

A GUIDE TO

Metabolic and Weight-loss Surgery



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Welcome

WVU Metabolic and Weight-Loss Surgery offers a comprehensive, surgical weight-loss program. We understand that excess weight can negatively impact nearly every aspect of your life, and we are excited to be your partner on the path to a healthier you.

Our program has a strong focus on pre- and post-surgery education that serves as your foundation for life-long success. We work closely with you to make sure you have the tools and knowledge to be successful in your weight-loss journey – in the short term and for the rest of your life. We design your schedule of regular follow-up appointments and monthly support groups to help you succeed. We are here to help you each step of the way!



Welcome from Our Physicians

On behalf of our physician team at WVU Metabolic and Weight-Loss Surgery, we welcome you and congratulate you on taking this first step to a healthier life. Over the past 15 years, we have helped thousands of people struggling with obesity lose large amounts of weight – and gain their lives back.

Our physicians have received specialized training in bariatrics and weight-loss surgery. We are experts in our field and remain on the leading edge of what's coming next, so we can help you be successful in your weight-loss journey. Our comprehensive services and track record of excellence is recognized through our accreditation through the American College of Surgeons and American Society for Metabolic and Bariatric Surgery.

About the Metabolic and Weight-Loss Surgery Program at WVU Medicine

Candidates for metabolic and weight-loss surgery are often 100 or more pounds overweight and committed to a healthy lifestyle. Our team holds free information sessions so you can learn about the various surgery options we offer, including:

- ✓ Sleeve gastrectomy
- ✓ Roux-en-Y gastric bypass
- ✓ Revisional weight loss surgery
- ✓ Adjustable gastric banding

Meet Our Team

Our metabolic and weight-loss surgery program addresses not only the physical issues related to being overweight or obese, but also the psychological issues. During your weight-loss journey, you will see several specialists, including:

- ✓ *Bariatrician: specially-trained doctor who specializes in safe, healthy weight loss*
- ✓ Bariatric surgeon
- ✓ Bariatric nurse
- ✓ Bariatric psychologist
- ✓ Bariatric dietitian
- ✓ Medical specialists
- ✓ Physician assistant and nurse practitioner
- ✓ Physical therapist
- ✓ Patient navigator

Starting Steps in the Program

Jeanette May, 53

Jeanette May struggled with her weight for most of her life. But, when she found herself thinking, "Please let this seatbelt work; please let it fit," while boarding an airplane one day, she knew the time had come for her to become proactive about getting healthy.

Shortly thereafter, in the summer of 2015, Jeanette saw a Facebook ad for WVU Metabolic and Weight-Loss Surgery – and that got her thinking: "Is bariatric surgery the tool I need to help lose the weight and keep it off?" As a WVU grad and Morgantown resident, she was very familiar with WVU Medicine and its strong reputation. So, she attended a weight-loss surgery information session in July 2015. Jeanette weighed 240 pounds at that time.

Keeping the weight off

Jeanette underwent the Roux-en-Y gastric procedure on January 4, 2016. On her surgery day, 5' 1½" Jeanette weighed in at 221 pounds. In the first year after surgery, she lost 115 pounds. At two years post-op, she maintains her weight loss and stays between 123 to 127 pounds.

Jeanette's self-discipline and ongoing monitoring of her weight have enabled her to lose nearly half her body weight and keep it off. "Now, when I hit 127 or 128, it clicks, and I know what I need to do to get back – and it works," she explained. "I've heard the horror stories about the regain, and 130 is my max. I don't want to go above that." Through sticking to a healthy diet and working out with her personal trainer regularly, Jeanette mindfully keeps herself at her desired weight.

These days, Jeanette is taking adventures and traveling like never before. "Before, my weight would have held me back just to have the energy to do it," she said. In March 2017, she went on a three-week cruise to Australia and New Zealand, which included hiking and bridge climbs. She's also gone zip-lining, an activity in which her prior weight may have barred her from even participating.

In 2018, she booked a cruise to Alaska and an overnight hike and has plans to go skydiving – another thrilling adventure on which she would have most likely missed out. "The best thing about losing the weight," Jeanette said, "is that I feel like I'm participating in life now, and not just sitting on the sidelines. Plus – people tell me I smile more now."

Eating right – for the long term

For Jeanette, one of the most important factors in her great success on her weight-loss journey has been sticking to her food plan. From the time she went to her first nutrition class in July 2015 through the end of 2016, she followed the nutrition plan to the letter. "I didn't want to deviate from it. I wanted to follow that," she said.

In 2017, when she started working with the personal trainer and exercising more, she realized she needed to adjust her food intake accordingly. For example, she needed to eat more carbs for weight lifting and running than when she was just walking. Even more than a year after surgery, Jeanette continued to work closely with the WVU nutritionist to tweak her dietary needs – to make sure she stays healthy, meets her nutrition needs, and supports her physical activity.

Just go for it

When asked what advice she would give someone considering bariatric surgery, Jeanette said, "Don't wait. Just knowing what I can do now in my 50s, I can't imagine what I could have done in my 40s or even 30s without that extra weight."

After shedding nearly half her body weight, Jeanette has certainly proved that she can achieve anything she sets out to. Nothing is standing in the way of a lifetime of adventures for her now.



Initial Steps to Your Weight-Loss Journey at WVU Metabolic and Weight-Loss Surgery

Here are the steps to get started on your weight-loss journey with us:

- ✓ **Step 1:** Attend a free, no commitment weight-loss surgery information session.
- ✓ **Step 2:** Complete and return the patient information packet provided at the information session.
- ✓ **Step 3:** Attend your scheduled initial bariatric surgery consultation along with basic testing.
- ✓ **Step 4:** Complete the testing, consultations, and nutrition education as outlined in your initial consultation.

Step 1:

Attend weight-loss surgery session

If you are interested in learning more about weight-loss surgery at WVU Metabolic and Weight-Loss Surgery, attending a free information session is the first step for program participants. Please call us at 304-293-1728 to make your reservation for one of our weekly sessions, or sign up on the web at <http://wvumedicine.org/bariatrics>.

Step 2:

Complete and return patient information packet

Next, you'll need to fill out and return the patient information packet. Completing this data accurately and thoroughly gives us the medical information we need to consider you as a candidate for weight-loss surgery. You can print these forms out on the website (<http://wvumedicine.org/bariatrics>) from the Forms section. You'll need to complete and fill out both our nutrition questionnaire and health history. You may bring the completed forms with you to turn in at your scheduled bariatric information session.

Step 3:

Attend your scheduled initial bariatric surgery consultation along with basic testing

After attending the bariatric information session and completing your patient information packet, you will be scheduled for an initial consultation. You will be contacted with an appointment time and location. During the initial consultation, you will meet our bariatric physician, dietitian, patient navigator, and bariatric nurse. You will also undergo basic testing, including blood work and a chest x-ray.

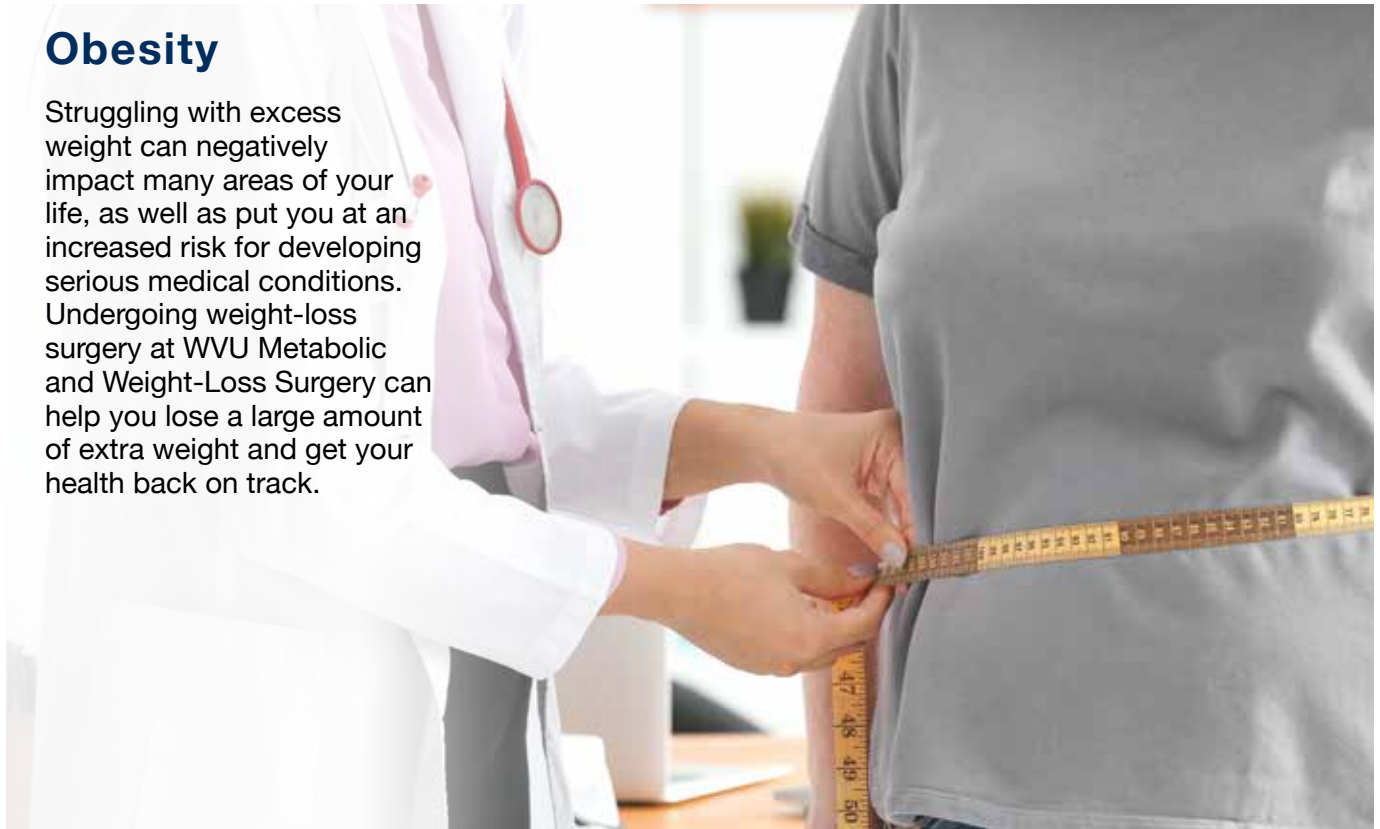
Step 4:

Complete the testing, consultations, and nutrition education as outlined in your initial consultation

You will need to complete evaluations and/or consultations that were determined in your initial consultation. You will be provided with a list of these evaluations and consultations that are needed at your initial appointment.

Obesity

Struggling with excess weight can negatively impact many areas of your life, as well as put you at an increased risk for developing serious medical conditions. Undergoing weight-loss surgery at WVU Metabolic and Weight-Loss Surgery can help you lose a large amount of extra weight and get your health back on track.



You may be a candidate for weight-loss surgery if you:

- /// Have a body mass index (BMI*) of greater than 40
- /// Have a BMI* of 35 to 39.9 with one or more other complications, such as:
 - /// High blood pressure
 - /// Type 2 diabetes
 - /// High cholesterol
 - /// Obstructive sleep apnea

Please note that insurance carriers determine the requirements for weight-loss surgery, and you should check with your insurance company to understand your benefits and requirements. While most insurance policies cover weight-loss surgery for qualified individuals, some policies do not.

**You can calculate your BMI by dividing your weight in kilograms by your height in meters squared.*

Surgical Overview

Weight-loss surgery is major surgery, but it is considered to be safe and effective. It is not a cosmetic operation. You should consider it to be permanent – and it will be life changing.

WVU Metabolic and Weight-Loss Surgery offers a minimally invasive, laparoscopic approach. In most cases, you will have a quicker recovery and less downtime after undergoing a minimally invasive procedure.

The minimally invasive approach consists of a few small incisions. The surgeon will assess which approach suits you best during your first appointment.

Surgical Options

We offer a variety of surgical options, including:

Laparoscopic sleeve gastrectomy:

This procedure restricts and decreases food intake through surgical removal of 80 to 85 percent of the stomach. The operation has been shown to significantly alter the hormones that regulate appetite and satiety. Sleeve gastrectomy – also known as vertical gastrectomy – is the most common weight-loss procedure performed in the United States for the last several years.

Laparoscopic Roux-en-Y gastric

bypass: This procedure creates a small (25 to 50 mL) stomach pouch which restricts the amount of food that is able to be consumed. The small intestine is connected to the stomach pouch, and the food is bypassed or diverted away from the first part of the intestine (duodenum). By diverting food away from the duodenum, many patients experience significant alteration and improvement in metabolism and glucose control.

Laparoscopic revisional bariatric

surgery: Oftentimes, this procedure involves the removal of an adjustable gastric band with conversion to either a sleeve gastrectomy or Roux-en-Y bypass.

Laparoscopic adjustable gastric

banding: Less commonly performed these days, this procedure restricts and decreases the amount of food you can eat, as an adjustable band is placed around the top part of the stomach to restrict the passage of food. The gastric band is adjusted by placing a needle into a port that is located under the skin. Adjusting the band changes how quickly the food is able to pass.

Benefits of Weight-Loss Surgery

When you lose a substantial amount of weight after being obese, you will be able to more fully participate in everyday life. Your quality of life will improve, and day-to-day life will be easier, as you complete tasks with more energy and a renewed sense of purpose.

Weight-loss surgery can also have a positive effect on many other medical conditions, such as:

- ✓ Acid reflux (GERD)
- ✓ Asthma
- ✓ Degenerative joint pain
- ✓ Diabetes
- ✓ High cholesterol
- ✓ Hypertension
- ✓ Low back pain
- ✓ Polycystic ovarian syndrome (PCOS)
- ✓ Reduced incidence of cancer
- ✓ Respiratory insufficiency (trouble breathing)
- ✓ Sleep apnea
- ✓ Urinary stress incontinence

For example, many people who have diabetes and undergo successful weight-loss surgery are able to control their blood sugar with diet alone and no longer have to take insulin on a regular basis.

Risks of Weight-Loss Surgery

Like any major surgical procedure, there are risks associated with weight-loss surgery. However, we firmly believe that the potential benefits far outweigh the risks. Risks of weight-loss surgery can include:

- ✓ Abdominal hernia
- ✓ Blood clot in the lungs or legs
- ✓ Inflammation of the gallbladder
- ✓ Leakage through staples or sutures
- ✓ Ulcer in the stomach or small intestine
- ✓ Vitamin and mineral deficiencies
- ✓ Vomiting and abdominal pain

You can avoid or reduce your risks for these complications by undergoing your weight-loss surgery with an experienced, trusted team and by strictly following your aftercare instructions and keeping your follow-up appointments.

Follow-Up Appointments

You must adhere to your follow-up appointment schedule to maximize your weight-loss results and minimize your risk of post-surgery complications. Here is a sample follow-up appointment schedule:

- ✓ Within 2 weeks after surgery
- ✓ 6 weeks after surgery
- ✓ 3 months after surgery
- ✓ 6 months after surgery
- ✓ 12 months after surgery
- ✓ Annually thereafter

At these appointments, you will meet with various members of our bariatric care team, according to your specific needs. You will have periodic blood work to assess for vitamin or other nutritional deficiencies. You will meet with a dietitian and have the opportunity to meet with one of our behavioral health specialists.

It is your responsibility to schedule and keep your follow-up appointments. If you are unsure if you will be able to adhere to this follow-up schedule, speak with our team before proceeding with surgery. Your success in our program depends on your commitment to this schedule.

Frequently Asked Questions

What are the qualifications for this procedure?

Many insurance policies require a BMI of 40 kg/m² or above, or a BMI of 35 to 39.9 kg/m² with one or more documented weight-related illnesses (diabetes, sleep apnea, or high blood pressure requiring at least one medication).

How safe is bariatric surgery?

As with all types of abdominal surgery, there is a chance of complications. The major risks associated with bariatric surgery are roughly the same as those associated with other elective abdominal operations, including elective hysterectomy or gallbladder removal. Bariatric surgery is proven to be safe and effective with low risk for major complications.

What are the most common associated complications with bariatric surgery?

The most common side effects are nausea and upset stomach, which usually resolve within four to six weeks of surgery. Another common side effect is hair loss, which is similar to hair loss during the post-partum period in that it is temporary, and your hair will generally re-grow after several months.

Other side effects can include vomiting, intolerance of some foods, mineral deficiency, or stomach ulcer. Most of these complications can be resolved or avoided with proper nutrition and careful eating. Your surgeon has a sound pre-surgical medical plan and comprehensive post-surgical follow-up plan that minimizes the risk of these complications.

How long does the surgery take?

The sleeve gastrectomy procedure takes 45 to 60 minutes to complete, and you will be in the operating room about two hours. The Roux-en-Y gastric bypass takes one and a half to two hours to complete.

Can I ever lose too much weight?

It is very unlikely for patients to lose too much weight. Occasionally, patients can develop a stricture (outlet obstruction) within the first few weeks after surgery. This is often easily correctable with a same-day procedure. Your weight-loss team will conduct blood work to screen for vitamin deficiencies on a regular basis to ensure that you are well nourished and your nutritional needs are being met.

From the time I am seen in the office, how long before I will have the surgery?

In many cases, this is dependent on insurance requirements. For most patients, this is

about a six-month process. Again, this is dependent on your insurance company and its requirements for surgery. Once we have gathered the information that we need, we send a letter to your insurance company for pre-approval for the procedure. Once obtained, you would then undergo an in-depth history and physical examination as well as some laboratory tests and x-rays. Once those are done, provided there are no additional or unexpected medical problems that would require treatment first, we would schedule your operation.

How long is the hospital stay for a bariatric operation?

The average length of stay is two nights.

How long would I be off work after bariatric surgery?

This depends on the type of job you have. Some people who can go on light duty or work a desk job return to work as soon as two weeks after surgery. If your job does not allow light duty or involves physical labor, you may need to take off as many as six weeks. On average, you can expect to be off work for three to four weeks after your procedure.

What kind of food can be eaten after surgery?

You will slowly progress back to a solid diet after surgery. You will be on a full liquid diet for two weeks, then a pureed foods diet for two weeks, and then on soft foods for two weeks. After that, you will be on a solid food diet. Detailed information will be provided about the types and quantities of food we recommend you eat during each of these phases.

How quickly does a person lose weight after the surgery?

Patients generally lose 60 to 85 percent of their excess weight within the first year after surgery. After that, weight loss continues until about 18 months post-surgery, when you usually achieve your goal weight. If you exercise, attend support groups, and follow nutrition recommendations, your weight loss from bariatric surgery can be greater.

Can I become pregnant after having the surgery?

Because rapid weight loss and nutritional deficiencies can harm a developing fetus, women of childbearing age should avoid pregnancy for one to two years after surgery. If you should become pregnant, you will need to contact the bariatric program to ensure that you and your baby are well nourished as your needs change.

Psychologist

Weight-loss surgery is life-altering and can be stressful. It requires careful thought, considerable awareness, and significant adjustment. Changes occur both emotionally and physically. Weight-loss surgery is not a cure; it is a tool to help you achieve a healthier weight. We want you to be as successful as you can with weight-loss surgery.



In order to have a successful long-term outcome, it is necessary to make a number of permanent lifestyle changes, including behaviors, eating habits, and activity patterns. This is why every patient is required to meet with a psychologist on the bariatrics team before surgery for a pre-surgical psychological evaluation.

Frequently Asked Questions

What should I expect during the psychological evaluation?

The evaluation will include a one-hour interview and questionnaires to assess eating habits, lifestyle behaviors, coping strategies, stressors, and other symptoms. The interview usually takes about one hour. You should also plan for 20-40 minutes to complete additional questionnaires. Please arrive at least 30 minutes before your appointment in order to complete this portion of the evaluation. If you arrive later than 15 minutes after your scheduled appointment, you may need to reschedule.

Is this just a clearance for surgery?

While a psychological clearance may be required by your insurance, the psychological evaluation is not pass or fail. The bariatric psychologist's role is to determine your mental well-being, as well as help you understand the potential behavioral changes that are necessary for long-term success after surgery. This is an opportunity to discuss the many changes you will face and discuss concerns and questions.

What is the purpose of the psychological evaluation?

The evaluation gives you the opportunity to discuss things to consider as you prepare for surgery so you can have the best support for a safe, effective surgery and successful recovery.

Is it just a one-time visit, or will I have to return?

Multiple visits may be needed to address goals or issues before surgery. The behavioral psychologist will make individualized recommendations to build upon your strengths and help you address challenges so that you can lose weight and keep it off. These recommendations will be discussed at the end of your evaluation so you will know what is important for you.

During my psychological evaluation, it was recommended that I receive follow-up to address several goals before surgery. What does this mean?

This means that it will be necessary for you to participate in follow-up visits with a bariatric psychologist before you will be cleared for surgery. It is important to the bariatric team that you have all the support you need to ensure the best outcome possible. If you are unable to return to WVU Medicine, the bariatric team may be able to assist you with locating a provider of your choice.

What if I do not follow-up with the recommendation for treatment?

If you are unable to return for follow-up or you are unable to participate, your surgery will be delayed until follow-up is completed. To avoid delays, you may want to avoid no-shows or canceling appointments. If you need to cancel an appointment, it is up to you to re-schedule.

