

Nutrition Nibbles Consulting, LLC

Bariatric Surgery Fears



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Making the Decision

- ▶ The decision to have bariatric surgery for weight loss continues to grow in emerging nations worldwide.
 - ▶ As the prevalence continues to escalate, the increasing amount of conflicting information available online can lead to fear and anxiety for pre-op patients.
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Learning Objectives

- ▶ By the end of this class, my goal is for you to:
 - Recognize the most common fears that pre-op patients are experiencing
 - Feel confident in your weight loss surgery journey
 - Feel prepared for your post-op journey and understand the realistic expectations
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Preparing for Weight Loss Surgery: Nutrition History Questionnaire

- ▶ My goal is to help you feel confident and prepared for surgery.
 - What are your biggest fears (if any) associated with bariatric surgery?

 - ▶ This surgery will affect the way that you eat for the rest of your life.
 - What questions or concerns do you have regarding food and nutrition after surgery?
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Fear of the unknown

- ▶ Fear of the unknown is a very common answer from my patients
 - ▶ Many of them only know extreme dieting and weight cycling their entire lives
 - ▶ Can't imagine how they will be full and satisfied with such small portions
 - ▶ Can't imagine losing significant weight and keeping it off
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“The surgery won’t work for me.”

- ▶ The ASMBS states that patients may lose as much as 60% of excess weight six months after surgery and 77% of excess weight as early as 12 months after surgery
 - ▶ On average, five years after surgery, patients maintain 50% of their excess weight lost
 - ▶ Majority of bariatric surgery patients with diabetes, dyslipidemia, hypertension, and obstructive sleep apnea experience remission of these obesity-related diseases
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Calculating Excess Weight

We need to start this discussion by defining excess weight, which is how much “extra” weight someone is carrying.

Excess weight can be calculated by taking your actual weight and subtracting your ideal weight (www.calculator.net/ideal-weight-calculator).

If you weigh 250 pounds and your ideal weight is 150 pounds, then your excess weight would be 100 pounds.

The below breakdown shows you the expected weight-loss with each of the different surgical procedures.

- ▶ Sleeve Gastrectomy – 60% of excess weight
- ▶ Roux-en-y Gastric Bypass – 70% of excess weight

“The surgery won’t work for me.”

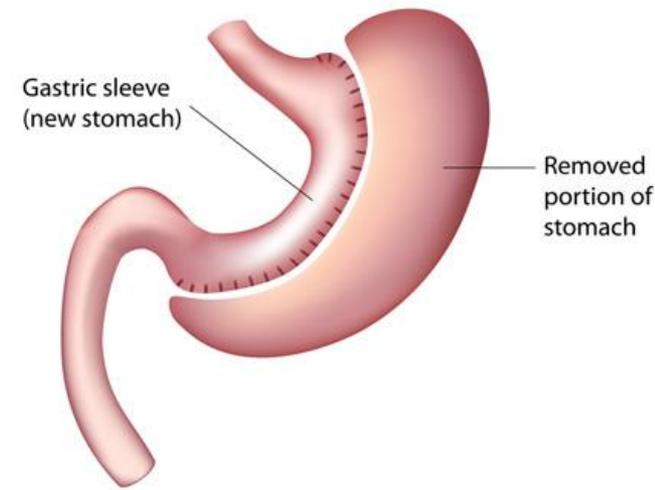
Types of Bariatric Surgery

- ▶ Restrictive procedures
 - Adjustable gastric band (lap band)
 - Vertical sleeve gastrectomy (VSG)
- ▶ Restrictive + Malabsorptive procedures
 - Roux-en-Y gastric bypass (RYGB)
 - Biliopancreatic diversion with duodenal switch (BPD/DS)
- ▶ Aids in weight loss by:
 - Restricts the amount of food that the stomach holds
 - Limits the amount of calories and nutrients the body absorbs
 - Alters the gut hormones, which increase fullness and contribute to appetite suppression

