

Bariatric Surgery Patient Guidebook

SHED THE WEIGHT. WE CAN HELP YOU. *REIMAGINED.*



Our Mission:

Above all else,
we are committed
to the care and
improvement
of human life.

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Using this Guidebook

This book is an important part of your preparation for, and recovery from, surgery. We have included the weight loss surgery pathway on page 5 of this book to help you ensure all steps are completed prior to your surgery date. Following the pathway, each section of this book is designed to help you and your family understand your bariatric surgery and the processes that will help to improve your safety and success. Please bring this guidebook to all your physician and hospital appointments. Refer to it often. And please ask questions!

Welcome to the Denver Center for Bariatric Surgery

As the leading program in the region, the Denver Center for Bariatric Surgery knows weight loss. With help from our renowned surgeons and extensive support network, you will be amazed at what you can overcome. We want to congratulate you on beginning your journey and assure you that we will help you along the way. The entire Center for Bariatrics team is honored to be part of your life and transformation. We have the weight loss options and tools you need to get your life back on track. With our world-class surgeons using the latest surgical techniques, we will help you find your balance and turn your hopes into reality.

We are proud to be a nationally recognized, American Society for Metabolic and Bariatric Surgery (ASMBS) accredited, Center of Excellence program. We are committed to developing the most inclusive, safe, caring, and effective program to help you achieve durable and lasting weight reduction and meet all your goals for improved health and a life that lives up to your dreams and potential.

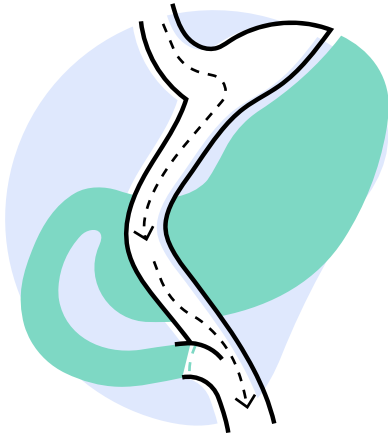


Center of
Excellence
BARIATRIC SURGERY

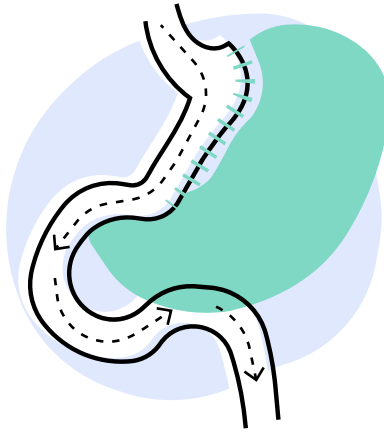


About Weight Loss Surgery

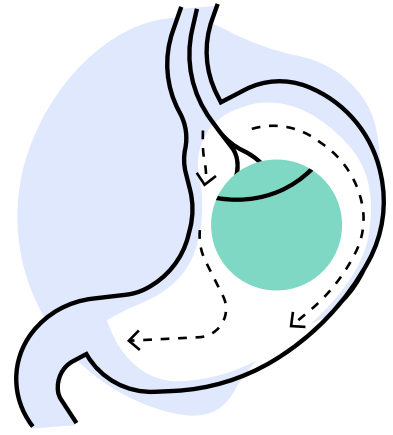
Gastric Bypass



Mini Gastric Bypass



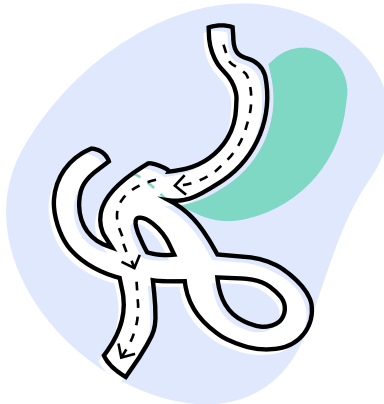
Gastric Balloon



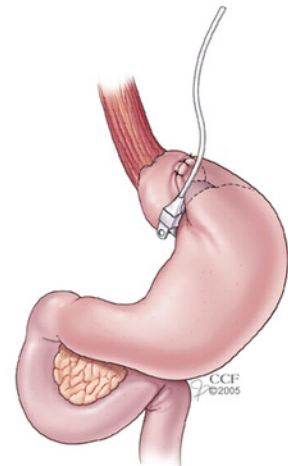
Gastric Sleeve



Duodenal Switch



Adjustable Gastric Band



What Will Be So Different About Me After Surgery?