Behavioral Health Considerations

Weight-loss surgery is not a cure-all but rather a serious medical procedure that serves as a tool for establishing a healthier weight. In order to be successful over the

long-term, it is also necessary to make permanent lifestyle changes in eating and activity patterns.

Bariatric surgery changes your body, not the way you think. Only you have the ability to change your lifestyle and keeping your current lifestyle after surgery will only limit your success.

The entire weight-loss journey can have a profound impact on your body and mind. Your surgery will change your health and appearance, but it may also trigger a new way of thinking as a result of your positive lifestyle changes.

Your relationships with others may change because of your decision to become healthier. Our behavioral support team will help you and those around you prepare for the physical, emotional, and health transformation.

Though weight-loss surgery physically reduces the size of your stomach, it will not prevent you from eventually gaining back weight if you do not learn how to reduce the amount of food you eat and increase your physical activity to promote calorie burning.

Weight-loss surgery alone will not increase your self-esteem. Many factors play a role in one's self-esteem, such as current and past experiences, perceptions, and attitudes.

Those who have had prior substance abuse problems are at an increased risk for relapse. Substance abuse has also been shown to increase the risk of regaining weight 2-5 years following surgery. Ongoing awareness and support can help to reduce this risk.

If you have any questions or concerns, please do not hesitate to share them with us during your first behavioral health appointment.

Nutritional Guidelines for WVU Metabolic and Weight-Loss Surgery

Healthy lifestyle habits will be critical to your success with WVU Metabolic and Weight Loss Surgery. Nutrition recommendations are designed to support healthy weight loss while ensuring adequate nutrition.

After surgery, you will need to:

- ✓ Consume at least 64oz of sugar-free, caffeine-free, carbonation-free fluid daily
- ✓ Eat 60 to 80 grams of lean protein daily
- ✓ Take vitamins as recommended



Pre-Surgery High-Protein Liquid Diet

Why do a pre-operative diet?

- ✓ To decrease the size of the liver
- ✓ To give you a head-start on weight loss
- ✓ To lower surgical risk through weight loss
- ✓ To practice tolerance of the liquid diet
- ✓ To prepare yourself mentally for the diet changes required after surgery

When do I start the liquid diet?

Most patients follow the pre-op diet for 7 to 14 days, depending on their medical history.

You will receive a personalized start date from the program coordinator via MyWVUChart or by telephone.

How the liquid diet works

80-100g of protein daily through a high-protein, low-sugar protein drink that contains:

- ✓ At least 15g of protein per serving
- ✓ Less than 5g of sugar per serving
- ✓ Less than 5g of fat per serving

Examples include:

- ✓ 3 Premier Protein Drinks per day
- ✓ 3 Unjury Drinks per day (1 scoop + 8oz skim milk each)
- ✓ 3 Elevation Drinks (from Aldi) per day (1 scoop + 8oz skim milk each)
- ✓ 3 Six Star Whey Protein Drinks (from Walmart) per day (1 scoop + 8oz skim milk each)

PLUS at least 64 additional ounces of water or other sugar-free, caffeine-free, and carbonation-free liquids with less than 10 calories per cup, such as:

- ✓ Powerade Zero
- ✓ Water
- ✓ Reduced-sodium broths or bouillon
- ✓ Sugar-free gelatin
- ✓ Sugar-free popsicles
- ✓ Sugar-free drink mixes or drops, such as Crystal Light
- ✓ Decaf coffee, tea, or herbal tea (no milk or cream)

Post-Surgery Diet Stages

After you've undergone your surgery, you will proceed through four diet stages.

- ✓ **Stage 1:** Full liquids
- ✓ **Stage 2:** Pureed foods
- ✓ **Stage 3:** Soft foods
- ✓ **Stage 4:** Stabilization

Your weight-loss surgery diet involves a four-phase plan. You will advance gradually through the phases, depending on your tolerance. Your provider will give you personalized target advancement dates during your first post-operative appointment.

See the following pages for more details on each of these phases and what you can expect.

Portion control after bariatric surgery

After bariatric surgery, your newly created stomach pouch will be about the size of a golf ball (gastric bypass) or the size of a large magic marker (gastric sleeve). It will take several months for your new stomach to completely heal. During that time, it is very important to maintain adequate nutrition. After three months, you will have to keep portion sizes small and calorie levels lower to continue your weight loss.

On average, you will be eating 500 to 700 calories per day from week two to week four after surgery. These will be divided into five to six mini-meals throughout the day. Portion sizes are $\frac{1}{2}$ cup for liquids and $\frac{1}{4}$ cup for purees and solids.

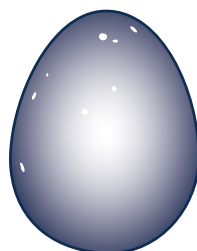
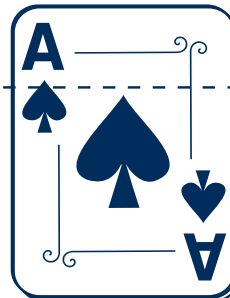
Portion sizes

From six weeks to six months after surgery, you will be consuming 700 to 1,000 calories per day, on average. Continue to divide this into five to six small meals.

- 2-3 servings milk and dairy products (nonfat or low-fat)
- 4-6 servings lean meat or meat alternative (1oz each, lean and low-fat)
- 2 servings fruit (avoid dried fruits and fruits with added sugar)
- 2 servings non-starchy vegetables

Recommended portion sizes are $\frac{1}{4}$ to $\frac{1}{2}$ cup (or up to 2oz) for solids and $\frac{1}{2}$ cup for liquids.

- $\frac{1}{2}$ cup liquids = 4oz or a billiards ball
- 2oz meat = $\frac{2}{3}$ of a deck of cards
- $\frac{1}{4}$ cup solids = large egg or a golf ball



Keys to success after (and before!) bariatric surgery

1. Plan

- Meal times
- Meal choices
- Beverages
- Exercise
- When to take vitamins

2. Track

- What you eat
- How much you eat
- Protein intake
- Fluid intake
- Exercise

Plan the times you will eat each day:

3-6 months: 5-6 protein focused mini-meals per day

6-12 months: 3 small, protein-focused meals with 2-3 protein snacks as needed

12 months-lifetime: 3 protein-focused meals with 1-2 protein snacks as needed

Keep track: Log your protein, fluid, and calories (if needed)

- Purchase a small notebook or make copies of the included log for keeping food records. (See Appendix)
- Online journals and smartphone apps are also good options. (See below)
- Record all portion sizes of food and fluid (even water!) that you consume in a day. Use the food label to find the protein and calorie content of foods.
- Total each snack or meal.

How do I evaluate my journal?

- Did you meet your protein goals? If not, how can you get closer to your goals tomorrow?
- Did you meet your fluid goals? If not, how can you increase your water tomorrow?
- Review portion sizes and meal patterns. Were your meals spaced evenly throughout the day, or did you eat and drink only in the afternoon and evening?
- Consider the food choices you made at each meal. Was there a better option?

Nutritional tracking websites:

- myfitnesspal.com
- nutritiondata.com
- thedailyplate.com
- calorieking.com
- loseit.com
- fitday.com
- nutritionvalue.org
- sparkpeople.com
- myplate.gov

Free smartphone apps for tracking:

- MyFitnessPal
- Baritastic
- CalorieCount
- Nutrition Menu

During Your Hospital Stay: Clear Liquids

Day 1 Post-Surgery

- After getting the “go ahead” from your doctor, start to slowly sip clear liquids.
- Slow, small sips are important. No gulping, and no chugging! Small medicine cups will be provided to you to drink from and to help you measure your fluids.
- Record your fluid intake. You will get a tracking sheet to keep at your bedside. Keep track of what, when, and how much you drink.
- Burping, nausea, hiccups, chest discomfort, chest pain, or vomiting may all be signs that you are drinking too much or too quickly. If this happens, slow down.
- Fluid goals: Try to drink one medicine cup (1oz/30mL) every 15 minutes as a starting point. As tolerated, work up to 4-8oz per hour.
- Avoid drinking from straws to prevent swallowing air, which may cause discomfort.

Day 2 Post-Surgery

- Keep sipping! Work on keeping yourself hydrated. Goal: 4-8oz per hour.
- Try cold, hot, and room-temperature fluids to see which suit you best.
- You will need to tolerate at least 20oz in a 24-hour period before it is safe for you to return home.

You can find a liquid tracker in the Appendix on page 53.

Permitted drinks include sugar-free, caffeine-free, and carbonation-free liquids with fewer than 10 calories per cup, such as:

- Powerade Zero
- Water
- Reduced-sodium broths or bouillon
- Sugar-free gelatin
- Sugar-free popsicles
- Sugar-free drink mixes or drops, such as Crystal Light
- Decaf coffee, tea, or herbal tea (no milk or cream)

Diet Progression: Step 1 Diet: Full Liquids

Step 1 Diet: Full Liquids

Timeframe: Discharge to home – Day 14 post-op

Procedures: Gastric bypass and sleeve gastrectomy

Step 1 Diet Goals:

Maintain hydration: Drink at least 64oz of total fluid each day

Begin to work toward your protein goals: 60-80g each day

Step 1 Diet Tips:

Continue to sip slowly to minimize nausea and/or vomiting.

Carry water with you if you leave home.

Continue to keep track of how much fluid you are drinking.

Start to keep track of how much protein you are consuming.

If you are chewing, it is not a liquid. No solids, puddings, yogurts, or ice cream!

Protein drinks count toward your fluid goals!

Food Group	Foods to Include	Foods to Avoid
Beverages While on liquids, drink throughout the day	Sugar-free drink mix, like Crystal Light™ or flavor drops Powerade Zero™ or Gatorade Zero™ “Diet” juices (<10cal/ serving) Approved protein supplements Decaf tea or coffee, hot or cold Decaf herbal teas Skim/fat free milk	Whole or 2% milk Regular sweetened teas, lemonades, fruit drinks Carbonated drinks, like soda or seltzers Fruit juice Caffeinated drinks
Milk/Dairy	Skim or 1% milk No-sugar-added soy and/or nut milks Sugar-free, fat-free hot chocolate	All others
Soups	Broth from a can or bouillon cubes	All others
Meat/Meat Substitutes	None	All
Grains/Starches	None	All
Vegetables	None	All
Fruits	None	All
Sweets/Desserts	Sugar-free gelatin Sugar-free popsicles Sugar substitutes	All others
Miscellaneous	Herbs, spices, seasonings	All others

Meal	Items	Protein
Breakfast	1 approved protein drink: 1 carton pre-mixed drink or 1 scoop powder mixed w/ 8oz skim milk or milk substitute	20-30g
Snack	8oz water 8-12oz sugar/caffeine/carbonation-free drink	0
Lunch	1 approved protein drink: 1 carton pre-mixed drink or 1 scoop powder mixed w/ 8oz skim milk or milk substitute	20-30g
Snack	8oz cup broth 8-12oz cup water	0
Dinner	1 approved protein drink: 1 carton pre-mixed drink or 1 scoop powder mixed w/ 8oz skim milk or milk substitute	20-30g
Snack	8oz herbal decaf tea w/ sugar substitute 4oz skim milk	4g

Step 2 Diet: Pureed Foods

You will receive a start date for pureed foods during your first post-op appointment. No purees until at least 2 weeks post-op.

Timeframe: Weeks 3 and 4

Procedure: Gastric bypass and sleeve gastrectomy

Why not begin regular foods right away?

Your stomach will still be very tender and swollen. It is in the middle of the healing process.

Eating solid foods may lead to stomach irritation, discomfort, or a blockage. Also, solid foods may disrupt the staple line, increasing the risk of complications and need for an additional surgery.

What is a pureed food?

A puree has a smooth texture with minimal lumps and bumps.

Some foods, such as yogurt, are naturally a pureed consistency.

Many baby foods have a pureed texture.

Many people choose to puree their own foods.

Puree Instructions

1. Choose high-protein, low-fat, and low-sugar foods.
2. Pre-cook proteins, vegetables, and fruits. Cut cooled food into small pieces.
3. Add cut pieces to blender or chopper with a small amount of water, broth, fat-free gravy, vegetable juice, or skim milk.
4. Pulse blender until food is chopped, then puree to desired texture.
5. If it does not puree well or is too thick, add more liquid.
6. Freeze leftover purees in an ice cube tray for easy use later.

Begin your vitamin regimen during the puree phase. See Vitamin Class pages (32-34) for specific information.

Food Group	Foods to Include	Foods to Avoid
Beverages Sip between meals	Sugar-free drink mix, like Crystal Light™ or flavor drops Powerade Zero™ or Gatorade Zero™ “Diet” Juices (<10cal/ serving) Approved protein supplements Decaf tea or coffee, hot or cold Decaf herbal teas Skim/fat free milk	Whole or 2% milk Regular sweetened teas, lemonades, fruit drinks Carbonated drinks, like soda or seltzers Fruit juice Caffeinated drinks
Milk/Dairy (¼-½ cup) Good sources of protein and calcium	Low-fat or fat-free: Greek yogurt (avoid large fruit chunks) Cottage cheese Ricotta cheese Skim or 1% milk No-added-sugar nut or soy milks	Whole or 2% milk Regular or high-fat cheeses, yogurts, or cottage cheese Yogurt with >15g sugar per single serve cup
Meat/Meat Substitutes (¼ cup) Good sources of protein, energy, B vitamins, and iron	½ small jar strained baby food meats (plain) Cooked, pureed LEAN meats, such as beef, turkey, chicken, pork, venison, or veal Baked or broiled fish, pureed Tofu, pureed Eggs, pureed	All others
Grains/Starches (3 Tbsp- ¼ cup) Good sources of energy, B vitamins, and iron (if fortified)	*Limit to 2-3 Tbsp/day MAX* Cooked cereal, such as Cream of Wheat or Cream of Rice, oatmeal, grits (no added sugars) Mashed potato or sweet potato—no skins Mashed winter squash, like acorn squash	All other grains, like pasta, rice, cold cereals, or bread products Peas, corn, dried beans
Vegetables (3 Tbsp- ¼ cup) Good source of vitamins, minerals, and fiber and are low in calories	½ cup vegetable juice, such as tomato, carrot, and V8 juice Any PUREED vegetable. Examples are: beets, carrots, green beans, spinach, zucchini squash, or blended vegetable soup	Any veggie that is not pureed
Fruits (3 Tbsp-¼ cup) Good source of vitamins, minerals, and fiber.	Pureed, unsweetened fruit Unsweetened applesauce Mashed banana ½ jar strained baby food (Stage 1) *Avoid strained fruit desserts and junior or toddler foods*	Raw fruits Fruits canned in light or heavy syrup Dried fruits Fruit with added sugar
Fats	None	All
Sweets/Desserts (¼ cup)	Sugar-free, fat-free pudding Sugar-free gelatin Sugar-free popsicles Sugar-free, fat-free/low-fat fudge pops Sugar-free or fat-free whipped topping Sugar-free jam or jelly Sugar substitutes Sugar-free syrup	All others

Diet Progression: Step 2 Diet: Purees

Step 2 Diet Goals:

Maintain hydration: drink at least 64oz of total fluid each day

Maintain protein goals of 60-80g each day

Step 2 Diet Tips:

Continue to sip slowly to minimize nausea and/or vomiting. Carry water with you if you leave home.

Begin spacing eating and drinking: no fluid for 15 minutes before or 30 minutes after eating.

Limit new foods to one per meal to help determine tolerance.

Stop eating when you feel full. Pay attention to your stomach.

You may eat or drink sugar-free popsicles, sugar-free gelatin, and sugar-free drinks in between your meals and snacks. Do not count these as a meal.

Use V8 juice, tomato juice, or skim milk as part of your beverages.

Continue to keep track of how much fluid you are drinking and how much protein you are consuming.

Find more information on specific protein drinks and protein foods in the Appendix starting on page 58.

Food Group	Foods to Include	Foods to Avoid
Miscellaneous	Lemon or lime juice Low-fat/light mayonnaise, sour cream, salad dressing, meat gravies Low calorie BBQ sauce Ketchup and mustard Cocktail sauce Butter spray Any herbs and seasonings	Regular fat or high-calorie condiments Be cautious with spicy seasonings, as they may irritate your pouch

Meal	Items	Protein
Breakfast	¼-½ cup low-sugar, fat-free Greek yogurt	8-14g
Snack	Approved protein shake	20-30g
Lunch	¼ cup cottage cheese 1-2 Tbsp no-sugar-added applesauce	5-7g
Snack	Approved protein shake	20-30g
Dinner	3 Tbsp pureed chicken with 1 Tbsp low-fat gravy and 3 Tbsp pureed vegetables	5-10g
Snack	½ of approved protein shake *ONLY IF NEEDED TO REACH YOUR PROTEIN GOALS	10-15g

Meal	Items	Protein
Breakfast		
Snack		
Lunch		
Snack		
Dinner		
Snack		

Diet Progression: Step 3 Diet: Soft Foods

Step 3 Diet: Soft Foods

Timeframe: Weeks 4-6

Procedures: Gastric bypass and sleeve gastrectomy

You will receive a start date for soft foods during your first post-op appointment.

What is a soft food, and why should I wait to eat regular consistency foods?

✓ Your stomach still in the healing process.

✓ Soft foods are fork tender.

✓ Soft foods allow you to increase your tolerance of different foods.

Food Group	Foods to Include	Foods to Avoid
Beverages Sip between meals	Sugar-free drink mix, like Crystal Light™ or flavor drops Powerade Zero™ or Gatorade Zero™ “Diet” Juices (<10cal/ serving) Approved protein supplements Decaf tea or coffee, hot or cold Decaf herbal teas Skim/fat free milk	Whole or 2% milk Regular sweetened teas, lemonades, fruit drinks Carbonated drinks, like soda or seltzers Fruit juice Caffeinated drinks
Milk/Dairy (¼-½ cup) Good sources of protein and calcium	Low-fat or fat-free: ✓ Light Greek yogurt ✓ Cottage cheese ✓ Ricotta cheese Skim or 1% milk No-added-sugar nut or soy milks Low-fat cheese or string cheese	Whole or 2% milk Regular or high-fat cheeses, yogurts, or cottage cheese Yogurt with >15g sugar per single serve cup
Meat/Meat Substitutes (¼ cup or 2 oz) Good sources of protein, energy, B vitamins, and iron	Baked, broiled, or grilled fish Tofu Eggs: scrambled, boiled, poached Canned meats in water (tuna, chicken, crab, salmon) Ham or chicken salad (light mayo) Lean lunchmeat — chopped Lean ground turkey or beef Chili Meatloaf Tender or “crock-pot” meats (chopped) Pulled pork or chicken Lentils Fat-free refried beans Cooked beans	Fried foods Tough meats Jerky High-fat meats Meats that aren’t chopped Dry meats may be difficult to tolerate
Grains/ Starches (¼ cup or 1oz) Good sources of energy, B vitamins, and iron (if fortified) *Limit starches until you can eat 60-80g protein daily*	Low-fat soup, no noodles or rice Hot or cold cereals, no sugar added Instant or baked potato, no skin Yam or sweet potato, no skin Green peas Winter squash Quinoa	High-fat or cream soups Bread or bread products Tortillas or wraps Crackers French fries or fried potatoes Fried snack chips High-fat casseroles, sauces, and gravies Rice Noodles or pasta
Vegetables (3 Tbsp- ¼ cup) Good source of vitamins, minerals, and fiber	Any fresh, frozen, or canned vegetable — MUST be cooked until soft	Raw veggies Salads Any with high-fat sauce or gravies

Diet Progression: Step 3 Diet: Soft Foods

Step 3 Diet Goals:

Maintain hydration: drink at least 64oz of total fluid each day

Maintain protein goals of 60-80g each day

Step 3 Diet Tips:

Continue to sip slowly to minimize nausea and/or vomiting. Carry water with you if you leave home.

Continue spacing eating and drinking: no fluid for 15 minutes before or 30 minutes after eating.

Limit new foods to one per meal to help determine tolerance.

Stop eating when you feel full. Pay attention to your stomach.

You may eat or drink sugar-free popsicles, sugar-free gelatin, and sugar-free drinks in between your meals and snacks. **Do not count these as a meal.**

Use V8 juice, tomato juice, or skim milk as part of your beverages.

Continue to **keep track** of how much fluid you are drinking and how much protein you are consuming.

Find more information on specific protein drinks and protein foods in the Appendix starting on page 58.

Food Group	Foods to Include	Foods to Avoid
Fruits (3 Tbsp-¼ cup) Good source of vitamins, minerals, and fiber.	Unsweetened applesauce Banana Soft, canned fruit in own juice or no-added sugar Any peeled, soft, fresh fruit (no skins or strings)	Raw oranges or apples Fruits canned in light or heavy syrup Dried fruits Fruit with added sugar
Fats	Limit to 2 tsp per day of oil or light margarine/butter	Butter Lard Crisco/oleo Hydrogenated margarines
Sweets/ Desserts (¼ cup)	Sugar-free, fat-free pudding Sugar-free gelatin Sugar-free popsicles Sugar-free, fat-free/low-fat fudge pops Sugar-free or fat-free whipped topping Sugar-free jam or jelly Sugar substitutes Sugar-free syrup	High-fat or high-calorie desserts
Miscellaneous	Lemon or lime juice Low-fat/light mayonnaise, sour cream, salad dressing, meat gravies Low calorie BBQ sauce Salsa and hot sauce Horseradish Ketchup and mustard Cocktail sauce Butter spray Any herbs and seasonings	Regular fat or high-calorie condiments

Meal	Items	Protein
Breakfast	¼ cup egg substitute + 1oz low-fat cheese + ¼-½ banana Start drinking 30 min after meals	14g
Snack	¼ cup cottage cheese with 2 Tbsp sugar-free applesauce	5-7g
Lunch	¼-½ cup chili or meat stew Start drinking 30 min after meals	10-17g
Snack	Choose one: 1-2 thin slices fat-free ham or turkey or 1 reduced-fat string cheese Start drinking 30 min after meals	7-14g
Dinner	2oz baked fish 3 Tbsp soft-cooked broccoli Start drinking 30 min after meals	10-14g
Snack	Choose one: 1 single-serving-size light Greek yogurt or ½ protein shake Start drinking 30 min after meals	10-15g

Diet Progression: Step 4 Diet: Stabilization

Stage 4 Diet: Stabilization

Timeframe: Weeks 7- Lifetime

Procedures: Gastric bypass and sleeve gastrectomy

You will receive a start date for the stabilization phase during your first post-op appointment.