Vertical sleeve gastrectomy (VSG)

- ▶ A laparoscopic procedure that restricts the size of the stomach pouch and its ability to hold food
- ▶ There is no rerouting of the intestines and no foreign band introduced to the body
- ▶ 70% to 80% of the **gastric fundus** is removed, leaving a tubular pouch that resembles a banana
- ▶ The intestines remain intact
- ▶ Irreversible procedure

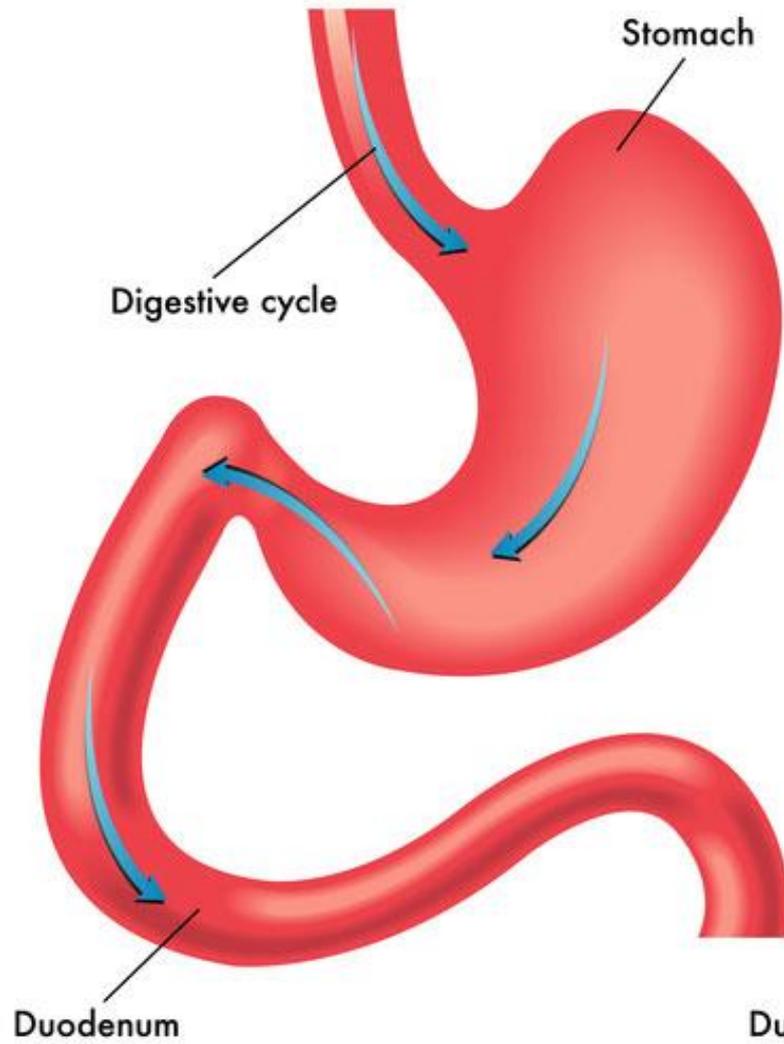
Vertical Sleeve Gastrectomy



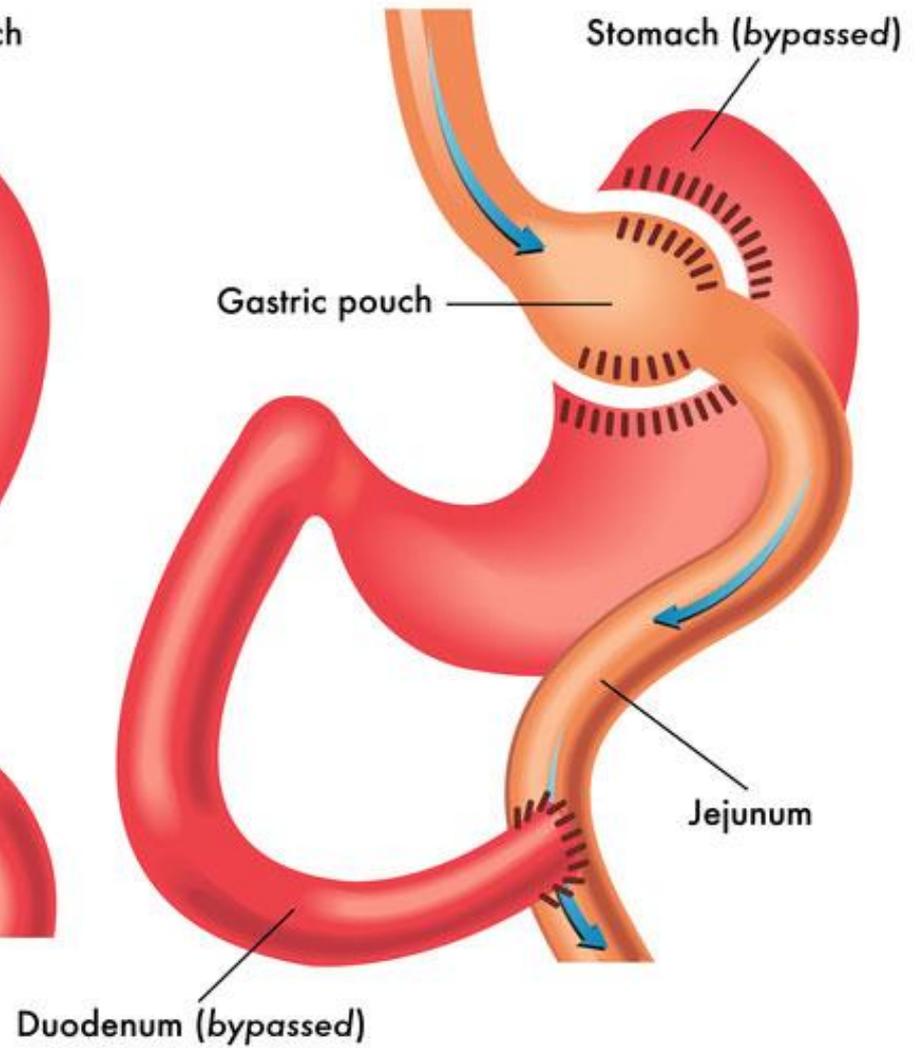
Gastric Bypass (Roux-en-Y)

- ▶ Laparoscopic procedure with small incisions to the abdomen
 - ▶ The surgeon creates a small stomach pouch (about the size of an egg) by dividing the top of the stomach from the rest of the stomach
 - ▶ The duodenum and the proximal jejunum are bypassed
 - ▶ The remaining jejunum is attached to the new, smaller stomach. This forms a "Y" shape.
 - ▶ This bypass results in malabsorption.
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Before Surgery



After Surgery



Prevalence

- ▶ The total number of bariatric procedures performed **worldwide** in **2013** was 468,609
 - 45% were gastric bypass surgeries
 - 37% vertical sleeve gastrectomy
 - 10% adjustable lap band
- ▶ An estimated 256,000 bariatric surgeries were performed in 2019 (in this country), which represents less than 1% of the currently eligible surgical population based on body mass index (BMI).