After Bariatric Surgery

You will eat less because your stomach size will be reduced, and you will be full with much less food. The amount of size reduction is different between procedures and based on your anatomy and surgical decision-making. The normal stomach is about 40-60 ounces in size.

- Sleeve and Switch stomachs are reduced about 60-70% in size.
- Bypass stomach pouches are about 2-3 ounces in size.
- MGB stomachs are about 4-6 ounces in size.

Gastric Bypass Patients Only:

The outlet from your new stomach pouch is narrowed and this slows the flow of food out of your new stomach pouch, keeping you full longer.

Bypass, Duodenal Switch, and MGB Patients:

The small intestine food path has been shortened to reduce food absorption.

For all surgeries, the hunger hormone, Ghrelin, is greatly reduced after surgery, making you less hungry.



Weight Loss Surgery Pathway

First Things First

- Complete initial consultation with your surgeon
- Complete lab work
- Complete psychological evaluation
- Attend pre-op surgery nutrition class online and complete quiz (schedule before or after initial consultation)
- Complete one-on-one consultation with dietitian (schedule before or after initial consultation)
- Complete any additional clearance steps (such as specialist consults) that may be required by your surgeon, as explained at your initial consultation.
- Complete a home nocturnal oximetry (oxygen study) or you may need a formal sleep study, if ordered by your surgeon or if required by your insurance pre-operatively. * Also needed when you live at altitude and/or limited oxygen company resources.
- Undergo pre-operative physical with surgeon or nurse practitioner
- Undergo pre-op visit at the Surgical Readiness Center
- Undergo pre-op Physical at the clinic with either surgeon or nurse practitioner.
- Blood lab workup
- EKG (If ordered)
- Review of home medications
- Nursing pre-admission intake history/registration at the hospital where you will be having surgery
- Post-Op Follow Up
- Required Pre-Select Diet Class / video one week after surgery
- Required Soft Food Diet Class / video three weeks after surgery
- Required Solid Food Diet Class / video six weeks after surgery
- Three-month live webinar class
- Required Post-Op Follow-up Class / video six months after surgery
- Common follow-up visits with your surgeon's office
- Two-week class and visit in office with nurse practitioner
- Six-week class and appointment with office
- Six-month appointment with office (lab work commonly required)
- Six to nine-month Back-to-Basics class virtual or video and/or possible appointment with office
- Twelve-month appointment with office and dietitian (lab work commonly required)
- May continue appointments every three month until close to goal
- Surgeon
- Registered dietitians visit anytime throughout your weight loss journey
- Expect yearly follow-up with your surgeon / nurse practitioner
- Lifestyle Maintenance
- Educational offerings throughout the year
- Back-to-Basics review classes
- Menu Planning Classes
- Special classes offered online listed in the monthly Bariatric Newsletter (register at denverbariatrics.com under "patient resources")
- Support groups (offered twice per month)

Pre-Op Preparation

Anticipating Your Surgery Date

We believe weight-loss is a journey and we would like to be your co-pilot. To reduce anxiety, we help you plan and give you tools to manage and have better control over future events. Some may feel a lack of control, but we will help you take ownership as well as be prepared for this surgery. In the days before surgery, many patients experience feelings of anxiety. Doubts may surface about your surgery, and patients sometimes become concerned about potential problems, discomfort, or nutrition issues with surgery. We encourage you to reach out to us with any questions or concerns.

We encourage you to attend at least one bariatric support group prior to surgery. Discover that others have experienced similar fears and overcome them. Make this time before surgery for you and about you. Plan the upcoming changes and how you will address coping and potential challenges. Concerns are a normal part of your mental preparation for this exciting and sometimes stressful event.

It is typical to adjust to the idea of this surgery, including a brief period commonly known as “buyer’s remorse.” This usually occurs just prior to surgery or within the first few weeks of recovery. You may think to yourself, “What have I done?” or “What was I thinking?” These thoughts fade as your recovery progresses and you begin to reap the benefits of weight loss, feeling better, and improvements in your health. In part, these feelings happen due to hormonal changes triggered by the physiologic stresses of the surgery process and are temporary.