What is stabilization?

- ✓ Stabilization is another term for “regular” foods.
- ✓ Food choices will impact long-term weight loss. Avoid high-fat and high-sugar foods.
- ✓ Avoid sugary drinks for a lifetime.

Food Group	Foods to Include	Foods to Avoid
Beverages Sip between meals	Sugar-free drink mix, like Crystal Light™ or flavor drops Powerade Zero™ or Gatorade Zero™ “Diet” Juices (<10cal/ serving) Approved protein supplements Decaf tea or coffee, hot or cold Decaf herbal teas Skim/fat free milk	Whole or 2% milk Regular sweetened teas, lemonades, fruit drinks Carbonated drinks, like soda or seltzers Fruit juice Caffeinated drinks
Milk/Dairy (½ cup) Good sources of protein and calcium	Low-fat or fat-free: Yogurt Cottage or ricotta cheese Skim or 1% milk Soy milk Low-fat sliced cheese or string cheese	Whole or 2% milk Regular or high-fat cheeses, yogurts, or cottage cheese
Meat/Meat Substitutes (¼-½ cup or 2-3 oz) Good sources of protein, energy, B vitamins, and iron	Any moist or soft-cooked lean meat or poultry Baked, broiled, or grilled fish Tofu Eggs: scrambled, boiled, poached Canned meats in water (tuna, chicken, crab, salmon) Lean lunchmeat, like turkey or 98% fat-free ham Peanut butter (Limit to 1-2 Tbsp daily) Nuts, seeds (limit to 1oz or ¼ cup daily) Fat-free refried beans Cooked beans Lentils Low-fat jerky	Fried meats Meats with skin Tough meats High-fat meats Dry meats may be difficult to tolerate
Grains/Starches (¼ cup or 1oz) Good sources of energy, B vitamins, and iron (if fortified) *Avoid starches and grains until you can get 60-80g protein consistently. This is usually around the 6-month post-op mark*	Any low-fat soup Hot or cold cereals, no sugar added Low-fat crackers or Melba toast Toast (well done) Soft tortilla (not chips!) Baked chips Rice Noodles or pasta Instant or baked potato, no skin Yam or sweet potato, no skin Green peas Creamed corn Winter squash Breads, bagels, or English muffins, preferably low fat, low sugar, and whole-grain (may be better tolerated if toasted)	High-fat or cream soups Untoasted bread, buns French fries or fried potatoes Fried snack chips High-fat casseroles, sauces, and gravies
Vegetables (¼-½ cup) Good source of vitamins, minerals, and fiber and are low in calories	Any fresh, frozen, or canned vegetable	Any with high-fat sauce or gravies

Diet Progression: Step 4 Diet: Stabilization

Step 4 Diet Goals:

Maintain hydration: drink at least 64oz of total fluid each day

Maintain protein goals of 60-80g each day

Step 4 Diet Tips:

Continue to sip slowly to minimize nausea and/or vomiting. Carry water with you if you leave home.

Continue spacing eating and drinking: no fluid for 15 minutes before or 30 minutes after eating.

Limit new foods to one per meal to help determine tolerance.

Stop eating when you feel full. Pay attention to your stomach.

If you vomit, use only clear liquids at your next snack or meal. Add blended foods or liquids to the next meal.

You may eat or drink sugar-free popsicles, sugar-free gelatin, and sugar-free drinks in between your meals and snacks. **Do not count these as a meal.**

Use V8 juice, tomato juice, or skim milk as part of your beverages.

Continue to **keep track** of how much fluid you are drinking and how much protein you are consuming.

Find more information on specific protein drinks and protein foods in the Appendix starting on page 58.

Food Group	Foods to Include	Foods to Avoid
Fruits (3 Tbsp-¼ cup) Good source of vitamins, minerals, and fiber.	Unsweetened applesauce Canned fruit in own juice or no-added sugar Raw or fresh fruit	Fruits canned in light or heavy syrup Dried fruits Fruit with added sugar
Fats	Limit to 3 tsp per day of oil or light margarine/butter	Lard Crisco/oleo Hydrogenated margarines
Sweets/ Desserts (¼ cup)	Sugar-free, fat-free pudding Sugar-free gelatin Sugar-free popsicles Sugar-free, fat-free/low-fat fudge pops and frozen desserts Sugar-free or fat-free whipped topping Sugar-free jam or jelly Sugar substitutes Sugar-free syrup	High-fat or high-calorie desserts
Miscellaneous	Lemon or lime juice Low-fat/light mayonnaise, sour cream, salad dressing, meat gravies Low calorie BBQ sauce Salsa and hot sauce Horseradish Ketchup and mustard Cocktail sauce Butter spray Any herbs and seasonings	Regular fat or high-calorie condiments

Create your own sample menu using foods from the Step 4 lists.

Include a solid, lean protein food at least three times throughout the day.

When you can reach 60-80g of protein within 3 meals and 2 snacks, eliminate the third snack.

Meal	Items	Protein
Breakfast	1 egg, scrambled w/ 2 Tbsp green peppers & 1 Tbsp onions, 1oz Canadian bacon Start drinking 30 min after meals	14g
Snack	1 single-serve-cup light Greek yogurt Start drinking 30 min after meals	10-15g
Lunch	2-3oz grilled chicken breast ¼-½ cup green beans Start drinking 30 min after meals	14-21g
Snack	1 reduced-fat string cheese + ¼ cup berries Start drinking 30 min after meals	7g
Dinner	2-3oz lean hamburger with lettuce and tomato, ketchup and mustard (no bun) ¼ baked potato w/ 1 tsp light butter and 2 Tbsp plain Greek yogurt Start drinking 30 min after meals	16-23g
Snack	Choose One: ½ banana + 1 Tbsp peanut butter or ½ protein shake or ½ protein bar Start drinking 30 min after meals	7-15g

Deb Meadows, 57

Back in 2014, Deb Meadows started to consider undergoing weight-loss surgery. She just couldn't seem to lose weight and keep it off by other means, but her primary care provider wasn't particularly supportive of bariatric surgery. Then, Deb – a nurse – started a new job in general surgery at WVU Medicine. This employer change would eventually lead to Deb's life-changing weight loss of 102 pounds.

Inspired by her coworkers

As a nurse in general surgery, Deb met a couple coworkers who had undergone bariatric weight-loss surgery at WVU Medicine a few years prior and had great success. They had lost a substantial amount of weight and had been able to maintain their weight loss. Deb thought that if they could do it, she could, too.

Around the same time, Deb became acquainted with the bariatric surgery team at WVU Medicine. Since she had been interested in weight-loss surgery for a couple years and now personally knew a couple people who had success undergoing a procedure, she decided to attend an information session in August 2016.

Getting ready for surgery

The waiting period for undergoing bariatric surgery varies depending on insurance carrier; Deb's insurance required a six-month timeframe before undergoing surgery. Looking back, she is thankful for this time to carefully consider her decision and to truly understand what a major lifestyle change she was about to make.

For Deb, one of the most critical components of the WVU Bariatrics program was the pre-surgery classes. These classes helped her totally change her perception with food and how she incorporates it into her life. "When I started, I really didn't know all of the changes that I was going to have to make until after I started the classes," she said. Pre-surgery classes give

patients time to learn new habits and practice and develop them into their own habits before undergoing surgery. "It's important to understand your goals before going into surgery," Deb said. "You should really think through it before doing it. It's not an overnight decision, and it's a lot of changes."

Overcoming mental hurdles

One important step of the pre-surgery process was to have a psychological evaluation. Working with a psychologist who is experienced with bariatric patients and part of the surgical weight-loss team helps patients prepare mentally and psychologically for surgery. "A lot of it is in your mind," Deb said. "It's how you're going to deal with situations – some of it was physical but a lot of it was mental, too. It's having to deal with a different route of eating when you've gone another way for so long."

Deb said that the tough lifestyle changes started while she was in the six-month waiting period prior to her procedure. "Before the surgery, my hardest thing was giving up caffeine and sodas. I loved the fizz." Since then, she has found and learned to enjoy healthier alternatives.

A collaborative team effort

Deb can't seem to say enough about how wonderful her experience at WVU Metabolic and Weight-Loss Surgery has been. "Everyone has been so supportive; they are an amazing team," she said. Deb received the tools that she needed to prepare herself for surgery and for after the surgery – all from a supportive, multidisciplinary team.

Throughout her journey, Deb worked closely with her surgeon, dietitian, nurse, physician assistant, and psychologist. "Each had their own part," she said. "Each one spent time with me to make sure I was right on track."

"I had the best care while I was in the hospital and even afterwards," Deb explained. "I could call them at any time and have my questions answered and have their support. I was never alone through any part of the procedure; they were there each step of the way."



Setting SMART Goals

Did you meet your goals for the last month? If the answer is “kind of” or “not really,” consider changing the way you set your goals:

✓ Break a large goal into smaller goals.

✓ Focus on lifestyle change, not just weight loss.

✓ Make your goals **SMART**:

Specific:

Well defined, understandable, clear

Measurable:

You will know how close you are to the goal and when the goal is reached

Attainable:

Though a challenge, the goal can be met

Realistic:

Do-able, so you can reach your goal with effort

Time-Based:

Frequency and time line are clear

Look at your Nutrition Progress Sheet. This outlines 15 habits that you will need to adopt to be successful after surgery.

Ask yourself these questions:

1. What am I most willing to change right now?

2. What will be the hardest part?

3. What will be the easiest part?

4. How will I meet my goal?

5. How long will it take to reach my goal?

6. Is this a realistic short-term goal?

Sample Goal: *"I will eat better."*

Make this a SMART Goal!

Specific:

Measureable:

Attainable:

Realistic:

Timely:

Which goal have you had trouble meeting?

Your Goal:

Specific:

Measureable:

Attainable:

Realistic:

Timely:

What is mindful eating?

Eating with Intention — making a conscious decision to fuel your body

Eating with Attention — listening to your body's cues of hunger and fullness

Core principles of Mindful Eating

- ✓ Awareness of the present moment
- ✓ Being aware of the nourishment available through preparing and eating food
- ✓ Choosing enjoyable and nutritious foods
- ✓ Acknowledge food preference without judgment (no good or bad)
- ✓ Recognizing and listening to physical hunger and fullness cues
- ✓ Use wisdom to guide your food choices

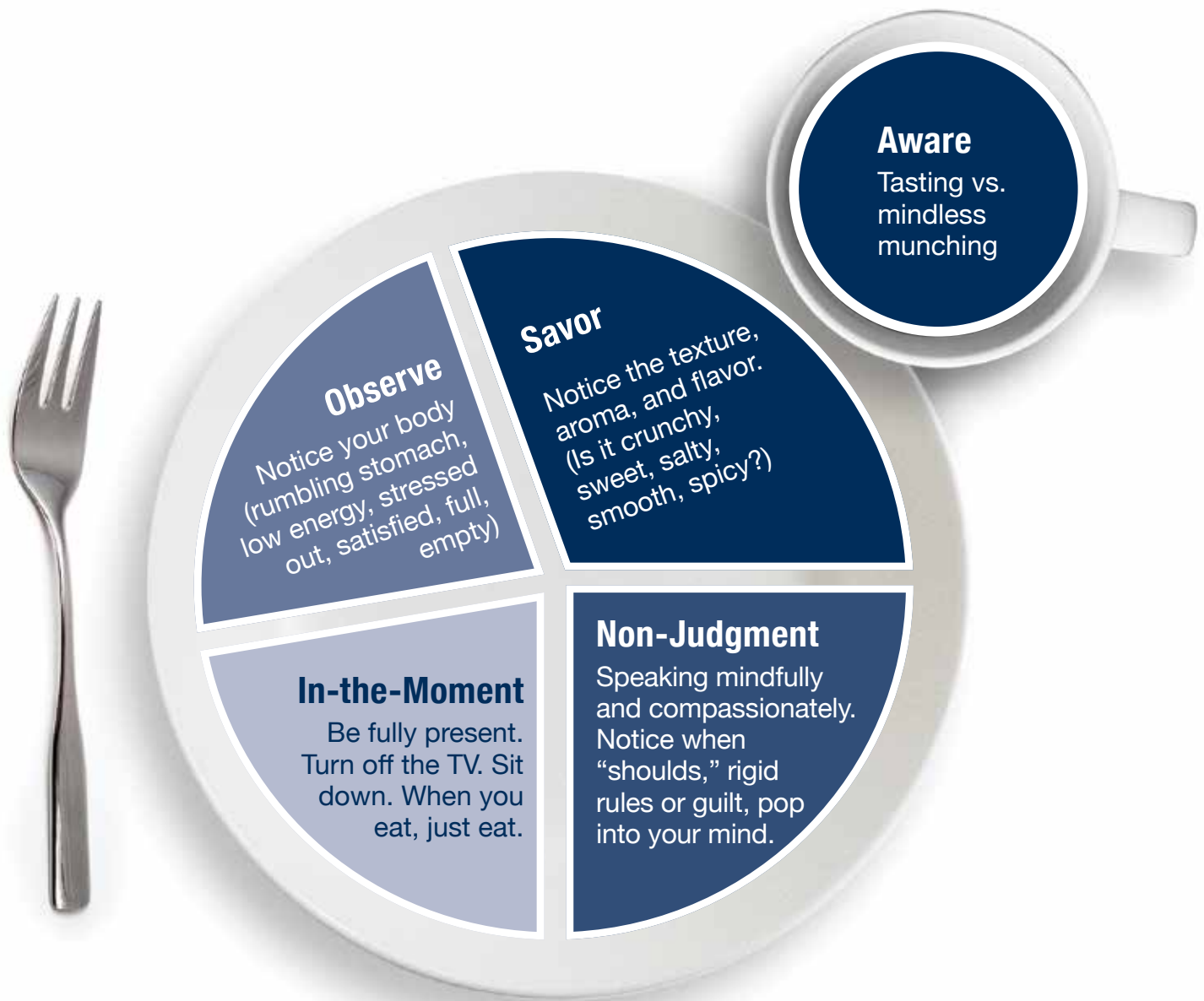
Signs of mindLESS eating

- ✓ Eating quickly
- ✓ Taking large bites
- ✓ Not chewing thoroughly
- ✓ Eating while distracted, which can lead to eating more than you need
- ✓ Not tasting food, therefore having trouble feeling satisfied with a smaller volume of food

Ask yourself: "Am I hungry? What am I hungry for?"

Asking yourself these questions gives you a chance to determine if you need to eat, or if you just want to eat.

Preparing for Surgery: Mindful Eating



Check triggers that may affect how you eat:

Stress		Boredom		Angry		Sad	
Happy		Excited		Anxious		Fear	
Guilt or Shame		Time		Eating in a Group		Eating Alone	
Specific People		Going to the Movies		Watching TV		Celebrations	
Buffets		Internet Surfing		Driving		Distractions	

The Hunger Scale

0	1	2	3	4	5	6	7	8	9	10
Empty	Ravenous	Overly Hungry	Physically Hungry	Slightly Hungry	Neutral	Satisfied	No Longer Hungry	Full	Stuffed	Extremely Full

How can you tell when you are hungry?

Common signs of physical hunger include:

- ✓ Hunger pangs or gnawing
- ✓ Stomach growling
- ✓ Feeling emptiness
- ✓ Nausea
- ✓ Irritability
- ✓ Headache
- ✓ Low energy/fatigue
- ✓ Difficulty concentrating
- ✓ Feeling like you must eat now

Becoming more Mindful

Becoming more mindful when eating takes practice. Eating quickly and multitasking during mealtimes may be challenging habits to change.

Make a conscious effort to:

- ✓ Be present. Pay attention to your meal.
- ✓ Eat at the table, if possible.
- ✓ Minimize distractions. Turn off the TV and computer. Put your phone away.
- ✓ Begin slowing down. Use a timer if necessary. It takes 20-30 minutes to feel full.

Take 1 minute before eating to de-stress.

Chew your food well. Try putting your fork down between bites.

Monitor your meal times.

Some ideas for being more Mindful

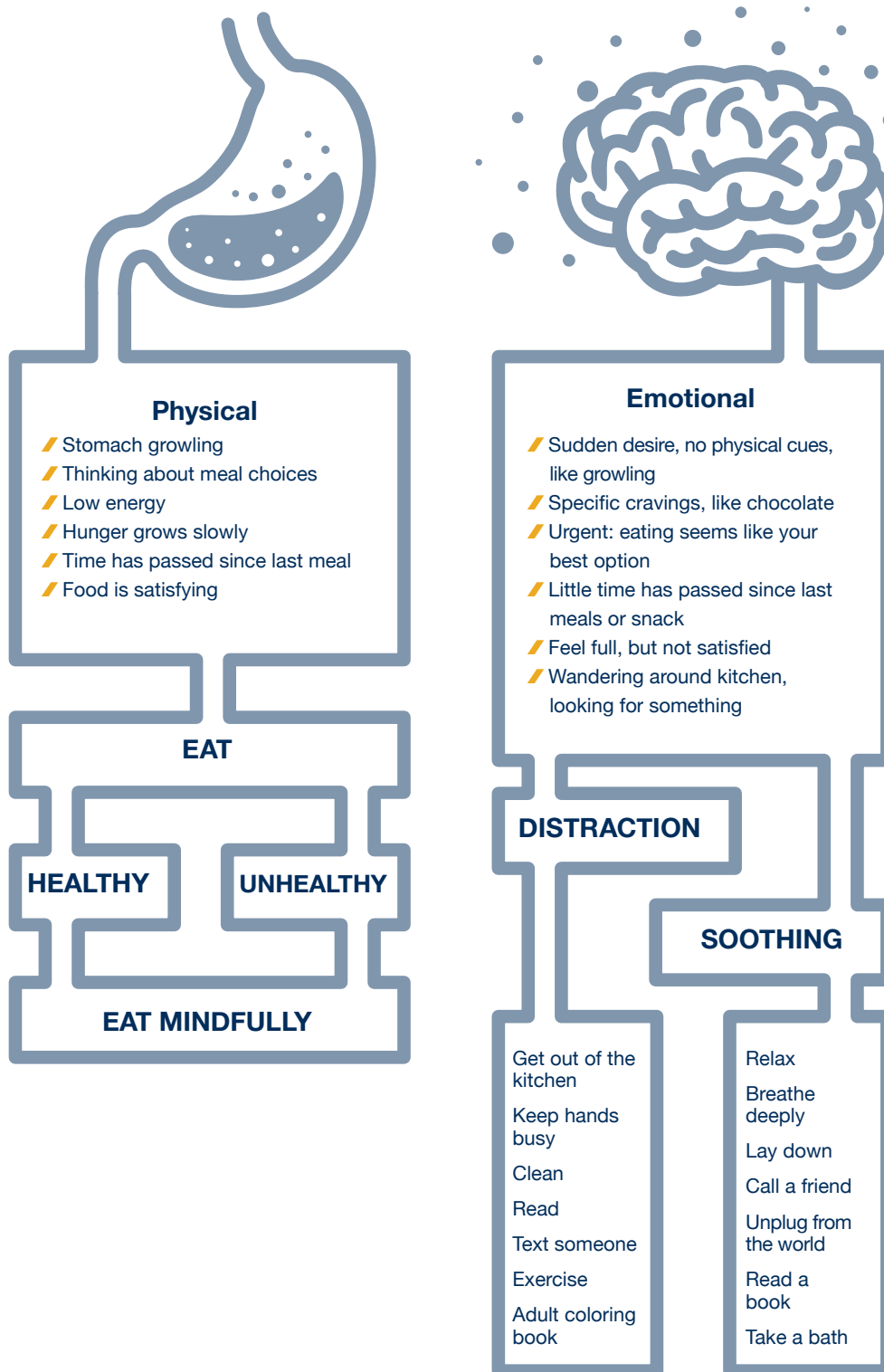
- ✓ **Keep food out of sight and in closed containers.** This can help prevent impulse eating.
- ✓ **Write down everything you eat.** Be responsible for what you consume.
- ✓ **Don't walk into the kitchen when you are bored.** Try going for a walk, reading a book, taking a walk, or tidying up.
- ✓ **Be aware of what you are drinking.** Stick to calorie-free beverages.
- ✓ **Make small, gradual lifestyle changes.** Change one or two behaviors at a time. First, cut out caloric beverages, then something else, like smaller portions.
- ✓ **Eat less more often.** Split your 3 meals into 5 smaller meals. Healthy snacks can help prevent over-eating at meal times. Avoid skipping meals.

Hunger and fullness after surgery

After surgery, you may experience some changes in the way you feel before and after eating. Each person is different. Some changes may last only a short time; others may last months to years.