Estimate of Bariatric Surgery Numbers, 2011-2019

	2011	2012	2013	2014	2015	2016	2017	2018	2019*
Total	158,000	173,000	179,000	193,000	196,000	216,000	228,000	252,000	256,000
Sleeve	17.8%	33.0%	42.1%	51.7%	53.6%	58.1%	59.4%	61.4%	59.4%
RYGB	36.7%	37.5%	34.2%	26.8%	23.0%	18.7%	17.8%	17.0%	17.8%
Band	35.4%	20.2%	14.0%	9.5%	5.7%	3.4%	2.7%	1.1%	0.9%
BPD-DS	0.9%	1.0%	1.0%	0.4%	0.6%	0.6%	0.7%	0.8%	0.9%
Revision	6.0%	6.0%	6.0%	11.5%	13.6%	14.0%	14.1%	15.4%	16.7%
Other	3.2%	2.3%	2.7%	0.1%	3.2%	2.6%	2.5%	2.3%	2.4%
Balloons	—	—	—	—	0.3%	2.6%	2.8%	2.0%	1.8%

ASMBS Website

- ▶ <https://asmbs.org/resource-categories/fact-sheets>
- ▶ **The American Society for Metabolic and Bariatric Surgery (ASMBS) is the largest national society for this specialty.**

Fear: the liquid diet

- ▶ The liquid diet is one the most anticipated events before undergoing weight loss surgery.
 - ▶ The purpose is to help shrink the liver.
 - ▶ By drinking a very low calorie diet during the pre-op liquid phase, it forces the body to use glycogen as an energy source.
 - ▶ As the glycogen breaks down, the liver becomes smaller.
 - ▶ This allows the surgeon to see more of the abdomen in the operating room and perform the surgery safely.
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Plan ahead

▶ Full Liquid Diet: 7 days prior to surgery

- Breakfast:
 - Ready-to-drink protein shake
- Snack:
 - Low sugar yogurt
- Lunch:
 - Fat-free, low-sodium cream soup, strained
- Snack:
 - Sugar free pudding or jello
- Dinner:
 - Fat-free, low-sodium cream soup, strained
- Dessert:
 - Low sugar Greek Yogurt

Plan ahead

- ▶ Protein shakes – **Ready to Drink**
 - Premier Protein
 - Premier Protein with Oats (for high fiber!)
 - **Dairy-Free:**
 - Keep in mind the protein is slightly lower for these options (20g per container) and the sugar is slightly higher (4–5g)
 - These options are high in fiber!
 - Aloha, Evolve, Owyn

Plan ahead

▶ Protein shakes – Powder

- **Recipe:** Combine 1 scoop of protein powder to 1 cup of water or fat-free milk; add ice and mix in a blender
- **Recommend brands:**
 - Premier Protein
 - Unflavored:
 - Garden of Life Raw Organic Protein Powder Unflavored, No Stevia
 - Unjury unflavored protein powder
 - Genepro unflavored protein powder

Fear: the puree diet

- ▶ The purpose: to help ease the body into digesting regular textures.
- ▶ Think of it as helping the body breakdown, absorb and digest.
- ▶ Patients do NOT have to rely on baby food and all meals from a blender
- ▶ Protein is often a concern for patients at this time
- ▶ **Tips:**
 - Have a plan
 - Take it slow
 - Prioritize water and protein intake
 - Restart the bariatric multivitamin, calcium and B12
 - Get moving

“Will I have to be on a liquid diet for the rest of my life?”

- ▶ More often than not, protein shakes are not needed for long after weight loss surgery
- ▶ The ASMBS recommends at least 60g of protein a day.
 - This goal can be reached when a patient is eating 3 ounces of protein at three meals a day.
 - Therefore, most patients can wean down and off liquid protein once they've reached regular textures
- ▶ Set a schedule of three meals a day and focus on a dense protein sources at each meal

Fear: potential complications

- ▶ Per the ASMBS, bariatric surgery has complication and mortality rates (4% and 0.1%, respectively) comparable to some of the safest and most commonly performed surgeries in the U.S., including gallbladder surgery, appendectomy and knee replacement.
- ▶ Common fears:
 - Worsening acid reflux
 - Dumping syndrome
 - Chronic nausea/vomiting
 - Leakage