Keep in mind that all surgeries have inherent risks of complications (up to and including the extremely rare risk of mortality). You need to be honest with yourself and your family about these risks. Potential complications need to be discussed and planned for with your loved ones. It is always best to be prepared. (Also remember, not having surgery has notable risks when one is suffering from severe weight issues and the associated health problems.)

It is important to talk over any questions with your surgeon and his medical team before surgery. Remember, you have undergone extensive medical testing and clearance steps in preparation of this surgery. Your surgeon and his team are proceeding with your surgery only because they believe your body can handle this procedure.

Be proud of the work you have accomplished to reach this point! Remind yourself of the reasons why you initially chose to pursue bariatric surgery. After all, most patients have researched the option of bariatric surgery for years before they ever meet with a surgeon. Bariatric surgery is a safe, effective, and durable weight loss management tool. Progress starts here.

Pre-Op Shopping List

Supplements

- Multivitamin:** Chewable or liquid (no gummies or patches); start when home from surgery
- B-12 1,000 mcg:** Sublingual, liquid or injection; start when home from surgery
- Stool softener such as Colace:** Take as needed for constipation. You can start taking this daily at home after surgery. You also may take Milk of Magnesia as needed.
- Calcium Citrate 1500mg/day:** Chewable or liquid; start with Solid Food Diet (6 weeks)
- Fiber:** Start with Solid Food Diet (6 weeks)
- Duodenal Switch and some Gastric Bypass Revisions:** Vitamins A, D, E, K (see dose amount in chart below)

Supplement Organizer

Vitamin	Procedure	Start	Dose
Multivitamin	All	Immediately following surgery	1 for Sleeve 2x for DS and RYG
Vitamin B12	All	Immediately following surgery	500-1000 mcg
Calcium Citrate	All	6 weeks post op	1000-1500 mg (2-3 doses of 500mg)
Vitamin D	All	Immediately following surgery	3000 IU
Fiber	All	6 weeks post op	2-3 doses/day of 3-5g from fiber supplement; 25-35g/day total from food and supplement
Fat Soluble ADEK	DS, OAGB, bypass revision	Immediately following surgery	A - 10,000 IU; D - 3000+ IU; E - 50 IU; K - 300 mcg
Iron	If needed	Only if needed	30-60mg
Biotin (for hair re-growth)	Not Required	Only if needed	5000mg
Omega 3 Fatty Acids	Not Required	Only if needed	2000mg for anti-inflammatory benefits
Thiamin	If needed	Only if needed	1-2mg
Zinc	If needed	Only if needed	10-20mg or 100% RDA (DS - need 200% RDA)
Copper	If needed	Only if needed	1-2mg or 100% RDA (DS - need 200% RDA)



Protein Powders or Drinks

Consider high protein/low carb (> 20 grams protein no more than 5 grams of carbs). Both Powder or pre-mixed liquids are acceptable. Try several brands before surgery.

- Do NOT stock up on more than a week's supply, as one's taste preferences may change after surgery
- Look for at least 20 grams of protein per serving
- No more than five grams of carbs per serving
- Mixers: Use water, non-fat/1% milk, unsweetened soy or almond milk, ultra-filtered milk
- Try unflavored protein powder to mix in and increase your protein intake

Food

Clear liquids

REQUIRED 24-48 HOURS PRIOR TO SURGERY

- Broth, decaf tea or herbal teas, diet lemonade or other diet flavors (non-carbonated, non-caffeinated)
- Sugar free popsicles, sugar free Jell-O
- Clear protein drinks
- Flavored Waters (zero calorie)

Kitchen Utensils

- Kitchen timer (timing is essential in the first few weeks) or use a timer app to help keep you on schedule.
- Small bowls (1-3 ounces), baby spoons, baby forks

Hospital Checklist

Bring to Hospital Day of Surgery

- This manual
- Robe, pajamas/boxers, and fully enclosed slippers (you will be walking the halls)
- Bath items
- Loose-fitting clothing to wear home
- CPAP machine and mask (if you have sleep apnea)
- Home oxygen tank for transport (if you currently use daytime oxygen)
- Personal fan (if desired)
- Toilet tongs (if needed)
- Wet wipes
- Camera (start to chronicle your journey)
- Cell phone and charger
- Reading material