- ✓ **Not feeling hungry at all:** This may last up to 6 months.
- ✓ **Very subtle signs of hunger:** Missing these subtle signs of hunger, and then feeling an urgency to eat after waiting too long between meals and snacks.
- ✓ **Fullness may feel different and may come on very quickly.** Assess your fullness after each bite.
- ✓ **Signs of fullness may feel like pressure in your chest or upper abdomen.** Another sign is excessive burping.

Overcoming Emotional Eating: Stomach vs. Mind



Dining Out

Choosing to dine out can put you in a situation where you may be more likely to give in to temptation. But, dining out can be do-able both before and after surgery with some pre-planning.

Plan ahead and do your homework. Research options before arriving — many restaurants post nutritional information online. Search the restaurant's nutrition data online prior to sitting down to eat. If you cannot find the nutrition data, choose an item that is labeled "low-fat," "heart-healthy," or "light." Other key words to look for: roasted, poached, steamed, baked, and grilled.

Don't feel pressured to eat like everyone else. Other diners may order large portions or items that may make you sick after surgery — don't let that keep you from choosing something that is right for you.

Ask for sauces and dressings on the side. Choose low-calorie condiments like mustard, ketchup, hot sauce, and vinegars.

Request substitutions. Ask for a side-salad, steamed vegetables, or fruit instead of fried items or starchy sides.

Split an entrée. If you don't have anyone to share with, ask for a box with your meal (or take your own), and package up a portion of your meal before you eat.

Order smaller portions: half-portions, lunch portions, kids' portions, senior portions, a la carte.

After surgery, avoid foods that may get "stuck" or get "gummy:" steak, well-done meats, pastas, rice, and breads.

Before surgery, order only calorie-free drinks.

After surgery, order a glass of ice to avoid drinking a lot of fluid with your meal.

Avoid buffets. Before surgery, you may find using the plate-method a helpful tool to help control portions if you don't have any other choices.

	Sit-Down	Fast-Food	Convenience Store
Breakfast	<ul style="list-style-type: none"> Scrambled eggs or egg whites Veggie omelet with no oil or butter Turkey sausage or turkey bacon Oatmeal Fruit Cup 	<ul style="list-style-type: none"> Egg white sandwich (no bread until 6 mo. post-op) Scrambled eggs Turkey sausage, Canadian bacon Fruit and yogurt cup Oatmeal (no added sugar) 	<ul style="list-style-type: none"> Boiled eggs Greek yogurt String cheese Protein bar Protein drink Single-serve cheese stick
Lunch or Dinner	<ul style="list-style-type: none"> Salad w/ grilled chicken or steak Baked fish Steamed or grilled seafood Pulled pork or chicken Plain, grilled lean meat, like chicken, sirloin, or pork chop Veggie burger, no bun Deli meat sandwich, no bun Broth-based soups or chili Salad bar: veggies, cottage cheese 	<ul style="list-style-type: none"> Grilled chicken sandwich, no bun Grilled chicken nuggets or strips Low-fat deli meat, no bun Plain burger, no bun Chili Chicken salad (not fried), use light amount of dressing Fat-free refried beans Veggie burger, no bun 	<ul style="list-style-type: none"> Grilled chicken, no bun Low-fat deli meat, no bun Salads with grilled meat, light dressing Packaged boiled egg Single-serve cheese Hummus cup Light Greek yogurt
Side Dishes or Snacks	<ul style="list-style-type: none"> Sweet potato, no butter Baked potato, no butter Side salad, light or fat-free dressing Steamed vegetables, no butter Fruit 	<ul style="list-style-type: none"> Side salad Small chili Fruit cup or apple slices 	<ul style="list-style-type: none"> Fruit cup or fresh fruit Hummus cup Nuts Protein bar or drink Side salad Single-serve cheese Protein drink or bar

My Action Plan to Solve a Problem

With each food choice you make, you have the opportunity to better understand and manage your health.

The choices we make can impact the stress of living with a chronic condition and our quality of life. When problems arise, we must learn to solve them. To understand why a problem exists and how to deal with it, use these steps:

- What is the problem?
- What am I doing that may affect the problem?
- What are my barriers to better self-care?
- What are some possible solutions I could use to overcome the barriers or solve the problem?
- Check back: Did my solution help?

Ask yourself these questions:

1. The PROBLEM as I see it is ... ex: *My dinner portion is too large.*

2. My self-care behaviors that affect the problem... ex: *I skip breakfast. I wait until I'm very hungry to eat. I eat at buffets often.*

3. My barriers that keep me from better self-care are... ex: *I'm too busy. I forget to eat. I'm not hungry in the morning.*

4. Possible solutions to the problem are... ex: *I will pre-pack or set out a quick breakfast, like a piece of fruit or a boiled egg. I will set an alarm on my phone to remind me to eat. I will avoid buffets. I will use MyPlate as a guide when eating dinner.*

5. Evaluate progress: I'll know my solution is working because... ex: *I will eat more often throughout the day. My portions at night will be smaller.*

Nutritional Guidelines: Label Reading

Label Reading for Healthy Menu Planning

Serving size: Pay close attention to the serving size. The entire label is based on this information.

Calories: The amount of calories you need each day depends on many factors, including exercise. The number of servings you eat determines the number of calories you actually eat.



Nutrition Facts

8 servings per container

Serving size 2/3 cup (55g)

Amount per serving

Calories 230

% Daily Value*

Total Fat 8g 10%

Saturated Fat 1g 5%

Trans Fat 0g

Cholesterol 0mg 0%

Sodium 160mg 7%

Total Carbohydrate 37g 13%

Dietary Fiber 4g 14%

Total Sugars 12g

Includes 10g Added Sugars 20%

Protein 3g

Vit. D 2mcg 10% • Calcium 260mg 20%

Iron 8mg 45% • Potas. 235mg 6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Carbohydrates: These come from starches, fiber, and natural and added sugars. Carbohydrates are your #1 energy source. The new label breaks down carbohydrate sources.

Protein: Aim for 60-80g per day after surgery. Protein helps maintain your muscles and organs. It also helps your immune system and helps with healing after surgery. Lean protein foods are best for weight management.

Vitamins and minerals: Both vitamins and minerals help your body function properly. You will need "extra" of certain vitamins and minerals after surgery.

Fat: Fat has more calories per spoonful than any other macronutrient.

Label A

Nutrition Facts

Servings Size 1 cup (245g)

Serving Per Container

Amount per serving

Calories 80 **Calories from Fat** 0

% Daily Value*

Total Fat 0g 0%

Saturated Fat 0g 0%

Trans Fat 0g

Cholesterol 5mg 2%

Sodium 105mg 4%

Total Carbohydrate 12g 4%

Dietary Fiber 0g 0%

Total Sugars 12g

Protein 8g

Vitamin A 10% **Vitamin C** 0%

Calcium 30% **Iron** 0%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

		Calories: 2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium		2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 Carbohydrate 4 Protein 4

Label B

Nutrition Facts

Servings Size 1 cup (244g)

Serving Per Container

Amount per serving

Calories 120 **Calories from Fat** 45

% Daily Value*

Total Fat 5g 8%

Saturated Fat 3g 15%

Trans Fat 0g

Cholesterol 20mg 7%

Sodium 100mg 4%

Total Carbohydrate 11g 4%

Dietary Fiber 0g 0%

Total Sugars 11g

Protein 8g

Vitamin A 10% **Vitamin C** 0%

Calcium 30% **Iron** 0%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

		Calories: 2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium		2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 Carbohydrate 4 Protein 4

Practice example: Label A vs. Label B

What is the serving size for each of these foods?

If you have 2 servings from "Label A," how many calories would you be consuming?

Which has less fat per serving?

Using the guidelines for fat on the previous page, which is a better/healthier option?

Carbohydrates

Why do we need carbohydrates?

- ✓ Your body's preferred source of energy
- ✓ Digestive system turns carbs into glucose (blood sugar)
- ✓ "No carb" or "very low carb" not a realistic strategy for long-term weight loss

After surgery:

- ✓ Protein = your #1 priority. But, carbohydrates are added to your meals as your new stomach allows, usually around 3-6mo after surgery.
- ✓ 1-year post-op: up to 30g total carbohydrates per meal, and up to 10g at 1-2 snacks.

Complex carbohydrates: Choose often

- ✓ Found in plant-based foods
- ✓ Have a healthy amount of vitamins and minerals
- ✓ Contain fiber

Whole-grain bread and flour
Whole-grain rice and pasta
Potatoes
Whole-grain cereals
Beans and legumes

Dietary Fiber

Pre-surgery: Promotes bowel health, satiety, and can help lower cholesterol and blood glucose levels.

- ✓ 21-25g/day for adult women
- ✓ 30-38g/day for adult men
- ✓ Most adults get only about 15 g/day

Post-surgery: Fiber will help to promote bowel health regularly. Make it a point to eat higher fiber carbohydrates, such as beans, nuts, whole grains, and oatmeal. Vegetables and fruits contain fiber, too.

Whole Grains

Whole grains are part of a healthy diet and are good sources of fiber, vitamins, and minerals. Grains are also naturally low in fat. They've been linked to a lower risk of heart disease, diabetes, certain cancers, and other health problems.

The best kinds of grains are whole grains.

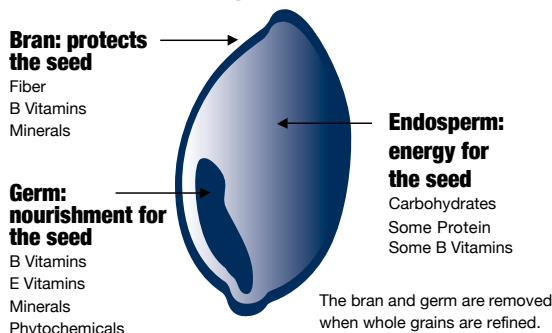
The 2010 Dietary Guidelines for Americans recommends that at least half of all the grains you eat are whole grains (3-5oz/day). Chances are you eat a lot of grains already. But are they whole grains? If you're like most, you're not getting enough whole grains in your diet.

When shopping, look at the ingredient list for words like "whole" and "stone ground." Be aware of terms like "wheat flour" "enriched flour," "bran," or "multi-grain," because they do not guarantee that the food is whole grain.

Ways to increase whole grains in your diet:

INSTEAD OF...	TRY...
White bread	Whole-grain bread
All-purpose white flour	Whole-wheat flour
White pasta	Whole-grain pasta
White rice	Brown rice, wild rice, bulgur, or quinoa
Sugary breakfast cereal	Bran flakes, shredded wheat, or oatmeal
Mashed potatoes	Baked regular or sweet potato with skin
French fries or white bread	Starchy vegetables like corn, peas, or lima beans
Dry bread crumbs	Crushed bran cereal or rolled oats
Red meat, poultry, or pork	Legumes (black, pinto, kidney beans, chickpeas)

Anatomy of a grain



What about white whole-wheat bread?

It may seem like it doesn't add up, but white whole-wheat bread is actually made with whole grains, just as is regular whole-wheat bread. So if you prefer the taste and texture of white bread but want the nutritional benefits of whole wheat, choose white whole-wheat bread — not regular, refined white bread.

Nutritional Guidelines: Carbohydrates

Simple carbohydrates – natural and added sugars

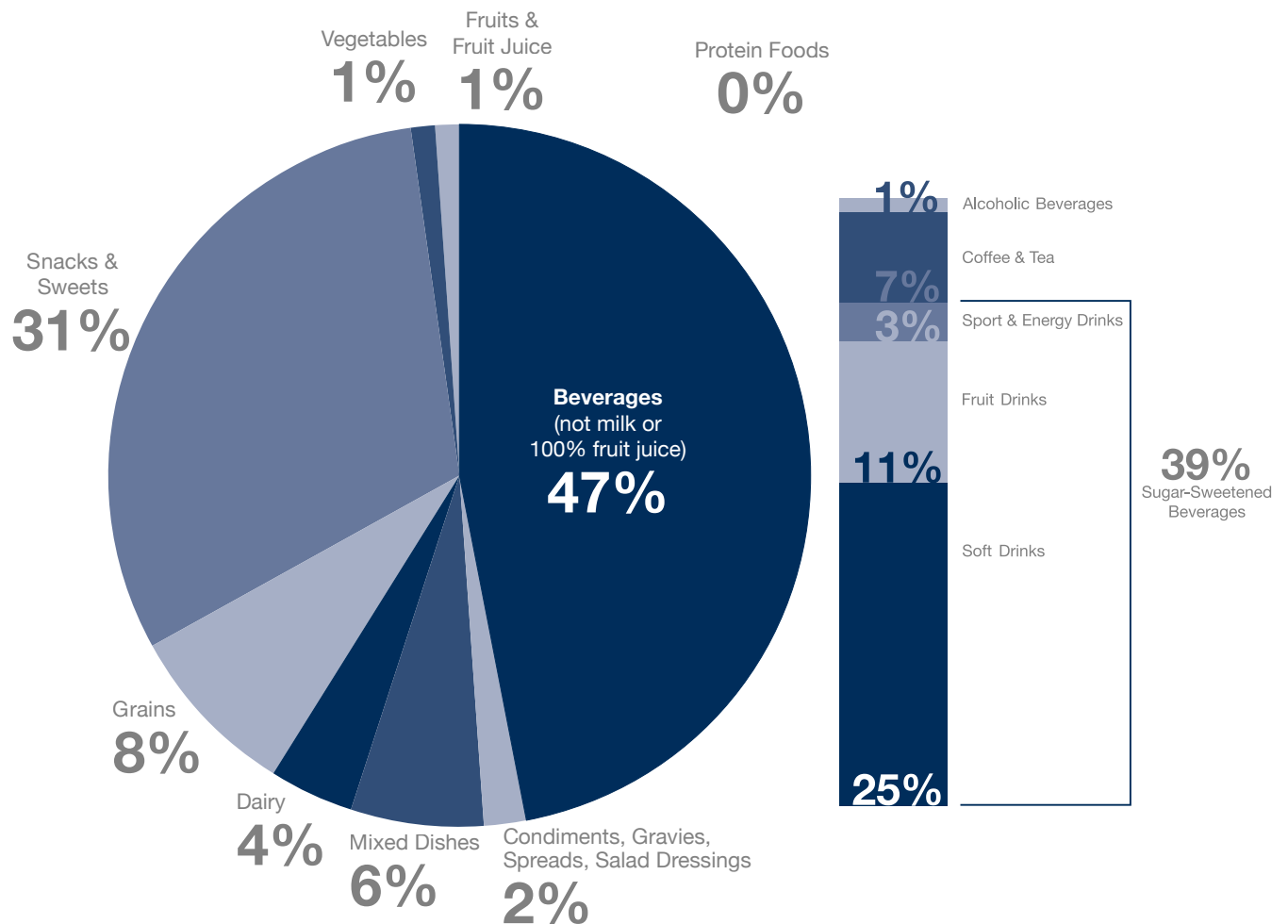
Choose natural sugars **OFTEN**

- ✓ Found in fruits and dairy foods.
- ✓ Contain vitamins and minerals
- ✓ Fruits contain fiber
- ✓ Dairy foods contain protein

Fruit - Fresh, frozen, or canned in juice
Fat-free, skim, or 1% milk
Non-fat, light yogurt

AVOID or limit added sugars

- ✓ Foods with sugar added during processing
- ✓ Digested and absorbed more quickly
- ✓ Leave you feeling tired, hungry, and craving more sugar shortly after you've finished eating
- ✓ May cause dumping syndrome after surgery



What We Eat in America (WWEIA) Food Category analyses for the 2015 Dietary Guidelines Advisory Committee. Estimates based on day 1 dietary recalls from WWEIA, NHANES 2009-2010.

What are your top 3 sources of sugars?

Table sugar	Honey
Brown sugar	Molasses
"Raw" sugar	Corn Syrup

Nutritional Guidelines: Fats

	Saturated Fats	Trans Fats	Monosaturated Fats	Polyunsaturated Fats
Commonly Found in These Foods:	<ul style="list-style-type: none"> Mainly from animal fats - beef, lamb, pork, poultry skin, beef fat, lard, butter, cheese, other whole or reduced-fat dairy products Some plants - Palm, palm kernel, & coconut oils 	<ul style="list-style-type: none"> Baked goods - pastries, biscuits, muffins, cakes, pie crusts, donuts, cookies Fried foods Snack foods - crackers, popcorn Traditional stick margarine & vegetable shortening 	<ul style="list-style-type: none"> Vegteable oils - canola, olive, peanut, & sesame Avocados & olives Many nuts & seeds - almonds, peanuts/peanut butter 	<ul style="list-style-type: none"> High in Omega-6 and Omega-3 (ALA) Vegetable oils - soybean, corn, & safflower Many nuts & seeds - walnuts & sunflower seeds High in Omega-3 (EPA & DHA) Fatty fish - salmon, tuna, mackerel, herring, & trout
Effect on Heart Health:	<ul style="list-style-type: none"> Raise "bad" cholesterol Increase risk of heart diseases Also likely high in cholesterol 	<ul style="list-style-type: none"> Raise "bad" cholesterol May lower "good" cholesterol Increase risk of heart disease 	<ul style="list-style-type: none"> Reduce "bad" cholesterol May lower risk of heart disease 	<ul style="list-style-type: none"> Reduce "bad" cholesterol May lower risk of heart disease
Characteristics:	<ul style="list-style-type: none"> Solids at room temperature 	<ul style="list-style-type: none"> Solids at room temperature Found in "partially-hydrogenated" oils 	<ul style="list-style-type: none"> Liquid at room temperature, but may turn solid when chilled 	<ul style="list-style-type: none"> Liquid at room temperature and when chilled
Daily Limit:	<ul style="list-style-type: none"> Less than 7% of daily calories If you eat 2,000 calories/day, then 140 calories (15g) can be from saturated fats 	<ul style="list-style-type: none"> Less than 1% total daily calories If you eat 2,000 calories, less than 20 calories (2g) should be from trans fats 	<ul style="list-style-type: none"> Total fats should be 25-35% of calories Eat these fats instead of saturated and trans fats 	<ul style="list-style-type: none"> Total fats should be 25-35% of calories Eat these fats instead of saturated and trans fats

Fat facts

- Saturated and trans-fats: raise bad cholesterol and may increase risk of heart disease
- Poly and mono-unsaturated Fats: reduce bad cholesterol and may lower risk of heart disease
- 1 year post-op: up to 30g total fat per day. Focus on good fats when cooking.

Tips to lower saturated fats

- Bake, broil, roast, or grill meats. Don't fry!
- Drain off any fat.
- Trim visible fat from meat before cooking.
- Remove poultry skin before cooking.
- Refrigerate soups/meat drippings and then remove hardened fat.
- Use skim or 1% milk.

- Choose low-fat or non-fat dairy products.
- Use lean ground round instead of ground chuck.
- Use margarine with phyto-sterols, fat-free spray margarine, or oil instead of butter. Avoid margarines that list partially-hydrogenated vegetables oils first on the ingredient list.
- Use low-calorie or fat-free mayo and salad dressings.
- Replace one meat meal per week with fish, vegetable protein, or beans.
- Use fat-free sour cream, cream cheese, and gravies
- Avoid fried foods, especially if they are breaded. Use non-stick vegetable spray for your pans.
- Avoid vegetables cooked with meat fat or bacon.

- Limit pre-packaged biscuits, pancakes, cornbread, waffles, muffins, sweet rolls, coffee cakes, and baked desserts.
- Limit potato chips, corn chips, and buttered popcorn. Have pretzels, baked chips, or air-popped popcorn instead.
- Limit ice cream. Try fat-free ice cream or frozen yogurt, ice milk, sherbet, or sorbet.

What are your top 2 sources of saturated or trans fats?

-
-

What steps can you take to reduce fat intake at home?

-
-

Nutritional Guidelines: Protein and Hydration

Protein

Protein = PRIORITY after surgery. Protein is found in almost every part of your body, including your hair, nails, muscle, and organs. It is essential for maintaining cells and tissues, fighting infection, and maintaining bones. After surgery, it is critical for healing.

Most individuals will need 60g-80g protein daily after bariatric surgery. Your needs may be higher if you have infection or open wounds or are trying to build muscle.

Protein is found in meat, poultry, dairy, eggs, fish, beans, nuts, and lentils.

Ask yourself these questions:

How much protein do I need after surgery?

How much protein are you eating every day?

What can I do to increase my protein intake, if needed?

1. _____

2. _____

Fluid and hydration

Water is needed for almost every body function. The average adult is 55-75% water, making up 2/3 of our weight! Water makes up:

- // 75% of the brain — even mild dehydration can affect thinking
- // 92% of the blood — dehydration makes blood stickier
- // 22% of bones
- // 75% of muscle tissue — mild dehydration may cause muscle cramping

Water is essential for metabolism, digestion, temperature control (sweating), breathing, waste removal, lubrication of joints, and weight loss.

You will need the same amount of water after surgery as you do now. But, your new small stomach pouch may make it difficult to drink enough fluid.

Food	Amount	Grams of Protein
Milk - skim or 1%	1 cup	8g
Egg	1 large	6g
Hamburger - extra lean	3 oz	22g
Chicken	3 oz	23g
Fish	3 oz	22g
Yogurt - non-fat	4 oz	8g
Cheese - low fat	1 oz	7g
Lentils	½ cup	8-9g
Nuts	¼ cup	5-6g
Greek yogurt (non-fat)	½ cup	15g
Low-fat cottage cheese	½ cup	12g
Almonds	¼ cup	6g
Hard-boiled egg	1 large	6g
Edamame	1 cup	20g
Pumpkin seeds	¼ large	6g

See an extended list of protein foods starting on page 58 in the Appendix.

