 15%-20% at 12 to 24 months
- This procedure leaves no scars and has few complications, and is becoming increasingly popular in the world of bariatric metabolic surgery

## Adjustable Gastric Band

Type of surgery: Laparoscopic

How it works: This procedure uses an adjustable band to make the stomach smaller. A silicon band is slipped around the top of the stomach, making it smaller to help a person decrease their food intake.

Key facts:

- This procedure is reversible
- Weight loss after this procedure ranges from 40%-50%, but weight is lost at a slower rate than other procedures
- It's not considered a metabolic procedure since there's no change to the metabolic function of the stomach and intestines
- The band can slip and cause complications with this procedure, and some people are not comfortable having a foreign object in their body

## Biliopancreatic Diversion with Duodenal Switch (BPD/DS)

Type of surgery: Laparoscopic or open surgery

How it works: This procedure occurs in 2 stages: Stage 1 is a SG (see above), removing about 80% of the stomach. Stage 2 is an intestinal bypass, where the ileum (the third part of the small intestine) is connected to the duodenum, interrupting the normal path of digestion and bypassing about 2/3 of the small intestine

Key facts:

- Weight loss after BPD/DS ranges from 60%-70%
- There are higher risks for complications and vitamin and mineral deficiencies with this procedure than with other weight loss procedures

- This procedure allows people to eat larger meals with weight loss due to hormonal changes

## **Orbera**

Type of surgery: Endoscopic

How it works: In this procedure, a silicone balloon is inserted through the nose or esophagus, then gets inflated to shrink the stomach. This balloon is placed in the stomach for a maximum of 6 months.

Key facts:

- Weight loss ranges from 20%-30% making this a good option for those who have smaller weight loss goals
- This procedure isn't very common in the United States, so some clients may not have heard of this

Now you have a deeper understanding of the mechanisms, and metabolic and physical changes that occur during weight loss procedures. Your most important role when seeing clients who have had a procedure done or are considering one is to help them maintain healthy dietary and lifestyle habits that will help them lose weight and live a Nutritious Life for the long term.