Fear: potential complications

- ▶ There are several advantages to **pre-op weight loss**
- ▶ A large-scale study based on data from the Scandinavian Obesity Registry showed that weight loss of 9.5% **before** gastric bypass was associated with a marked reduction in important postoperative complications, such as:
 - anastomotic leakage
 - deep infection or abscess
 - minor wound complications
 - improved glycemic state before surgery
- ▶ These findings were even more significant in patients with BMIs >45.8
- ▶ Even modest pre-op weight loss has been associated with shortening the time of the surgery

Fear: potential complications

- ▶ Weight reduction before surgery also provides a protective effect in patients who suffer from non-alcoholic fatty liver disease (NAFLD)
 - 90% of patients with morbid obesity have NAFLD
- ▶ Fatty liver causes an enlarged left lobe of the liver that may disturb the visual field of the surgeon

Fear: GI side effects

▶ Dumping syndrome:

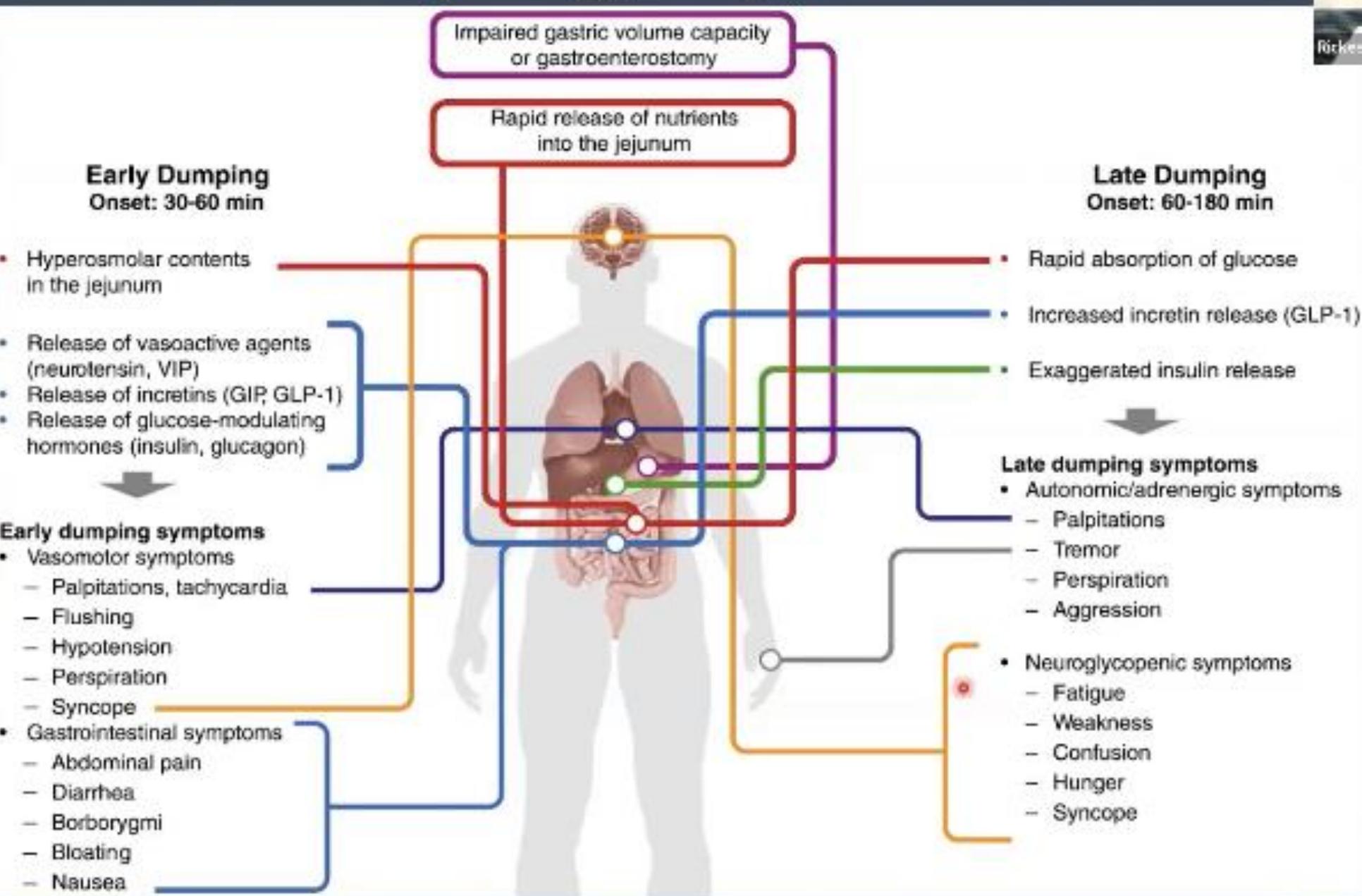
- Occurs after eating food/drink with high amounts of added sugar
- These concentrated sugars absorb water from the body as they pass through the intestines
- Symptoms include abdominal pain, diarrhea, nausea, vomiting, dizziness, flushing, palpitations, tachycardia, and hypotension