Tips to Maintain Adequate Hydration

- // Sip at least 64oz per day (8 glasses). Drink more if you are active. Don't gulp!
- // Don't wait until you are thirsty to drink water. By the time you feel thirsty, you may be already be down 2 or more cups of total body water.
- // Drink all through the day. Carry a water bottle in the car, at work, and when you run errands.
- // When exercising, drink water throughout your workout.
- // Don't underestimate losses from sweat. Hot days = increased need for fluids
- // Drink between instead of with meals. Stop drinking at least 15 minutes before eating. Wait 30 minutes after eating to start sipping again.
- // Don't count alcohol or caffeinated drinks toward your 64oz goal.

Signs of Mild Dehydration

- // Concentrated urine
- // Dry mouth and skin
- // Flushed skin
- // Headache or dizziness
- // Rapid pulse and breathing
- // Increased body temperature
- // Thirst

Severe dehydration can have serious consequences, including:

- // Confusion
- // Thickened blood
- // Shock
- // Seizures
- // Coma
- // Death

Nutritional Guidelines: Protein Supplements

Protein supplements

While protein supplements will not be a life-long necessity, they will be essential in helping you meet your protein goals in the first several weeks after surgery.

However, all protein drinks and supplements are not created equally. In order to meet your specific needs after surgery, look at the nutrition facts label for the following:

- Portion size: this provides reference information for the entire label. This is very important! Some servings may be 1 bottle, 1 scoop, 2 scoops, etc.
- Protein: your post-op protein goal is 60-80g per day. Make sure you choose a protein drink that contains at least 15g per serving.
- Sugar: high-sugar drinks may cause nausea or dumping syndrome. To prevent dumping, look for a drink that has <5g sugar per serving.
- Fat: high-fat drinks may also cause nausea or dumping. Look for drinks that contain <5g fat per serving.

A list of pre-screened, approved protein drinks is available in the Appendix on pages 59 and 60.

Practice

What is the serving size for each?

A: _____ B: _____

What is the protein for each?

A: _____ B: _____

Sugar content for each?

A: _____ B: _____

Fat content for each?

A: _____ B: _____

Which is the best choice?

A: _____ B: _____

Label A

Nutrition Facts			
Serving Size: 1 scoop (-27g)			
Serving Per Container: 17			
Amount per serving		1 scoop	with 8 fl. oz. skim milk
Calories		100	180
Calories from Fat		0	0
% Daily Value*			
Total Fat	0g	0%	0%
Saturated Fat	0g	0%	0%
Trans Fat	0g		
Cholesterol	0mg	0%	2%
Sodium	35mg	4%	7%
Potassium	140mg	4%	15%
Total Carbohydrate	4g	1%	5%
Dietary Fiber	0g	0%	0%
Sugars	4g		
Protein	20g	55%	55%
Vitamin A 0% 10%			
Calcium 105mg 10% 40%			
Iron 0mg 0% 0%			
Phosphorus 65mg 7% 30%			
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.			

Label B

Nutrition Facts

Serving Size: 1 pouch (170g)

Amount per serving

Calories 190		Calories from Fat 40	
		% Daily Value*	
Total Fat	4g		6%
Saturated Fat	1g		5%
Trans Fat	0g		
Cholesterol	10mg		3%
Sodium	110mg		5%
Potassium	400mg		11%
Total Carbohydrate	34g		11%
Dietary Fiber	3g		12%
Sugars	24g		
Protein	6g		12%

Vitamin A	2%	Vitamin C	100%
Calcium	30%	Iron	2%
Vitamin D	25%	Vitamin E	10%
Phosphorus	15%		

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Vitamins and Supplements

Why are supplements needed after surgery?

Sleeve gastrectomy:

- Restrictive procedure: you can't eat as much
- Reduced stomach acid: you may not be able to digest your food as well

Gastric bypass:

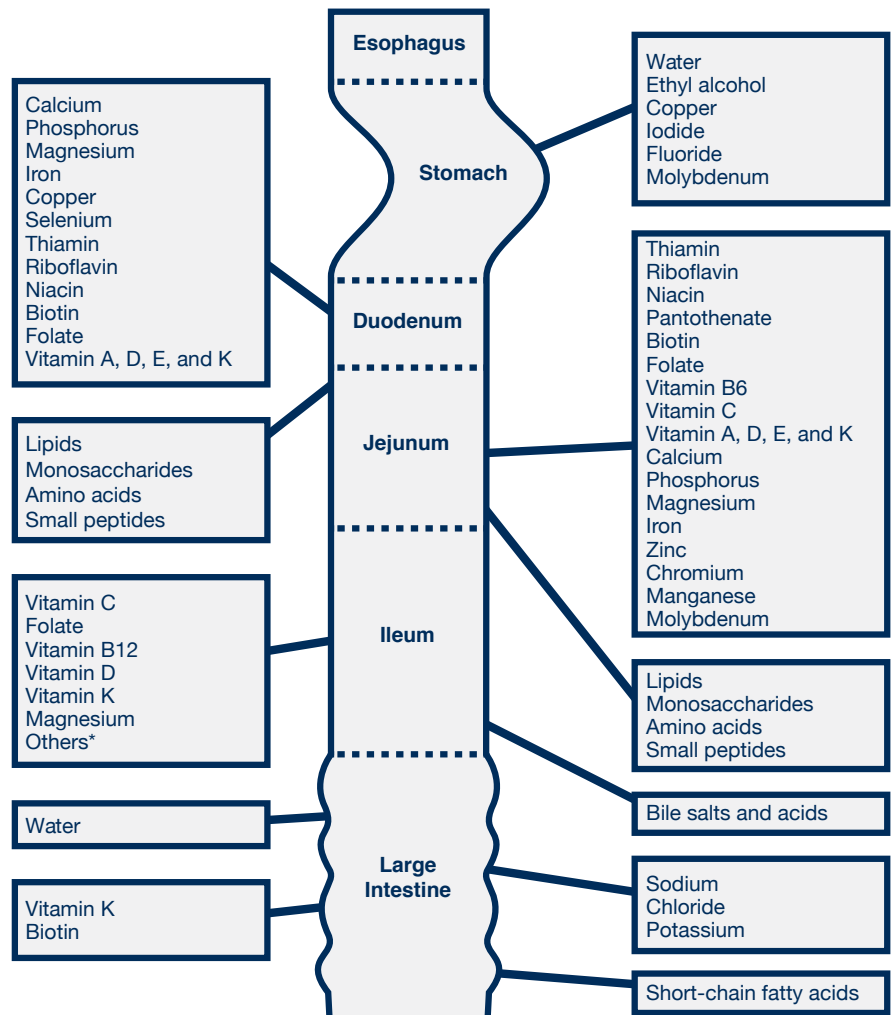
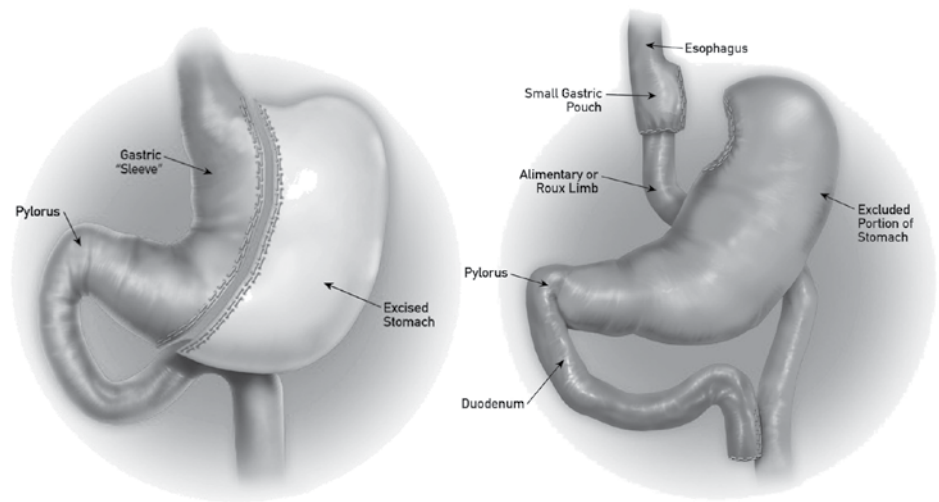
- Restrictive procedure: you can't eat as much
- Malabsorptive procedure: you may not be able to absorb all of the nutrients you ingest
- Reduced stomach acid: you may not be able to digest your food as well

Vitamins and minerals after bariatric surgery

After surgery, you will need to take several vitamins and minerals for life because of the very small amount of food that you will eat and because your body may have difficulty absorbing them.

Consider budget: cost of mandatory vitamins may range to \$20-\$40 per month.

A vitamin shopping guide is available in the Appendix.



*Many additional nutrients may be absorbed from the ileum depending on transit time.

Courtesy: Advanced Nutrition and Human Metabolism, fifth edition

Mandatory Supplements

Supplement	Type (dosage)	Reason	Administration	Interactions
Multivitamin	Bypass and Sleeve: <ul style="list-style-type: none"> Adult Formulation Chewable Complete Formulation May Contain Iron *no gummies or melts*	Help you get all of the micronutrients you need	Take with meals	Separate from calcium if possible
Calcium Citrate with Vitamin D or Calcium Carbonate with Vitamin D (either may contain magnesium)	Bypass and Sleeve: <ul style="list-style-type: none"> Calcium Citrate can be taken with or without food Calcium Carbonate must be taken with food Chewable or small size Break up into 2-4 doses 1200-1500mg/day 	Maintains bone and teeth strength. Essential for muscles to perform and assists fat-burning	CITRATE- Take with or without food CARBONATE- Must take with food	Separate >300mg doses from Iron
Vitamin B12	Bypass and Sleeve: <ul style="list-style-type: none"> 500mcg sublingual/day 1000mcg/month injection 	Helps red blood cells, brain function, maintains GI tract	Sublingual or injection	None

Optional Vitamins/Minerals

Supplement	Type (dosage)	Reason	Take with...	Interactions
Iron — some individuals may need extra iron	Ferrous Sulfate 325mg tablet/ capsule/10mL liquid Ferrous Gluconate 325mg tablet or liquid Ferrous Fumerate 325mg table or liquid	Vital to red blood cells that provide the entire body with oxygen	Vitamin C helps absorption	Do not take within 2 hrs of calcium Do not take with dairy products Do not take with coffee or tea
Zinc	10-20mg, but usually found in the Multivitamin	Helps with wound healing and helps support the immune system	Anytime	None
Biotin	150-300mcg, but usually found in the Multivitamin (no known “toxic” levels)	Maintains healthy skin and hair	Anytime	None
Vitamin D	Dose determined by lab work	Helps your body use calcium, helps support the immune system	Anytime	None

Vitamin Deficiencies

Failure to take supplements as recommended may lead to deficiencies:

Some may develop in weeks, others may take years to develop

May range in severity

Deficiencies can cause a range of symptoms and problems:

Mild deficiencies may go unnoticed and may be easily corrected.

Moderate deficiencies may affect how you feel and can take months to correct

Severe deficiencies may result in permanent damage or permanent change in mental status

Vitamin	Early Symptoms	Advanced Symptoms
Thiamine (B1)	Muscle cramps, irritability, fatigue, weakness, difficulty concentrating, numbness and tingling of fingers and toes, difficulty walking	Neuropathy, pain, heaviness in legs, difficulty walking up stairs or standing on 1 leg, loss of reflexes
Folic Acid (B9)	Pale skin, decreased appetite, irritability, lack of energy	Worsening fatigue, anemia, diarrhea, cracking in the corners of the mouth, swollen and/or shiny tongue
Vitamin B12	Pernicious anemia, fatigue, lightheadedness, vertigo, tinnitus, numbness and tingling in extremities, diarrhea, poor muscle coordination	Problems with reflexes, palpitations, rapid pulse, changes in mental status up to severe dementia, neuropathy
Vitamin D/ Calcium	Softening of the bones	Osteoporosis
Vitamin A	Loss of night vision, dry mouth, cracked lips, dry scaly skin	Total blindness
Iron	Anemia, leg cramping, pica, deformed nails, fatigue, hair loss	Fatigue, irritability, shortness of breath

Nutritional Guidelines: Potential Concerns

Potential concerns following surgery

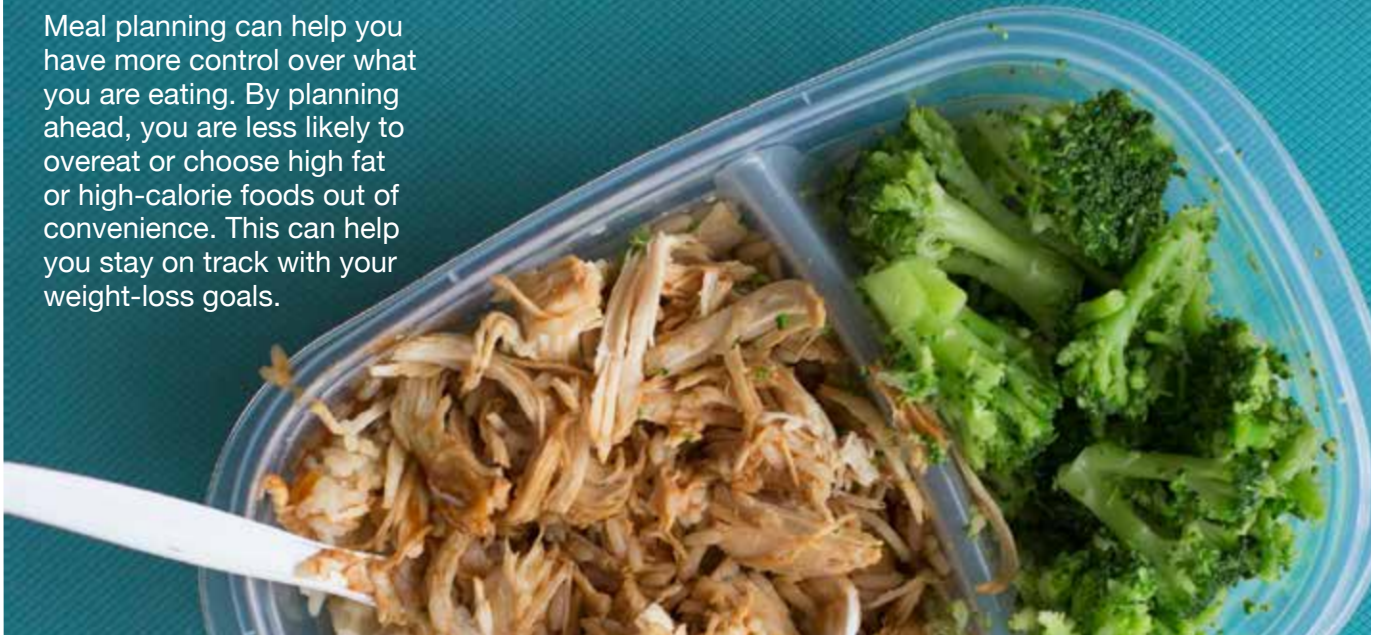
Problem	Signs/Symptoms	Treatment
Dehydration	Not getting enough fluid: can occur with persistent nausea, vomiting, or diarrhea. Flushed face, extreme thirst (more than normal), unable to drink. Dry, warm skin. Dark yellow urine; cannot urinate. Dizziness—made worse when standing. Weakness or cramping in the arms and legs. Sleepy or irritable (more than normal!) Dry mouth/tongue with thick saliva.	<p>Drink when you are thirsty. Sometimes it is difficult to tell the difference between hunger and thirst.</p> <p>Make sure you are getting a minimum of eight–8oz glasses of fluid daily (64oz). TRACK YOUR FLUIDS. Increase fluids if possible.</p> <p>After surgery, you should drink BETWEEN meals, not with them.</p>
Dumping	<p>Cold sweats, heart palpitations, nausea, vomiting, sudden onset diarrhea.</p> <p>Dumping occurs when a high-sugar or high-fat food is eaten. Everyone is different when it comes to dumping— some people never experience it.</p>	Avoid foods high in fat and sugar.
Low blood sugar (AKA “Late dumping”)	<p>Weakness, dizziness, sweating, and possible fainting. Caused by pancreas releasing surge of insulin, dropping blood sugar.</p> <p>Can happen 30 min–3 hours after eating.</p>	Eat 3 small meals + 1–2 small meals throughout the day. Avoid eating carbohydrate foods alone. Avoid concentrated sweets.
Heartburn	Acid, or a burning feeling in your throat or chest.	<p>You may try over-the-counter medications like Tums, Roloids, Pepto-Bismol, and Pepcid.</p> <p>Avoid carbonated drinks, alcohol, caffeine, citrus, spicy, acidic, and gassy foods. Avoid lying down for 1 hr after eating.</p>
Nausea and vomiting	<p>Feeling sick to your stomach, dry heaves, retching, spitting up foods, or foamy mucous. Nausea and vomiting may occur after eating or drinking.</p> <p>Possible causes:</p> <ul style="list-style-type: none"> // New food or texture doesn’t agree with you // Eating too large of a portion // Eating or drinking too much or too fast // Eating or drinking foods that are very hot or cold may cause you to gulp air, causing uncomfortable bloating // Not chewing food thoroughly // Taking vitamins on an empty stomach. 	<p>Wait a few weeks before trying the new food again. Make sure you’re eating food listed on your food list and not jumping ahead too fast.</p> <p>Eat and drink slowly, take small bites and small sips, and enjoy the meal.</p> <p>Try foods that are at room temperature.</p> <p>Make sure you chew well to a paste texture before swallowing.</p> <p>Pay attention to portion sizes. Take vitamins with meals.</p>

Nutritional Guidelines: Potential Concerns

Problem	Signs/Symptoms	Treatment
Bloating	An overstuffed, uncomfortable feeling	<p>Stop eating as soon as you feel fullness or pressure. Take 20-30 minutes to eat each meal.</p> <p>Do not drink liquids during meals.</p> <p>Cut back on total portion sizes.</p> <p>Use a child-sized spoon and fork to help slow pace of eating.</p> <p>Avoid very hot or cold foods that may cause you to gulp air.</p>
Constipation	<p>Bowel movements are very hard and not occurring regularly.</p> <p>Straining to have bowel movements.</p> <p>May be worse when not getting enough fiber or not drinking adequate fluids.</p>	<p>You may take an over-the-counter stool softener like Colace or Miralax two times per day.</p> <p>Consume more fiber via fruits, vegetables, legumes, and high-fiber grains.</p> <p>Ensure you are getting an adequate amount of fluid (>64oz/day).</p> <p>Try a small amount of prune juice. If you still experience constipation, call your bariatric team.</p>
Diarrhea	<p>Loose and watery bowel movements, crampy, abdominal pain.</p> <p>May be associated with:</p> <ul style="list-style-type: none"> 🔪 Dumping 🔪 Lactose intolerance 🔪 Change in food habits 🔪 Sensitivity to caffeine, sugar, or fat 	<p>Keep a food log to help identify patterns.</p> <p>Avoid caffeine.</p> <p>Avoid high-fat and high-sugar foods</p> <p>Include foods higher in soluble fiber, like beans, barley, oats, carrots, bananas, apples, peaches, and pears.</p> <p>Increase the amount you drink that day to compensate for lost fluids.</p>
Lactose Intolerance	Gassy, bloated, diarrhea, crampy, abdominal pain	<p>Do not eat or drink any milk or dairy products (cheese, yogurt, ice cream, cottage cheese, sour cream) or protein shake with milk for 3-5 days. If symptoms resolve, this may be Lactose Intolerance.</p> <p>Use unsweetened Lactaid and/or un-sweetened soy/nut milks.</p> <p>You can try Lactaid or dairy-ease pills.</p> <p>Use protein drinks that are lactose-free. Some people can eat yogurt or cheese but not milk. When reintroducing these items, start with cheese or yogurt. If it works, continue to eat these.</p>
Hair loss	<p>Hair falling out in large clumps, not normal daily hair loss.</p> <p>Losing hair around 3 months post-operatively is common. It is caused by the stress of surgery and/or rapid weight loss. It is often temporary.</p>	<p>Make sure you are getting 60-80g protein daily.</p> <p>Make sure you take the complete, adult formulation multivitamins. You may need an additional B-complex supplement.</p>
Taste and appetite changes	<p>Taste changes, like sweets taste sweeter.</p> <p>Bad or metallic taste in your mouth.</p> <p>Decreased interest in eating</p>	<p>Continue to try new foods.</p> <p>Rinse mouth with water or mouthwash.</p> <p>Continue to drink 64oz or more of fluid every day. Do not skip meals. May need to schedule meals regardless of hunger.</p>

A Key to Success

Meal planning can help you have more control over what you are eating. By planning ahead, you are less likely to overeat or choose high fat or high-calorie foods out of convenience. This can help you stay on track with your weight-loss goals.



Time

The biggest barrier facing many who are trying to change eating habits is finding the time to meal plan. Meal planning may sound like something time consuming, but a few minutes a week can make a big impact. Be sure to keep ingredients on hand for fast and easy meals for days when unexpected things come up so you aren't as tempted to eat at a restaurant.

Meal prepping can also be helpful. Take one day a week to prepare meals or wash and cut vegetables for later in the week. Having meals prepared or ingredients ready to use can be a real time saver on busy weeknights.

Brainstorm

Use the space below to brainstorm meal ideas. What are your favorite lean meats and vegetables? Use those as a base for your meal. What can you do to keep your meals interesting?

Quick and Easy Meals

After a long day, you may not feel like cooking dinner. It is tempting to pick up fast food on the way home or order delivery. Restaurant food and portion sizes made it difficult to keep to your lifestyle changes.

Life gets busy at times, but a little planning can keep those days from derailing your weight-loss goals. Keep ingredients on hand for fast and easy meals so you won't be tempted to make poor eating choices.

These meals are great options for busy nights:

Sandwiches/Burgers/Wraps

- Low-fat veggie burger or turkey burger on a whole wheat bun. Serve with leafy lettuce, tomato, onion, and condiments.
- Deli turkey breast sandwich on whole wheat bread with veggies
- Pita pocket with hummus, beans, turkey, or canned tuna. Add lots of veggies.
- Burritos made with low-fat tortillas, canned fat-free refried beans, ground turkey breast, or vegetarian meat with lettuce, salsa, and tomatoes

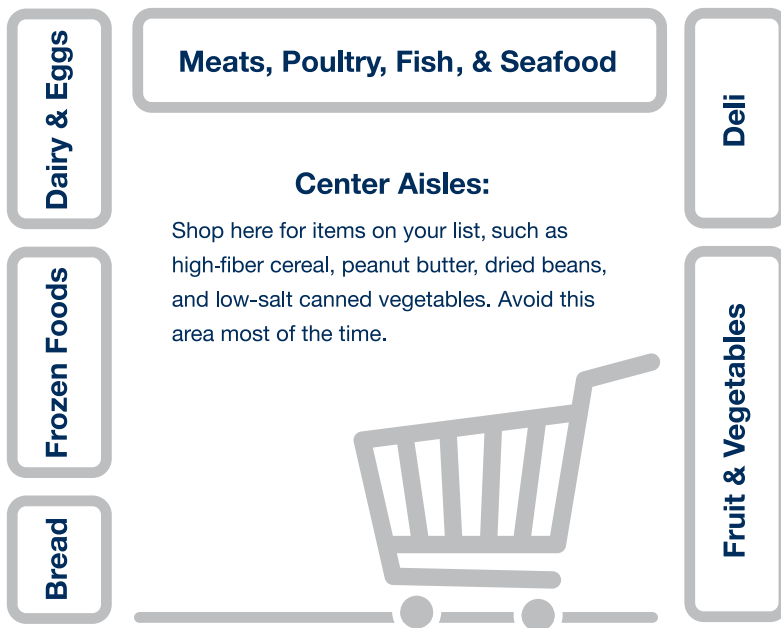
- Fajitas made with low-fat tortillas, grilled chicken breast, tomatoes, onion, and bell pepper

Whole Meal Salads

- Mixed green salad—toss a variety of raw veggies and low-fat dressing. Add canned tuna, chicken, beans or chickpeas, or cottage cheese
- Tostada salad—top shredded lettuce with tomatoes, grilled chicken or fat-free refried beans, low-fat cheese, and salsa. Eat with a few baked tortilla chips.

Other Ideas

- Breakfast for dinner: scrambled eggs or veggie omelets with turkey bacon and whole wheat toast.
- Rotisserie chicken
- Sheet pan meals: Roast boneless skinless chicken, chopped veggies, and a cubed sweet potato in the oven.
- "Burrito bowl" with leftover chicken or pork. Top with bell peppers, onions, beans, lettuce, salsa, and fat-free plain Greek yogurt.



Grocery Store Tour

When you shop for groceries, you should buy primarily from the outside edge of the store. The outer areas are where you can usually find healthier food items, like fresh and frozen produce, meats, and dairy. The inner aisles contain more packaged foods that tend to be higher in calories, fat, and salt. Some of the items in the inner aisles are designed to encourage impulse purchases of foods like cookies, chips, and other high-calorie snacks.

Plan for Success

1. Plan your meals and make a grocery list.
2. Don't shop hungry. You are more likely to make impulse purchases when your stomach is growling.
3. Shop the perimeter of the store first.
4. Fill your cart with fresh and frozen fruits and vegetables. Remember, if you are filling half of your plate with vegetables, half of your cart should be filled with them, too.
5. Use the inner aisles for staples and only the foods on your list.

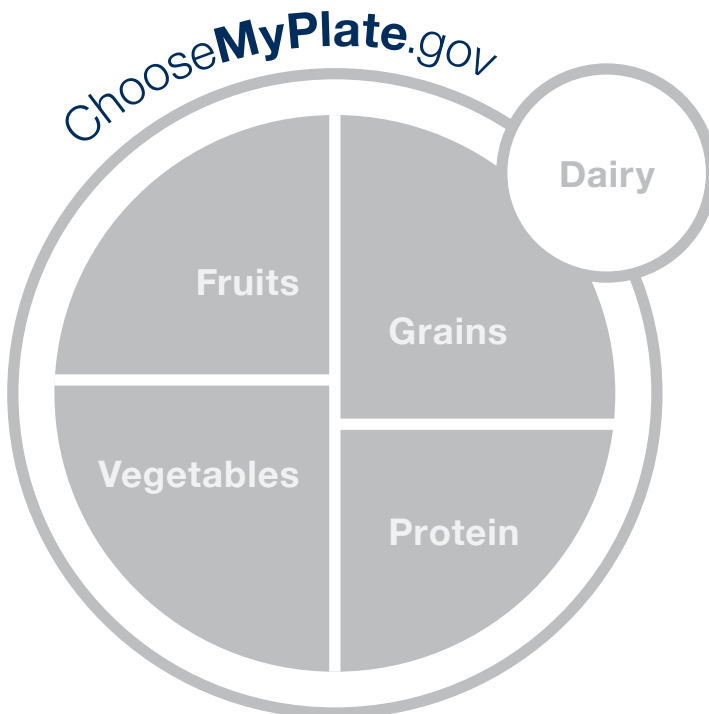
Cooking for Others

Cooking for others, whether it is friends or family, can present challenges. It can be hard to work around individual needs or preferences to prepare a healthy meal everyone can agree on. Make a list of several high protein, low carbohydrate meals with vegetables that everyone can agree on.

If it is still difficult to get everyone to agree, remember to use The Plate Method to portion your foods to meet your needs.

Cooking for One

Cooking for one can be hard because recipes make such large amounts. Consider cutting recipes in half or freezing leftovers in single-portion servings.



Use MyPlate for meal portioning before surgery

½ plate of non-starchy vegetables and fruits

¼ plate of lean proteins

¼ plate of starchy vegetables and grains

Up to one cup of fat-free dairy

Use Bariatric Food Pyramid after surgery

- 60 to 80g, or nine to 11 ounces of protein from lean meats, fish, poultry, dairy, eggs, beans, and legumes per day
- Two servings of fruit per day
- Two servings of non-starchy vegetables per day
- Up to two servings of starchy vegetables or grains per day
- Fats and sugars should be limited

Cooking Skills

The more you cook, the more your skills will improve. Some have found cooking shows helpful to learn techniques, while others benefit from how-to videos on YouTube. Don't be afraid to fail at new recipes occasionally. Look for skill levels, such as easy, moderate, or difficult, on recipes.

Budget Limitations

Creating a grocery list based on the weekly sale ad can help your budget go farther. Choose low-salt canned or frozen vegetables for a more affordable alternative to fresh produce.

Be sure to check out local farmer's markets for seasonal vegetables.

Meatless dishes can help your budget go further. Choose vegetarian protein sources like beans or chickpeas one or two days a week.

Protein content of meat alternatives

- 1 veggie burger = 5-15g
- 1 oz low-fat cheese = 6g
- ½ C Morningstar Farms Grillers Crumbles = 9g
- ¼ C part-skim ricotta cheese = 7g
- ½ C shelled soybeans = 16g
- 5 oz carton light Greek yogurt = 10-15g
- ½ C cooked quinoa = 4g
- ½ C reduced-fat cottage cheese = 12g
- ½ C cooked beans or lentils = 7-8g
- 8 oz skim or 1% milk = 8g
- 2 egg whites = 7g
- 3 oz tofu = 8g
- ¼ C egg substitute = 5g
- 2 Tbsp PB2 = 5g
- ¼ C mixed nuts = 6g
- ½ C dry, nonfat milk = 8g



Setting Up Your Kitchen

Plan to measure or weigh everything you eat for several months after surgery. It is very easy to underestimate portion sizes. You will need measuring cups, measuring spoons, and a food scale.

Purchase small plates to use at meal times. This will help with portion control.

Make sure you have nonstick cookware, which will make it easier to cook protein without added oil or butter. Use cooking sprays when needed to prevent sticking.

Use small, reusable containers to separate food into appropriate portions. Planning ahead can make grabbing lunch for the next day easier. Ice cube trays are helpful for portioning foods to prepare for the puree stage after surgery.

Clear out a shelf for your family's junk food that may tempt you. Pick a shelf that is higher up or one that is not at eye level.

Preferred Cooking Methods

Become familiar with different cooking methods like broiling, steaming, boiling, wrapping, and braising. It is very important for the meat you consume after surgery to be tender, or you may not be able to tolerate it.

Broiling: Cooking by exposing food to direct heat. Grilling is one type of broiling. Broiling cooks meat at very high temperature, locking in moisture, helping keep meats tender.

Boiling: Many foods can be boiled, but avoid boiling vegetables. This will cause them to lose vitamins, minerals, and flavor.

Steaming: Cooking with heated vapor so food isn't in direct contact with water. This will minimize the amount of nutrients lost during cooking. This is a great way to cook vegetables.

Wrapping: Wrapping a food and cooking to maintain flavor and tenderness. This is usually done with aluminum foil, parchment paper, or grape or banana leaves.

Braising: Cooking meats very slowly to maintain tenderness. The meat is typically seared on both sides, then placed in a pan with a small amount of liquid, covered, and cooked over low heat. This type of cooking is good for cuts of meat that are low in fat.

What should I buy?

Some of the best choices for meals, snacks, and drinks:

Grains

- ✓ Whole grain cereals, hot or cold
- ✓ Whole grain breads, English muffins, or sandwich "flats"
- ✓ Whole wheat pasta
- ✓ Whole grain rice
- ✓ Quinoa
- ✓ Whole grain crackers
- ✓ Dried beans & peas
- ✓ Whole grain waffles
- ✓ Whole grain pancakes

Fruits

- ✓ Any fresh fruits
- ✓ Frozen fruits with no sugar added
- ✓ Canned fruits in juice or water

Vegetables

- ✓ Any fresh vegetable
- ✓ Frozen vegetables without added sauce
- ✓ Low salt canned vegetables

Dairy

- ✓ Skim or 1% milk
- ✓ Fat-free, "light" yogurt
- ✓ Low-fat/fat-free cottage cheese
- ✓ Low-fat/fat-free cream cheese
- ✓ Low-fat/2% milk/part-skim cheese
- ✓ Low-fat mozzarella string cheese
- ✓ Laughing Cow light cheese

Meats

- ✓ Skinless chicken breast, fresh or frozen
- ✓ Fish, fresh or frozen
- ✓ Beef: sirloin, filet, round steak
- ✓ Turkey/pork
- ✓ Lean hamburger: ground sirloin or "90/10" or "93/7" ground beef, fresh or frozen
- ✓ Low-fat turkey, ham, chicken, roast beef deli meats
- ✓ Veggie burgers or other vegetable-based meat replacements

Condiments

- ✓ Salsa
- ✓ Ketchup/mustard
- ✓ Fat-free/Low-fat mayonnaise
- ✓ Fat-free/Low-fat salad dressing
- ✓ Fat-free/Low-fat sour cream
- ✓ Hot sauce
- ✓ Vinegar

Snacks

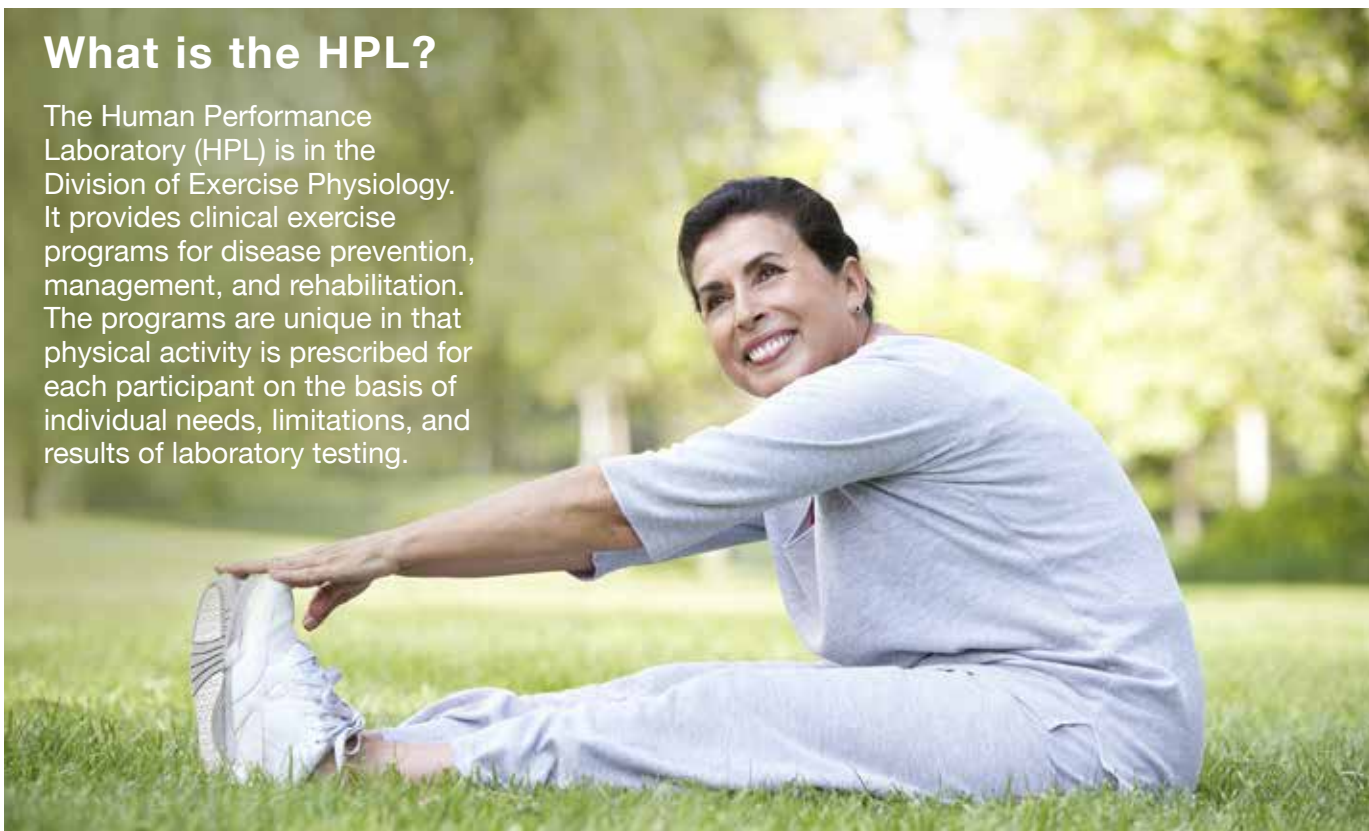
- ✓ Pretzels
- ✓ Whole grain crackers
- ✓ Plain popcorn
- ✓ Baked chips
- ✓ 100-calorie packs
- ✓ Sugar-free popsicles or fudgesicles
- ✓ Sugar-free gelatin
- ✓ Nuts
- ✓ Soy-nuts
- ✓ Sugar-free and fat-free puddings
- ✓ Peanut or nut butters

Beverages

- ✓ Decaf/diet/non-carbonated
- ✓ Water
- ✓ Flavored water
- ✓ Decaf coffee/tea
- ✓ Herbal teas (decaf)
- ✓ Zero calorie sports drinks
- ✓ Crystal Light or similar sugar-free drink mixes

What is the HPL?

The Human Performance Laboratory (HPL) is in the Division of Exercise Physiology. It provides clinical exercise programs for disease prevention, management, and rehabilitation. The programs are unique in that physical activity is prescribed for each participant on the basis of individual needs, limitations, and results of laboratory testing.



Participants will be provided with an assessment of behavioral and psychosocial risk factors associated with physical health and well-being. The HPL provides individuals with an opportunity to improve physical and mental well-being through participation in comprehensive health promotion programs.

The HPL offers a team approach to enhance weight loss that includes exercise physiologists, dietitians, clinical psychologists, physician assistants, and nurses.

Why choose the HPL?

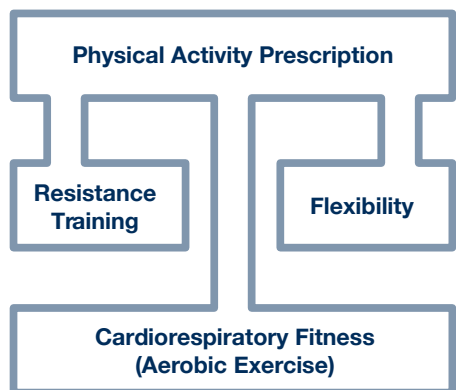
- Physical activity programs are made by clinical faculty in the WVU Division of Exercise Physiology
- Achieve your weight-loss goals through being more physically active
- Receive an individualized physical activity program
- We will work with your doctors and dietitians to provide an individualized, specific program to suit your needs and lifestyle environment.

We offer a variety of physical activity resources, including walking, treadmill exercises, cycling, resistance weights/band exercises, boxing, and our popular pool physical activity program.

Regular follow-up appointments and monthly support groups are designed to help you succeed.

We offer weight-management programs and both pre- and post-bariatric surgery programs.
We are here to help you!

Understanding the Components of Physical Activity



Your personalized program will include all of these components and will progress as your fitness level improves. At first, you may only be able to complete small amounts of these exercises, but research shows that even with small increases in physical activity, you will see the benefits.

Benefits of Physical Activity

- ✓ In the first year after surgery, some of the weight lost is from fat-free mass (i.e., muscle), but resistance training can preserve this.
- ✓ Doing cardiovascular and resistance exercise can decrease fat mass.
- ✓ Increasing muscle mass will increase your metabolic rate, which will help prevent weight regain.
- ✓ Physical activity can help you deal with stress, anxiety, and depression.
- ✓ Increasing physical activity time (even at low levels) can have great benefits.



Cardiovascular Physical Activity

At first, it may be difficult to get the recommended 150 minutes per week of moderate physical activity. Don't worry; any increase in physical activity will be beneficial to you.

Here are some strategies to increase your physical activity right now:

- ✓ Park farther away. This allows you to walk more than usual.
- ✓ Take the stairs instead of using the elevator.
- ✓ Walk with a friend or pet. This allows you to be accountable.

Taking your abilities right now, we will come up with an exercise program to get you to a goal of the recommended 150 minutes of physical activity each week.

Increasing your physical activity and decreasing your sedentary time can lead to **BENEFITS**

Resistance Exercises

This includes machines, resistance bands, dumbbells, and even body weight to help build muscle mass and strength.

Increases muscle mass and metabolic rate

Helps to burn calories even after exercising, helping to manage weight

Helps to ward off the loss of muscle mass that is seen with bariatric surgery.

Flexibility

Moving your joints through a pain-free range of motion can help to prevent injuries.

You can do flexibility exercises, such as static stretching, EVERY DAY

Stretching not only improves flexibility in the muscles, but also the tendons and ligaments. All of these aspects are influenced through training. Stretching is important to decrease the chances for developing injuries.

Monitoring Intensity and Heart Rate

Rate of Perceived Exertion (RPE)

- ✓ This can be an easy tool for you to use while exercising
- ✓ Try to be at a 12-16 during cardiovascular exercise

Rating of Perceived Exertion Borg RPE Scale		
6		How you feel when
7	Very, very light	lying in bed or sitting
8		in a chair relaxed.
9	Very light	Little or no effort
10		
11	Fairly light	
12		Target range: How
13	Somewhat hard	you should feel with
14		exercise or activity
15	Hard	
16		
17	Very hard	How you felt with
18		the hardest work you
19	Very, very hard	have ever done.
20	Maximum exertion	Don't work this hard!

Rate of Perceived Exertion (RPE)

Taking your pulse

- ✓ This can be done before, during, or after exercise
- ✓ Can be taken on the wrist or the neck

10-Second Pulse Conversions

9 x 6 = 54	21 x 6 = 126
10 x 6 = 60	22 x 6 = 132
11 x 6 = 66	23 x 6 = 138
12 x 6 = 72	24 x 6 = 144
13 x 6 = 78	25 x 6 = 150
14 x 6 = 84	26 x 6 = 156
15 x 6 = 90	27 x 6 = 162
16 x 6 = 96	28 x 6 = 168
17 x 6 = 102	29 x 6 = 174
18 x 6 = 108	30 x 6 = 180
19 x 6 = 114	31 x 6 = 186
20 x 6 = 120	32 x 6 = 192

When should I stop exercising?

- ✓ If you feel chest tightness or pain
- ✓ If you become light-headed or experience dizziness
- ✓ If you feel nauseous
- ✓ Listen to your body: if something feels off, stop or slow down

Let's get started!

Any increased amount of activity is beneficial.

- ✓ At first, it may be hard to hit aerobic goals, but baby steps are key.

Keep a physical activity journal with weekly goals to keep you motivated.