▶ Dumping syndrome is generally avoidable

▶ Primarily happens in bypass patients

- Prevalence ranging from 40% to 75% of bypass patients (depending on their food/beverage choices!)

Dumping Syndrome



Fear: dumping syndrome

▶ Prevention:

- Avoid added sugars and foods that have a high glycemic index
- Combine complex carbohydrates, protein, and fiber in meals
 - Protein slows digestion and therefore prevents sugars from passing too quickly through the gut.
- Distribute your meals and snacks evenly throughout the day
- Do not drink while eating
- Eat and drink slowly
- Chew thoroughly

Fear: nausea and vomiting

- ▶ Food and smell aversions are common after surgery
 - ▶ If symptoms present after eating a new food, wait several days before trying it again
 - ▶ It may be necessary to return to liquids or pureed foods temporarily
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Fear: nausea/vomiting

- ▶ Most common causes:
 - Dehydration
 - Eating too quickly
 - Not chewing food well
 - Eating too much
 - Lying down after eating
 - Drinking too quickly
 - Drinking with meals
 - Carbonated beverages
 - Temperature of liquids

Fear: pain

- ▶ Immediately after surgery, pain can be due to the gas from a laparoscopic operation
- ▶ To mobilize the gas:
 - Walk
 - Gentle shoulder massage
 - Heating pad to your shoulder
 - Arm circles
- ▶ Pain can also result from:
 - Eating/drinking too fast
 - Taking too big of bites
 - Advancing the diet too quickly

Fear: worsening acid reflux

- ▶ Usually a result of the swelling and restriction after surgery
- ▶ Can happen in up to 60% of sleeve surgeries
 - Gerd can be occur in patients that never had Gerd prior
- ▶ Avoid cold and carbonated beverages
- ▶ Avoid straws
- ▶ Avoid the common trigger foods
- ▶ Small meals
- ▶ Do not eat right before going to sleep or lying down

Fear: stretching out the pouch

- ▶ The stomach stretches and expands as a result of food intake
- ▶ Eating one or two larger meals will not lead to a permanently stretched stomach or issues with your hunger and fullness triggers
 - However, making this a routine and a habit can lead to BIG issues

“I’m scared I’ll regain the weight.”

- ▶ Weight regain is common 12–18 months post-op
 - 80% of patients will experience weight gain from their lowest weight
 - 30% will gain more than 10% back
 - Most WLS patients on average will lose 60–77% of their excess body weight and most will keep 50% of the weight off long-term
 - This means that we can expect patients to gain back 10–17% of what they originally lost

“I’m scared I’ll regain the weight.”

- ▶ Weight regain is common 12–18 months post-op
 - **30% will gain more than 10% back**
 - Most seen in restrictive procedures
 - More common with the sleeve and gastric band compared to a bypass
- Can be due to:
 - Biological issues
 - Metabolic issues
 - Behavioral issues/habits
 - Anatomical issues

“I’m scared I’ll regain the weight.”