By having a physical activity program, it can help lead to sustained weight loss over years not just months.

Starting a physical activity program can be hard for anyone, but having a support system can truly help you to reach your goals.

Contact

Diana Gilleland, Manager of the HPL
 WVU Health Sciences Center Division of
 Exercise Physiology
 Room G279
 P.O. Box 9227
 Morgantown, WV 26506-9227
 Phone: 304-293-5497
 Fax: 304-293-2971



Website and URL	Description
American Society for Metabolic and Bariatric Surgery: www.asmbbs.org	Lots of helpful information on all aspects of bariatric surgery
Association for Morbid Obesity Support: www.obesityhelp.com	Run by other patients who have undergone weight-loss surgery – you can ask questions and get support
ChooseMyPlate: www.choosemyplate.gov	Government site providing healthy eating tips of the day, menus, recipes, and more
MyFitnessPal: www.myfitnesspal.com	Free app/website that provides community support and free nutrition tracker
Obesity Law and Advocacy Center: www.wlsappeals.com	Great information and support for patients who have been denied insurance coverage for weight-loss surgery
Obesity Online: www.obesity-online.com	Robust site with a lot of information regarding treatment for obesity
Obesity Society: www.obesity.org	Trustworthy information regarding the health effects of obesity and treatment
National Institutes of Health: www.niddk.nih.gov/health-information/health-statistics/overweight-obesity	Government site providing statistics on obesity in the United States
www.baritastic.com	Free app/website that provides surgery-specific tools for food, fluid, vitamin, and exercise tracking

Trusted Resource Websites

Check out these reputable websites that contain information on treatments, problems, and support related to metabolic and weight-loss surgery.

Directions and Lodging Options



Directions to our Information Sessions

From the East

Take I-68 East toward Morgantown

Take the exit toward Washington onto I-79 N (Continue for 4.7 mi)

Take exit 153 toward University Town Centre Drive (Continue for 0.5 mi)

Turn right onto University Town Centre Drive (Continue for 0.7 mi)

Arrive at University Town Centre Drive. Your destination is on the left: 6040 University Town Centre Dr., Morgantown, WV 26501-2421

From the South

Take I-79 North toward Morgantown

Take exit 153 toward University Town Centre Drive (Continue for 0.5 mi)

Turn right onto University Town Centre Drive (Continue for 0.7 mi)

Arrive at University Town Centre Dr. Your destination is on the left: 6040 University Town Centre Dr., Morgantown, WV 26501-2421

From the North

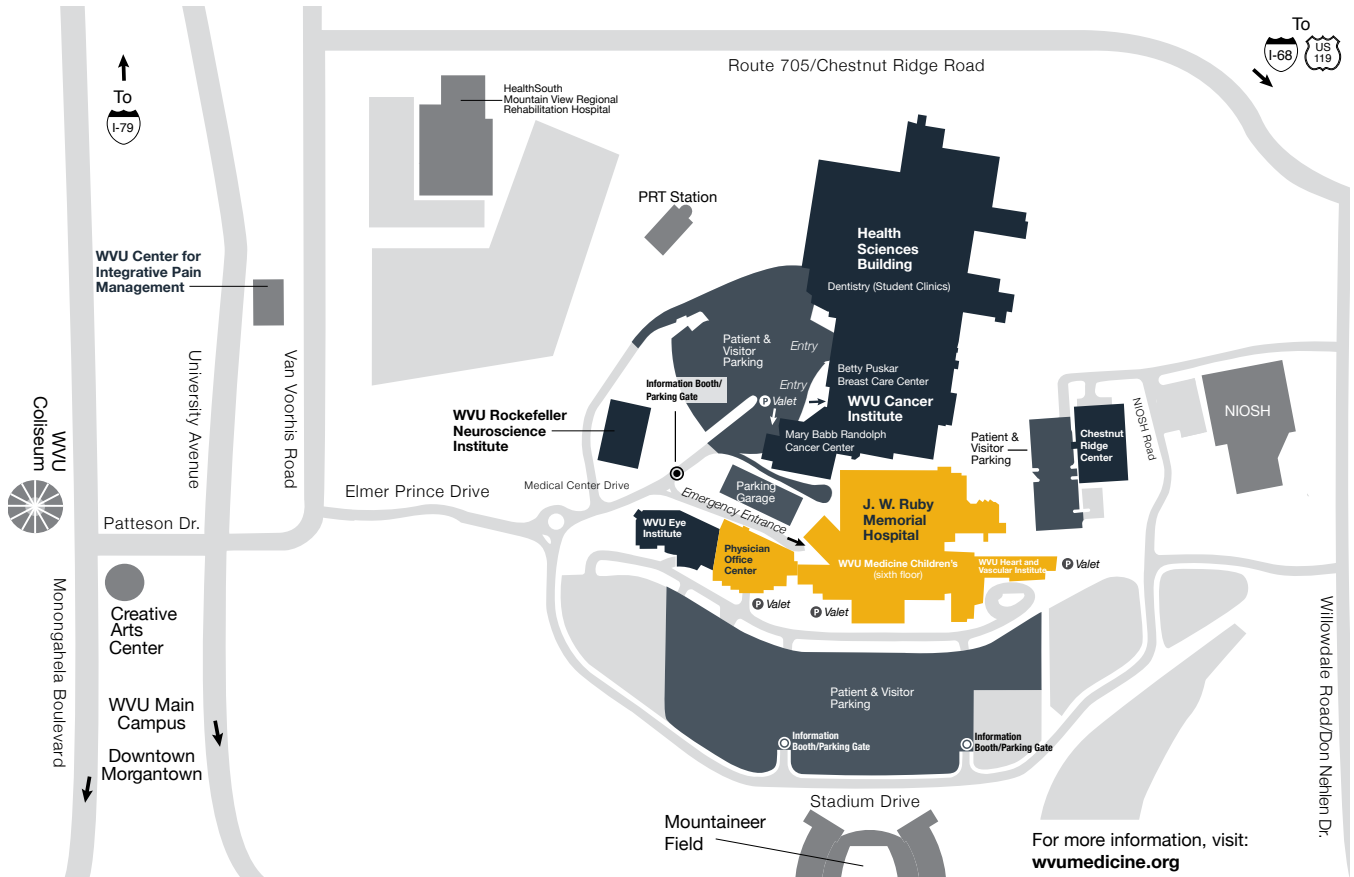
Take I-79 South toward Morgantown

Take the University Town Centre Drive exit (exit 153) toward County Hwy-46/7.

Enter the roundabout, and take the 3rd exit onto University Town Centre Drive.

Your destination is on the left: 6040 University Town Centre Dr., Morgantown, WV 26501-2421

Directions and Lodging Options



Directions to our main office/ clinic

Input the following address into your GPS when you are coming to our office for consultations or appointments before or after your surgery:

Bariatric Surgery – Physician Office Center
1 Medical Center Drive
Morgantown, WV 26506

Directions to our surgery center

You will undergo your procedure at WVU Metabolic and Weight-Loss Surgery at:

J.W. Ruby Memorial Hospital
1 Medical Center Drive
Morgantown, West Virginia 26506

Enter this address in your smartphone's GPS system to travel to the right location on the day of your surgery. If you need more information on getting to the hospital, please call our office directly at 304-293-1728.

Pre-admission instructions

Someone will call you the day before your procedure (or on Friday if your surgery is the following Monday), to tell you when to come to the hospital. If you cannot be contacted, call 304-598-6200 between 2:00 pm and 5:00 pm the day before your surgery to find out when to arrive.

Arriving at the hospital

Patients and visitors may park for free in the lots in front of the hospital. Report to Registration on the first floor of J.W. Ruby Memorial Hospital. The Registration staff will direct you to another part of the hospital for your procedure.

Lodging options

On-campus option: Rosenbaum Family House

Rosenbaum Family House provides a place for adult patients and their families to stay while receiving medical care at J.W. Ruby Memorial Hospital. The Family House provides a warm, family-oriented environment for outpatients and guests. There is often a waiting list for Family House.

About Family House:

- ▀ Guests wishing to stay at Family House must live 50 miles or more from Morgantown.
- ▀ Outpatients staying at Family House must have an appropriate caregiver if they cannot care for themselves.
- ▀ Family House can provide only one room per family, and no more than three people can stay in a room.
- ▀ Family House charges only \$20 per night per room. It costs \$40 per night to operate a room. The balance is covered by grateful guests and generous friends of Family House.
- ▀ If you qualify, ask a hospital employee to submit an electronic referral to Family House, and you will be placed on the Family House waiting list.
- ▀ Due to the great demand for rooms, Family House usually has a waiting list. Because guests may stay at Family House as long as the patient is undergoing medical treatment at J.W. Ruby Memorial Hospital, we do not know when a room will be available for you and your family.

Wait-list process

As rooms become available, they are generally given to the families who have been on the waiting list the longest. Long-term outpatients are given priority, and all room assignments are made at the director's discretion.

You are asked to check in with Family House once each day before noon to remain on the waiting list. If you fail to check in, your name will be removed from the waiting list.

Family House staff and volunteers can assist you in finding a local hotel until a room becomes available for you. Hotel discount rates range from \$45-99 plus tax. Please note that discount rates and rooms are subject to availability, and you are responsible for payment of your hotel room bill.

Off-campus options in Morgantown

There is a large variety of lodging in Morgantown. You can check out the Morgantown Convention and Visitors Bureau website for a list of nearby accommodations:

www.tourmorgantown.com/stay_home.php.

Pre-Operative Resources

Pre-Op Meal Planning: What's a Serving?

Food Group	Examples of Serving Sizes
GRAINS/STARCHES	<ul style="list-style-type: none"> 1 slice of bread ½ hamburger or hot dog bun 2 slices "light" bread ¼ bagel ½ English muffin ¾ cup dry cereal ½ cup cooked cereal ⅓ cup rice or pasta ½ cup mashed potatoes 3 oz baked potato or sweet potato (½ cup) 1 small corn cob (6") ½ cup corn ½ cup beans or peas 6" corn or flour tortilla 6 low-fat crackers 3 cups plain popped popcorn
FRUIT (count as carbohydrate)	<ul style="list-style-type: none"> 1 medium apple, orange, peach, or pear ½ banana (6") ½ cup canned fruit, no sugar added 1 ½ cup berries 2 Tbsp raisins or dried cranberries ½ large grapefruit 17 small grapes 1 cup cut melon
VEGETABLES	<ul style="list-style-type: none"> 1 cup raw, leafy vegetables 1 cup raw vegetables ½ cup cooked vegetables ½ cup vegetable juice ½ cup tomato sauce
MILK/DAIRY (count as protein)	<ul style="list-style-type: none"> 1 cup (8oz) milk, soy milk 6 oz light Greek yogurt 1 oz hard cheese
PROTEIN/MEAT/BEANS	<ul style="list-style-type: none"> 1 oz cooked lean meat, poultry, or fish 1 oz lean deli meat, like turkey, chicken, or ham ½ cup beans, peas, lentils 1 egg or 2 egg whites ¼ cup egg substitute 1 Tbsp peanut butter (also count as 1 fat) 1 oz (¼ cup) nuts or seeds ¼ cup cottage cheese
FATS & OILS	<ul style="list-style-type: none"> 1 tsp oil or butter 1 tsp regular mayonnaise 2 Tbsp sour cream 1 Tbsp salad dressing 2 Tbsp low-fat salad dressing 2 Tbsp avocado

Appendix: Pre-Operative Meal Planning

Pre-Op Meal Planning: 1,200 calories

Meal	Serving Totals Per Meal	Example
Breakfast	2 Protein	¼ cup egg substitute or 1 egg plus 1 Greek yogurt
	2 Carbohydrate	1 banana
	1 Fat	(in egg)
Lunch	3 Protein	3oz grilled chicken breast
	2 Vegetable	2 cups romaine lettuce + mushrooms, pepper, and onion
	1 Carbohydrate or Fruit	1 small pear or 6 whole-grain crackers
	1 Fat	2 Tbsp reduced-fat dressing
Dinner	3 Protein	3oz lean ground beef
	2 Carbohydrate or Fruit	1 small hamburger bun
	2 Vegetable	Lettuce, tomato, & onion + ½ cup green beans
	1 Fat	2 tsp light mayo
Snack	1 Protein	1 light string cheese
	1 Carbohydrate or Fruit	1 small apple

Pre-Op Meal Planning: 1,400 calories

Meal	Serving Totals Per Meal	Example
Breakfast	2 Protein	2 scrambled eggs or ½ cup egg substitute
	2 Carbohydrate	1 slice whole wheat toast plus 1 cup berries
	1 Fat	1 tsp butter
Lunch	3 Protein	2oz fat-free turkey 1 slice reduced-fat cheese
	2 Vegetable	Lettuce and tomato 1 cup reduced-sodium vegetable soup
	2 Carbohydrate or Fruit	2 slices whole wheat bread
	1 Fat	2 tsp reduced-fat mayo
Dinner	4 Protein	4oz lean pork chop
	2 Carbohydrate or Fruit	1 small baked sweet potato
	2 Vegetable	½ cup broccoli ½ cup cauliflower
	1 Fat	1 tsp butter
Snack	1 Protein	1 Tbsp reduced-fat peanut butter
	1 Carbohydrate or Fruit	½ banana

Appendix: Pre-Operative Meal Planning

Pre-Op Meal Planning: 1,600 calories

Meal	Serving Totals Per Meal	Example
Breakfast	2 Protein	1 egg or ¼ c egg substitute 1 link turkey sausage
	2 Carbohydrate	1 whole grain English muffin
	1 Fat	(found in turkey sausage)
Lunch	4 Protein	3oz grilled chicken ¼ cup reduced fat cheddar cheese
	3 Vegetable	2 cups romaine lettuce ½ cup chopped tomatoes, peppers, and onions ⅓ cup salsa
	3 Carbohydrate or Fruit	10 baked tortilla chips ¼ cup black beans 1 cup watermelon
	1 Fat	2 Tbsp light sour cream
Dinner	4 Protein	4oz baked tilapia
	2 Carbohydrate or Fruit	Homemade baked potato wedges (1 small potato) ½ cup pineapple salsa
	3 Vegetable	1 ½ cups mixed, roasted vegetables
	1 Fat	2 tsp olive oil for roasting potatoes & veggies
Snack	1 Protein	¼ cup almonds
	1 Fat	(in almonds)
	1 Carbohydrate or Fruit	1 small apple

Pre-Op Meal Planning: 1,800 calories

Meal	Serving Totals Per Meal	Example
Breakfast	1 Protein	1 hard boiled egg
	3 Carbohydrate	1 c oatmeal 1 cup mixed berries
	1 Fat	2 Tbsp crushed pecans
Lunch	4 Protein	4 oz tuna canned in water
	2 Vegetable	Lettuce and tomato 2 cups leafy greens with cucumbers and carrots
	2 Carbohydrate or Fruit	6 whole grain crackers OR 1 slice whole wheat toast 1 small orange
	2 Fat	1 tsp reduced-fat mayo 2 Tbsp reduced-fat salad dressing
Dinner	5 Protein	5 oz lean sirloin steak
	3 Carbohydrate or Fruit	1 cup brown rice
	3 Vegetable	1 ½ cups mixed stir-fry vegetables
	2 Fat	2 tsp olive oil for stir-frying steak & veggies
Snack	2 Protein	1 reduced fat string cheese 1 oz fat-free deli meat
	1 Carbohydrate or Fruit	3 cups plain popcorn (no butter)

Appendix: Pre-Operative Meal Planning

Pre-Op Meal Planning: 2,000 calories

Meal	Serving Totals Per Meal	Example
Breakfast	2 Protein	Breakfast wrap: 1 scrambled egg + 1 oz Canadian bacon
	2 Carbohydrate	½ cup black beans 6" whole grain tortilla
	1 Fat	2 Tbsp avocado
	1 Vegetable	3 Tbsp salsa or diced tomatoes
Lunch	5 Protein	4 oz grilled chicken breast 1 slice low-fat cheese
	2 Vegetable	Tomato, lettuce, & onion 1 cup raw veggies
	3 Carbohydrate or Fruit	Small hamburger bun
	2 Fat	2 Tbsp reduced-fat veggie dip
Dinner	6 Protein	6 oz lean ground turkey
	3 Carbohydrate or Fruit	1 cup whole wheat pasta
	3 Vegetable	½ cup spaghetti sauce 1 cup grilled zucchini, mushrooms, peppers, and onions
	2 Fat	1 tsp olive oil (for sautéing vegetables) 1Tbsp grated Parmesan cheese
Snack	1 Protein	¼ cup cottage cheese
	2 Carbohydrate or Fruit	1 cup fresh pineapple

2,200 calories:

Follow 2,000 calorie meal plan, but ADD:

- ✓ 2 servings protein
- ✓ 1 serving carbohydrate or fruit

2,400 calories:

Follow 2,000 calorie meal plan, but ADD:

- ✓ 2 servings protein
- ✓ 2 servings carbohydrate or fruit
- ✓ 1 serving fat

2,600 calories:

Follow 2,000 calorie meal plan, but ADD:

- ✓ 3 servings protein
- ✓ 3 servings carbohydrate or fruit
- ✓ 1 serving fat

2,800 calories:

Follow 2,000 calorie meal plan, but ADD:

- ✓ 4 servings protein
- ✓ 4 servings carbohydrate or fruit
- ✓ 2 servings fat

Appendix: Pre-Operative Meal Planning

My Sample Meal Plan

Meal	Serving Totals Per Meal	Food Choices
Breakfast	___ Protein	
	___ Carbohydrate	
	___ Fat	
Lunch	___ Protein	
	___ Vegetable	
	___ Carbohydrate or Fruit	
	___ Fat	
Dinner	___ Protein	
	___ Carbohydrate or Fruit	
	___ Vegetable	
	___ Fat	
Snack	___ Protein	
	___ Carbohydrate or Fruit	

Based on your individual calorie goal, use the guides to fill in the total servings of each food group per meal. Then, use the “What’s a Serving” list on page 48 to fill in your preferred food choices.

Post-Operative Resources

1 ounce = 30 mL

Post-Op Sample Fluid Log

30 mL = one
medicine cup

Hydration Goal:
48-64+ ounces/
day

Protein Goal:
60-80 grams/day

Time	Protein Supplement In-take (ounces)	Protein Supplement (grams protein)	Clear liquid items (ounces)	Comments
5 am				
6 am				
7 am				
8 am				
9 am				
10 am				
11 am				
Noon				
1 pm				
2 pm				
3 pm				
4 pm				
5 pm				
6 pm				
7 pm				
8 pm				
9 pm				
10 pm				
11 pm				
Midnight				
1-4 am				
Totals:				

Stage 2—Purees

Breakfast (choose one)

- ✓ ¼ cup light Greek yogurt
- ✓ ¼ cup low-fat or fat-free cottage cheese + 1 Tbsp applesauce or pureed fruit
- ✓ ¼ cup hot cereal + 2 Tbsp PB2 + cinnamon & skim milk
- ✓ 1 scrambled egg, pureed

Lunch or Dinner (choose one)

- ✓ ¼ cup low-fat or fat-free cottage cheese + 1 Tbsp applesauce or other pureed fruit
- ✓ ¼ cup pureed lean pork, chicken, turkey, or beef + 2-3 Tbsp puree vegetables
- ✓ ¼-½ cup pureed fat-free cream of mushroom soup with 3-4 Tbsp chicken blended in
- ✓ ¼ cup chicken or turkey pureed with 2 Tbsp mashed potatoes & fat-free gravy
- ✓ ¼-½ cup light Greek yogurt
- ✓ ¼-½ cup Ricotta Bake (see right)*
- ✓ ¼ cup packaged hummus
- ✓ ¼ cup fat-free refried beans with 2-3 Tbsp smooth salsa & 1 Tbsp mashed avocado
- ✓ ¼-½ cup white bean hummus (see right) *

Snacks (choose one)

- ✓ ¼-½ cup light Greek yogurt
- ✓ ½ cup applesauce or mashed banana
- ✓ ¼-½ cup fat-free/sugar-free pudding mix made with skim milk & ¼ cup dry protein mix

Feta & Red Pepper White Bean Hummus

Ingredients:

- ✓ 1 –15oz can Cannellini (or white) beans, drained & rinsed
- ✓ 2 heaping tsp tahini (or peanut butter)
- ✓ Juice of 1 lemon
- ✓ 1 clove garlic, minced
- ✓ ¼ cup low-fat feta
- ✓ 2-3 Tbsp roasted red peppers
- ✓ Salt & pepper to taste
- ✓ ¼ cup warm water

Instructions:

In the bowl of a food processor, add beans, tahini, lemon juice, garlic, feta, red peppers, salt, & pepper. Turn processor on, and slowly drizzle in water. Process until smooth and thick, adding additional water as needed.

Ricotta Bake

Ingredients:

- ✓ 8oz fat-free ricotta cheese
- ✓ 1 large egg, beaten
- ✓ 1 tsp Italian seasoning
- ✓ ½ cup smooth marinara sauce
- ✓ 3 Tbsp grated Parmesan
- ✓ Salt & pepper to taste

Instructions:

Mix ricotta cheese, beaten egg, Italian seasoning, salt, & pepper together in a small oven-proof dish. Pour marinara over the top and sprinkle with parmesan cheese. Bake at 450° for 20-25 minutes. Heat leftovers in microwave.

Stage 3—Soft Foods

Breakfast (choose one)

- 1 egg (scrambled, hard boiled, etc...)
- 1 egg and 1 slice low-fat cheese
- Mini Quiche (see right) *
- 1 oz lean deli meat rolled with 1 oz low-fat cheese

Lunch or Dinner (choose one)

- 1/4 cup fat-free refried beans mixed with salsa and sprinkled with cheese, topped with fat-free sour cream
- 1/4 cup finely chopped egg, chicken, or tuna mixed with 1 Tbsp light mayonnaise
- 1 slice lean deli meat rolled with 1 slice low-fat cheese
- 1/4 cup cottage cheese + 1/2 small peach or pear
- 1/4-1/2 cup chili—make with lean meat & beans
- 1/4-1/2 cup lean pulled pork with 2 Tbsp beans
- 1-2 oz salmon or crab cake (home made with light mayo, egg white, Old Bay seasoning)
- 2 oz baked fish + 1/4 cup steamed vegetables
- 1/4-1/2 cup Crock-Pot® beef stew or roast with lean meats
- 1-2oz lean meatloaf
- 1 Morningstar Farms™ Garden Veggie Burger

Snacks (choose one)

- 1/4 cup fat-free black beans topped with 1 Tbsp smooth salsa & fat-free sour cream
- 1/2 cup lentil soup
- Light string cheese or 1 oz 2% milk cheese

Mini Quiche

Ingredients:

- 1 cup egg substitute (or 4 eggs, beaten)
- 1/2 cup skim or 1% milk
- 4oz turkey or vegan breakfast sausage, casings removed & crumbled
- 1/2 cup chopped mushrooms
- 1/4 cup shredded 2% milk cheddar cheese
- 2-3 Tbsp green onions
- Salt & pepper to taste
- Cooking spray

Instructions:

- Heat oven to 325°. Coat a nonstick muffin pan with cooking spray (or use foil baking cups)
- Heat frying pan over medium, cook sausage until golden brown. Remove from pan. Add mushrooms to pan and cook until soft. Remove from pan. Mix sausage, mushrooms, green onions, & cheese together.
- Whisk eggs and milk in a medium bowl. Add salt & pepper as desired. Divide egg mixture among 6 muffin cups. Add in a heaping scoop of sausage/cheese mixture to each cup.
- Bake about 25 minutes or until a knife inserted comes out clean. Cool for 5 minutes on a rack. Place a wire rack or plate on top of the pan. Flip the pan, and turn quiches out onto the rack. Store in refrigerator for up to 3 days, or freeze for up to 1 month. Microwave to reheat.

Stage 4—Stabilization

Breakfast (choose one)

- ✓ 1 egg and ½ slice whole grain toast with no-added sugar jam
- ✓ ¼-½ cup light Greek yogurt or cottage cheese with ¼ C fresh berries
- ✓ ½ banana + 1 Tbsp peanut butter or PB2
- ✓ 1 oz lean deli meat rolled with 1 oz low-fat cheese
- ✓ 1 egg omelet with 2 Tbsp each cheddar cheese, green peppers, and chopped tomato
- ✓ Mini Quiche -see previous page for recipe

Lunch or Dinner (choose one)

- ✓ ½ cup lean ground beef and cooked onion/peppers/mushrooms topped with marinara sauce and 1-2 Tbsp parmesan cheese
- ✓ 2 oz lean meat, 2 Tbsp low-fat cheese, top with shredded lettuce & chopped tomatoes and low-fat dressing or salsa
- ✓ ¼ cup tuna, chicken, egg, ham salad with light mayo on lettuce leaf and small piece of fresh fruit
- ✓ 2-3 oz broiled lean meat with ½ cup vegetables
- ✓ ½ cup chili made with lean meat and beans
- ✓ 2-3 oz very lean beef or turkey burger with lettuce and tomato
- ✓ 1-2 Asian turkey lettuce wraps (see recipe at right)*

Snacks (choose one)

- ✓ Soy protein crisps
- ✓ ½ cup beef barley soup
- ✓ Light string cheese
- ✓ ¼ cup nuts + 1 cup popcorn (no butter)
- ✓ 1-2 oz low-fat meat jerky
- ✓ 3 Tbsp hummus + raw veggie sticks
- ✓ Fat-free bean dip + raw veggie sticks

Asian Turkey Lettuce Wraps

Ingredients:

- ✓ 1 lb. very lean ground turkey
- ✓ ½ cup shredded carrots
- ✓ 1 cup chopped mushrooms
- ✓ 1 can water chestnuts, roughly chopped
- ✓ ¼ cup reduced-sodium soy sauce
- ✓ 2 Tbsp rice wine vinegar
- ✓ 2 Tbsp brown sugar
- ✓ 1 head butter lettuce (or other leafy head lettuce)
- ✓ Cooking spray, salt & pepper to taste

Instructions:

1. Heat frying pan over medium-high, sauté mushrooms and carrots until soft. Add in turkey, season with salt and pepper. Stir until cooked through (at least 165°). Add in water chestnuts.
2. With heat on, add in soy sauce, rice wine vinegar, and brown sugar. Cook until sauce is slightly reduced and thickened.
3. Serve in washed lettuce leaves.

After 6 months post-op and protein goal is met consistently, you can add 1-2 small portions of grains or starchy foods per day:

- ✓ 1 slice whole grain bread or 6" whole grain wrap
- ✓ ½ small whole grain bun
- ✓ 6 whole grain crackers, like Triscuits
- ✓ ⅓ cup brown rice or wheat pasta
- ✓ ½ cup sweet or white potato
- ✓ ½ cup corn or peas
- ✓ ½ cup oatmeal or high-fiber cold cereal
- ✓ 1 ½ cups plain popped popcorn (no butter)

Appendix: Post-Operative Meal Ideas

Post-Op Sample Meal Log

Meal	Items	Calories	Protein
Breakfast			
Snack			
Lunch			
Snack			
Dinner			
Snack			
TOTAL			

Protein Goal:
60-80g

Fluid Goal: >64oz
*wait at least 30 minutes
between eating and
drinking*

Exercise: 30
minutes most
days

Exercise:

Appendix: Protein Content of Foods

Food	Items	Calories	Protein
Meat, Poultry, & Fish	Lean Meats: 0-3 grams fat per ounce Beef (sirloin, round), Veal, Chicken or Turkey (without skin), Fish (fresh/frozen), Shellfish, Pork Tenderloin, Wild Game (venison, rabbit, pheasant, duck, or goose without the skin), Tuna or Chicken canned in water	1oz	7
	Medium-fat Meats: 4-7 grams fat per ounce Beef, Poultry (with skin), Lamb, Pork (roast or chop), Veal (cutlets), Salmon	1oz	7
	AVOID High-fat meats: 8 grams of fat or more per ounce Bacon, hot dogs, bologna, salami, sausage, bologna, bratwurst, spare ribs	1oz	7
Milk, Dairy Products, and Milk Alternatives	Skim or 1% milk	8oz/1 cup	8
	Soy Milk, unsweetened or light	8oz/1 cup	7
	Almond, cashew, or coconut milk	8oz/1 cup	0-2
	Low-fat cheese	1 ounce	7-8
	Low-fat ricotta cheese	½ cup	14
	Low-fat cottage cheese	½ cup	12
	Fat-free yogurt	5oz	5-6
	Fat-free, light Greek yogurt	5oz	12-17
	Egg, whole	1 egg	6
	Egg substitute	¼ cup	6
Soy Foods	Edamame, cooked with no shells	1 cup	20
	Tofu	1oz	2
Plant Based Foods, Like: Nuts, Seeds, and Legumes	Peanut or almond butter	1 Tbsp	4
	Beans (cooked): black, garbanzo, kidney, lima, northern, pinto	½ cup	6-8
	Nuts	1oz/ ¼ cup	5
	Quinoa, cooked	½ cup	4

Appendix: Protein Supplements Powders and Drinks

Protein Drink	Kcal/ serving	Protein	Sugar	Fat	Where to Purchase
Bariatric Advantage High Protein Meal Replacement Packets	150-160	27g	0.5g	1.5-2g	bariatricadvantage.com Validation Code for savings: WVU
Chike Protein Powder	190/ 2 scoops	28g	3g	3.5g	ilikechike.com
GNC Amp Pure Isolate	120/1 scoop	25g	1g	0.5g	GNC
GNC Amp Wheyolic	100/1 scoop	20g	2g	1g	GNC
Nature's Best® Isolate Zero Carb Protein Powder	110/1 scoops	25g	0g	0.5g	Walmart.com GNC Amazon.com Vitaminworld.com
Elevation Whey Protein Powder Blend	170/1 Scoop	30g	2g	2.5g	Aldi Amazon.com
Protein H2O	60-90/16.9 oz	15-20g	0g	0g	Sam's Club Walmart Giant Eagle
Premier Protein Clear Protein Drink	90/16.9 oz	20g	0g	0g	Sam's Club Walmart
Orgain Nutritional Protein Shake or Orgain Clean Protein	150/14oz or 140/11oz	26g or 20g	2g or 3g	3.5g or 2g	www.orgain.com Kroger Walmart, Sam' Club CVS
Precision Engineered Whey Protein Isolate	140/1 scoop	30g	0g	1.5g	Vitamin World
Unjury Unflavored & Flavored Protein Powder	90/1 scoop	21g	0g	0g	unjury.com
Celebrate Meal Replacement Protein Powder	150/2 scoops	27g	3g	2g	celebratevitamins.com
Premier Protein Ready to Drink Shakes	160/11oz	30g	1g	3g	Walmart, Target Sam's Club Drug Stores Grocery Stores
Pure Protein Ready to Drink Shakes	120/11oz	23g	1g	0.5g	Walmart Grocery Stores Drug Stores
Pure Protein Powder	160/1 scoop	25g	2g	2.5g	Walmart Sam's Club Grocery Stores Amazon.com
Six Star Pro Nutrition Whey Isolate Plus	140/1 scoop	30g	1g	0.5g	Walmart Rite Aid (online)
Optimum Nutrition Gold Standard 100% Whey	120/1 scoop	24g	1g	1.5g	Optimum Nutrition.com Amazon.com GNC Walmart
Core Power High Protein Shake	170/14 oz	26g	5g	4.5g	Walmart, Drug Stores Grocery Stores , Convenience Stores

This is not a complete list of acceptable protein supplements, but a list that has been reviewed by your bariatric dietitians. If using products other than the ones listed, used provided guidelines and read labels carefully.

The protein supplements listed may be available in various flavors, and the calorie, protein, sugar, and fat content may vary slightly.

Appendix: Protein Supplements Powders and Drinks

Protein Drink	Kcal/ serving	Protein	Sugar	Fat	Where to Purchase
GNC Total Lean Ready to Drink Shakes	170/14oz	25g	2g	6g	GNC
MetRx Protein Plus Powder	110/1 scoop	23g	1g	1g	Walmart Amazon.com
Muscle Milk® 100 Calorie Nutrition Shake	100/11oz	20g	0g	1g	Walmart Target Grocery Stores Drug Stores
Muscle Milk® Genuine Nutrition Shake	160/14oz	25g	0g	4.5-5g	Walmart Target Grocery Stores Drug Stores
Muscle Milk® 100 Calorie Protein Powder	100/ 1 scoop	15g	0g	2g	Walmart Target Grocery Stores Drug Stores
Syntrax Essence , Matrix 2.0, or Matrix 5.0, or Whey Shake Protein Powder	100/120 1 scoop	23g	0g	0g	www.si03.com GNC Amazon.com
Syntrax Nectar Protein Powder	100/1 scoop	23g	0g	0g	Walmart (online) www.si03.com Amazon.com

Protein Drink	Kcal/ serving	Protein	Sugar	Fat	Where to Purchase
Oh Yeah! Nutrition Shake	220/14oz	32g	3g	9g	Walmart
EAS Complete Protein Powder	150/2 scoops	25g	7g	1g	Walmart Target
EAS Soy Protein Powder	170/1 scoop	20g	17g	1.5g	Walmart Amazon.com
Atkins Shakes (ready to drink)	240/carton	23g	1g	14g	Walmart Target Grocery Stores Drug Stores

Protein Source	Kcal/ serving	Protein	Sugar	Fat	Where to Purchase
Chike PB (Peanut Butter Powder)	40/ 2 Tbsp	6g	1g	1.5g	Chikenutrition.com
PB2 (Peanut Butter Powder)	45/ 2 Tbsp	5g	1g	1.5g	GNC Walmart Kroger
Non-fat Instant Dry Milk Powder	80/ 1/3 cup	8g	12g	0g	Grocery Stores (Baking Aisle)

These protein supplements should be used in moderation due to the high fat or sugar content.

These should not be your sole source of protein

Change it up!
Optional add-ins for protein and/or flavor boost. Add to protein drinks or foods appropriate for your diet phase in order to boost protein content and/or flavor.

Appendix: Protein Supplements Special Needs

Protein Supplements— Soy & Dairy Free

Protein Drink	Kcal/ serving	Protein	Sugar	Fat	Where to Purchase
Vega Sport	150/scoop	30g	1g	3g	Myvega.com Walmart Target
VegaOne Organic	150/scoop	20g	1g	5g	Myvega.com Walmart Target
Ghost Vegan Protein Powder	120/scoop	21g	0g	1.5g	ghostlifestyle.com GNC
Orgain Organic Protein (powder or pre-mixed)	150/2 scoops or 1 ready-to-drink bottle	21g	0g	4g	Walmart Orgain.com Amazon.com Thrivemarket.com
Sunwarrior Warrior Blend Protein	100/1 scoop	19g	0g	2g	Sunwarrior.com Thrivemarket.com Amazon.com
Jay Robb Egg White Protein	120/1 scoop	24g	0g	0g	Kroger GNC Amazon.com
Planted (from Unjury)	130/1 scoop	20g	3g	2.5g	Unjury.com

This is not a complete list of soy and dairy free protein supplements, but a list that has been reviewed by your bariatric dietitians at the date of publishing. If you have any food allergies, please be certain to **DOUBLE CHECK** all food labels for allergens, as products change frequently and may vary by flavor.

The protein supplements listed may be available in various flavors, and the calorie, protein, sugar, and fat content may vary slightly.

Appendix: Protein Supplements Protein Bars

Bar Name	Calories	Protein	Total Fat	Where to Purchase
Atkins Bars	180-240	11-19g	8-11g	Grocery Stores Walmart/Target Drug Stores
Bariatric Fusion Bars	190	6g	17g	bariatricfusion.com Amazon.com
Celebrate Bars	140	4g	15g	celebratevitamins.com Amazon.com
Cliff Builders Bar	250-270	20g	8g	Walmart Target Grocery Stores Drug Stores
MetRx Protein Plus or MetRx Big 100	230	27-32g	3-9g	GNC Grocery stores drugstore.com
Odwalla Bars	240	15g	5g	Grocery Stores Walmart, Target Drug Stores
Oh Yeah! One Bars	220	7g	21g	GNC Walmart, Target Grocery Stores
Optisource Mini Nutrition Bar	90	7g	2.5g	Walgreens
Power Bar Protein Plus or Power Bar Clean Whey	1200	7-9g	20g	Walmart, Target Grocery Stores Drug Stores
Power Crunch Bars	200	13-14g	13g	Walmart, Kroger GNC Amazon.com
Pure Protein	190	20g	6g	Grocery Stores Walmart, Target Drug Stores
Orgain Protein Bar	140	10g	6g	Grocery Stores Walmart, Target orgain.com
Think Thin High Protein Bars	230-240	20g	8g	Grocery Stores Walmart, Target Drug Stores
U-Turn, Detour	300-350	30g	8-11g	GNC drugstore.com
Quest Bar	200	20g	9g	Grocery Stores Walmart, Target Drug Stores
Zone Perfect	210	14-16g	7g	Grocery Stores Walmart, Target Drug Stores

When choosing a protein bar, look for 1g protein per 10-15 calories.

If you choose a bar that has more than 150 calories, split it into 2 separate snacks.

Sugar alcohols (on the label) may cause diarrhea after weight-loss surgery. Choose a bar without sugar alcohols if you are sensitive.

AVOID any bar with "KETO" in the name. These bars will contain more fat than traditional protein bars. These may promote weight regain and cause GI distress.

Multivitamins

Name	Dose	Also Need	Where to Purchase	Price
Bariatric Fusion Vitamin and Mineral Supplement	Chewable Tablet Rx 4/day	B12	*WVU Pharmacy* 304-598-4848 bariatricfusion.com amazon.com	\$24.99 (120 ct)
Celebrate Multi Complete 36 Chewable	Chewable Tablet Rx 2/day	Calcium + vit D B12	celebratevitamins.com amazon.com	\$19.95 (60 ct) \$52.95 (180ct)
Centrum Kids Chewable	Chewable Tablet Rx 3/day	Calcium + vit D B12	Walmart Drug Stores Grocery Stores	\$9.89- 12.49 (90 ct)
Opurity Bariatric Multicapsule with Iron	Swallow-Capsules Rx 2/day >3 month post-op ONLY	Calcium + vit D B12	unjury.com amazon.com	\$29.95 (180ct)
Bariatric Choice All-In-One	Chewable Tablet Rx 4/day	B12	Online: bariatricchoice.com Phone: 1-800-993-1143	\$29.95 (120 ct)
Bariatric Advantage Chewable Ultra Solo with Iron	Chewable Tablet Rx 1/day	Calcium + vit D B12	wvubariatrics. bariatricadvantage.com, Phone: 800-898-6888	\$22.95 (30 ct) validation code "WVU" for discount

Some individuals may need extra iron:

If you are a menstruating female or are an individual with a history of anemia, you may need to take additional iron. Please discuss this with your provider.

- ✓ Take 14-65 mg elemental iron once a day in addition to the 36 mg you would receive from taking your multivitamin. Ferrous fumarate, ferrous sulfate, and ferrous gluconate are the best absorbed forms of iron.
- ✓ Pair with multivitamin or a vitamin C for enhanced absorption.
- ✓ Do not take at same time as calcium supplements (separate by at least 2 hours).

Calcium + Vitamin D

Name	Dose	Contains	Where to Purchase	Price
CitraCal Petites Calcium Citrate plus D-3 Or store brand equivalent	Petite Tablets Rx 6/day <i>may need crushed or broken for first 3 months post-surgery</i>	1200 mg Calcium 1500 IU Vit D3	Walmart Target Drug Stores Grocery Stores	\$10.99- \$13.99 (200 ct)
Bariatric Advantage 500mg Calcium Chewy Bites	Soft Chews Rx 3/day	1500 mg Calcium 1500 IU Vit D3	bariatricadvantage.com 1-800-898-6888	\$33.95 (90 ct) Use code "WVU" for discount
Celebrate Calcium PLUS 500 Chewable	Chewable Tablet Rx 3/day	1500mg Ca Citrate 1000 IU Vit D3 100mg Mg	Walmart Drug Stores Grocery Stores	\$22.95 (90 ct)
OPURITY® Calcium Citrate Plus – Chewable	Chewable Tablet Rx 4/day	1300mg Ca Citrate 800 IU Vit D3 80mg Mg	unjury.com Phone: 1-800-517-5111	\$13.95 (125 ct)
Viactiv Calcium + Vitamin D (or store brand equivalent)	Soft Chews Rx 2/day (650mg each)	1300mg Calcium Carbonate 1000 IU vitamin D <i>Must Take With Food</i>	Walmart Target Drug Stores Grocery Stores	\$8.99- 10.99 (100 ct)
Caltrate Bone Health Chewables (or store brand equivalent)	Bone Health Chewable Tablets Rx 2/day	1200mg Ca Carbonate 1600 IU vit D, 80mg Mg	Walmart Target Drug Stores Grocery Stores	\$7.99- 10.99 (60 ct)
Caltrate Bone Health Chewables (Soft Chews)	Soft Chews, Rx 2/day	1200mg Ca Carbonate 1600 IU vit D	Walmart Target Drug Stores Grocery Stores	\$7.99- 10.99 (60 ct)

Vitamin B12

Name	Dose	Contains	Where to Purchase	Price
Prescription Only: Once monthly B12 injection	1/month	1000 mcg	Rx from your bariatric surgeon or family doctor	May be covered by insurance.
Celebrate B12 QuickMelts	Quick Melt (cherry or mint)	1000 mcg B12	celebratevitamins.com	\$15.95 (90 ct)
Spring Valley Sublingual Vitamin B12	Microlozenge (cherry)	500 mcg B12	Walmart	\$4.44 (200 ct)
Nature's Bounty Vitamin B-12 Sublingual Microlozenges	Microlozenge (cherry)	500 mcg B12	Walmart Target Drug Stores	\$10.49 (100 ct)
Life Extension Vitamin B-12 Dissolving Lozenges	Lozenge	500 mcg B12	Walmart lifeextension.com	\$6.56 (100 ct)

Sample Schedule

If you are taking any separate multivitamin and calcium, it will be important to schedule the timing of your doses to avoid potential interactions. It may be helpful to use a small pill organizer. Taking multivitamins with a meal or snack may reduce nausea.

Vitamin and Mineral Supplement	6am	8am	11am	2pm	6pm
Calcium Citrate 500mg w/Vitamin D (3 times a day)		x		x	x
Multivitamin , if taken in 2 servings/day, supplement dosing varies	x		x		
Vitamin B-12 500-1000 mcg daily	x				
Extra Iron: 14-65 mg elemental iron *Only for menstruating women and/or those instructed to take			x		

For more information, please visit our websites:

WVUMedicine.org/bariatrics

Follow us for information, support, and inspiration:

Facebook.com/groups/wvuweightloss

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