- ▶ Weight regain is common 12–18 months post-op
- ▶ **WHY?**
 - Overconfidence with weight loss
 - Less self-monitoring and follow up
 - Only focusing on the scale and not focusing on healthy behaviors long-term

“I’m scared I’ll regain the weight.”

▶ The "Honeymoon Phase"

- Typically up to one year post-op
- The time where patients typically lose the most weight
- Drastic decreases in the hunger hormone (ghrelin)
- The very tight restriction of the stomach pouch

▶ The further out from surgery:

- the hunger hormone begins to increase
- the metabolic rate slows down
- the stomach pouch slightly expands
- the commitment stage begins after the honeymoon phase

The honeymoon phase is the perfect opportunity to solidify your healthy eating habits and lifestyle strategies to prepare for when the honeymoon phase is over.

Once the honeymoon phase is over, the surgery cannot prevent you from falling back into old habits – **which is the most common reason for weight gain 1 year after surgery.**

Year #2 is the hardest!



“I’m scared I’ll regain the weight.”

▶ **Biological changes**

- Ghrelin is the most well known hormone that changes after surgery.
- Ghrelin goes down initially, but over time ghrelin returns.
- Our bodies naturally strive for homeostasis

“I’m scared I’ll regain the weight.”

▶ Metabolic changes

- Immediately after WLS there is a shift in the weight set point, causing a change in the metabolism
- Some surgeons will report that the immediate post-op timeframe prevents the metabolism “shut down” that occurs with extreme weight loss diets
- Over time, metabolic adaptation causes the energy expenditure to drop

“I’m scared I’ll regain the weight.”

▶ Anatomical issues

- Larger pouch
- Larger stoma
- Larger fundus that was not excised
- Gastric fistula

- These require surgical intervention

“I’m scared I’ll regain the weight.”

▶ Structural changes:

- The pouch expands and accommodates more food over time.
- Studies looking at gastric volume have found evidence that pouch size does increase overtime
 - The increase wasn’t dramatic
 - Picture the size of a golf ball expanding to the size of a tennis ball

“I’m scared I’ll regain the weight.”

▶ Structural changes:

- There was no exact gastric volume that has been shown to be appropriate based on your post-op timeframe
- **1 month post-op:** 3 fluid ounces \pm 2 ounces
- **6 months post-op:** 4.5 fluid ounces \pm 2 ounces
- **12 months post-op:** 8 fluid ounces \pm 2 ounces

“I’m scared I’ll regain the weight.”

▶ Volumetrics:

- How much you can consume depends on what you’re eating
- Soft foods, liquids, and foods fluffier in nature vs. dense whole foods, proteins and fibrous produce
 - Think: crackers vs. chicken
- The volume and the total calories you can consume depends on the food choice

“I’m scared I’ll regain the weight.”

- ▶ **Lifestyle factors play THE BIGGEST role in weight regain**
 - Less nutritious food and beverage choices
 - Sedentary lifestyle
 - Lack of support
 - Lack of follow up

 - ▶ **Eating patterns**
 - Grazing/mindless eating
 - Slider foods
 - Drinking with meals
 - Drinking high calorie beverages
- 

Fear: eliminating carbs forever

- ▶ Carbs are often generalized
 - All carbs are not the same!
- ▶ Types of carbohydrates:
 - Complex carbs
 - Refined carbs
 - Simple sugars (think: Dumping Syndrome)
- ▶ The role of healthy complex carbohydrates:
 - Energy
 - Digestion
 - Gut Health
 - Fullness
 - Muscle sparing

“Will I ever be able to eat carbs again?”

▶ **The benefits of complex carbohydrates**

- Lower blood cholesterol levels, which reduces the risk for heart disease
 - Decrease constipation and other GI disorders
 - Weight management due to feeling full with fewer calories
 - Diabetes management from the slow absorptions of sugar into the blood
 - Vitamins, Minerals, Antioxidants, Fiber
- 

“Will I ever be able to eat carbs again?”

- ▶ There is no specific recommendation as to how many carbs post-op patients should have.
- ▶ There have been research studies on the long-term weight loss success of WLS patients which show:
 - Those who are eating <130g of carbs a day (long-term post-op) tend to have more weight loss
- ▶ Under 6 months post-op: <50g of carbs per day
- ▶ 6 to 12 months post-op: <90g of carbs per day
- ▶ 12+ months post-op: <130g of carbs a day

“Food won’t be fun anymore”

- ▶ Finding food joy after surgery starts with changing the mindset
 - ▶ It is possible to enjoy food again in small quantities
 - ▶ Appreciate and notice the texture, aroma, taste and flavors
 - ▶ Address using food to entertain, take up time, cope with emotions, etc.
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“Food won’t be fun anymore”

- ▶ The surgery creates a physical restriction to the amount of food consumed
- ▶ The surgery does not address:
 - Using food for entertainment
 - Using food to cope
 - Having food be center of everything
- ▶ These habits must be addressed prior to surgery rather than hoping the surgery will solve the underlying issues
- ▶ Destructive patterns can be hard to recognize and may not be obvious

Fear: my hunger won't go away

- ▶ Ghrelin is the most well known hormone that changes after surgery
 - ▶ Ghrelin goes down initially, but over time ghrelin returns
 - ▶ The timeline varies per patient
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Fear: my hunger won't go away

- ▶ Other factors affecting hunger:
 - Lack of protein and fiber increases hunger
 - Adding in a small amount of complex carbs (which has fiber) with your protein helps you stay full longer and helps control blood sugar.
 - Eating refined carbohydrates will NOT help hunger
 - Eating a low protein and low fiber diet will NOT help hunger
 - Sleep deprivation and stress affects hunger
 - Distracted/mindless eating
 - Going too long without eating
 - Confirm its **true** hunger and not mind hunger
 - Probiotic can help ([antibiotics can affect hunger by influencing Ghrelin](#))

Fear: malnutrition

- ▶ Neglecting to take a bariatric multivitamin every day is **the most common cause of malnutrition.**
- ▶ Your supplements are to be taken daily, with no exceptions.

Fear: hair loss

- ▶ Hair loss typically peaks around 3–4 months after surgery and may last for up to 6 months
 - If hair loss continues past 6 months, it could be related to nutrition
 - ▶ Biotin has only been shown to be helpful in preventing hair loss **if you have a biotin deficiency**
 - ▶ Iron, zinc and protein
 - ▶ Taking a multivitamin will continue to be a daily, lifelong habit after surgery
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Knowledge Reduces Fear

- ▶ Watching the WLS journey of others can impact the fear factor
- ▶ Know who is taking care of you
 - Research the surgeon, the protocols
- ▶ Hear it from others who have been there before
 - Support groups
 - Patient membership site
- ▶ Protect your mindset
 - Rid yourself of the Facebook group that are not moderated by a Dietitian, surgeon's office or other trusted source

Preventing Post-op Weight Regain

- ▶ A fully self-paced online program that to help you either PREVENT, MANAGE or REVERSE post-op weight gain.



▶ <http://cassandragolden.com/Post-op-Programs.php>

▶ 50% off until August 15th!

Gulf Coast Bariatrics Presents,

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Bariatric Food Coach: \$14/month

- ▶ Provides meal plans, dining out guides, grocery shopping guides (Costco, Trader Joe's, Aldi and Sam's Club),
- ▶ Coaching videos and courses, over 500 recipes for ALL stages of the bariatric journey, meal planning templates
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- ▶ You'll have the support of other like-minded patients along with research-based recommendations from a Registered Dietitian (It's hard to trust what we see in Facebook groups).
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