Have Ready at Home

- Must arrange transport and have someone to stay with you your first night home
- Medical Equipment
- Blood pressure cuff (if diagnosed with hypertension/high blood pressure)
- Glucometer and test strips (if diagnosed with diabetes)

As Desired

- Heating pad (for abdominal comfort)
- Easy chair or recliner (getting up and down to rest early post-discharge may be more comfortable using these)



Preparing for Your Surgery Day

Medication Preparation

You should NOT take certain medications prior to surgery, but there may be some medications that need to be continued. Review the following but discuss all medications with your surgeon. If you are taking Hormone Replacement Therapy (HRT), contact your surgeon for instructions. Medications will be reviewed prior to your surgery as part of your pre-surgical appointment.

Discontinue Four Weeks Before Surgery

Birth control pills – Discontinue birth control pills patch or NuvaRing four to six weeks prior to surgery. Back up birth control is needed for four weeks following surgery until your birth control is effective. You can restart birth control pills or estrogen containing methods after four weeks postop. Often birth control pills may be less effective during the hormonal shifts following weight loss. A pregnancy test will be done during your pre-op visit at the Surgical Readiness Department at the hospital as a precaution. Birth control pills contain high doses of estrogen, which increases your risk of clotting after surgery and thus you must discontinue their use for this time. IUDs, Depo-Provera shots and implants are acceptable. You do not need to discontinue progesterone.

Discontinue Two Weeks Before Surgery

NSAID class discomfort medications – NSAIDs are a class of medication associated with the treatment of inflammation. Common side effects include gastric irritation, gastric ulcers, and gastric bleeding. NSAIDs are dangerous to bariatric patients due to the tendency to cause ‘marginal’ ulcers that form at or near the pouch and stomach outlet.

Marginal ulcers can cause discomfort, bleeding, obstruction, and perforation. Common NSAIDs include Aspirin, Ibuprofen, Motrin, Aleve, and Naproxen. Additionally, discontinue the use of omega-3 supplements, fish oil, and Vitamin C and any other supplemental herbs you may be taking.

Stop all NSAID discomfort relievers two weeks before any surgery (e.g., aspirin, Motrin, Aleve, ibuprofen, naproxen). (If you are having a BYPASS, you will NO LONGER be able to take NSAIDS after surgery at any time, unless otherwise stated by your surgeon. Rapid Release Tylenol (Acetaminophen) should be your new discomfort medication of choice!)

Do Not Discontinue Before Surgery

Some important medical conditions warrant taking essential medications first thing the morning of surgery, these conditions include:

- GERD or Acid Reflux H2 BLOCKERS
- Proton Pump Inhibitors - PPI
- Heart arrhythmia or other heart medication
- Seizure disorders - continue all anti-seizure meds
- Asthma, emphysema, or other breathing disorder meds
- Hypothyroidism (low thyroid), and sometimes hyperthyroidism (high thyroid)
- Beta Blockers (even if other hypertension medications discontinued)

Take your essential prescription medication (that has been reviewed by your medical team) the morning of surgery with a small sip of water. If you are unsure whether your medication is essential or not, please ask your surgeon or anesthesiologist when they call the night prior.

Diabetic Patients

Check with your doctor for blood sugar guidelines. You should be checking your blood sugar regularly, before and after surgery. Notify your surgeon if your blood sugar is greater than 200 mg/dl before surgery. Oral agents may be discontinued 24-48 hours prior to surgery. You will be consulted on these agents (would depend on your current glucose control). For insulin, all short acting insulins should be discontinued once you begin your clear liquid diet. For longer acting insulins, specific directions will be given from the office or by the medical team in the hospital before and after surgery.

If you are on insulin, talk with your healthcare provider about your plan for management before and after surgery.

High Blood Pressure Patients

Prior to surgery and when on your clear liquid diet, you may be required to stop certain medications 1-2 days prior to surgery.

Check your blood pressure regularly, before and after surgery. If you are outside of the recommended range and/or have high or low blood pressure symptoms of concern, alert your primary physician, our medical team, and/or have an urgent evaluation depending on the level and how you feel.

Patients on Blood Thinners

(e.g., coumadin, warfarin, Xarelto, pradaxa, etc.)

Discuss with your healthcare provider when and how you are to stop the medication and when/how to restart after surgery. Also discuss whether you will need a Lovenox or heparin anticoagulation bridge before and after surgery.

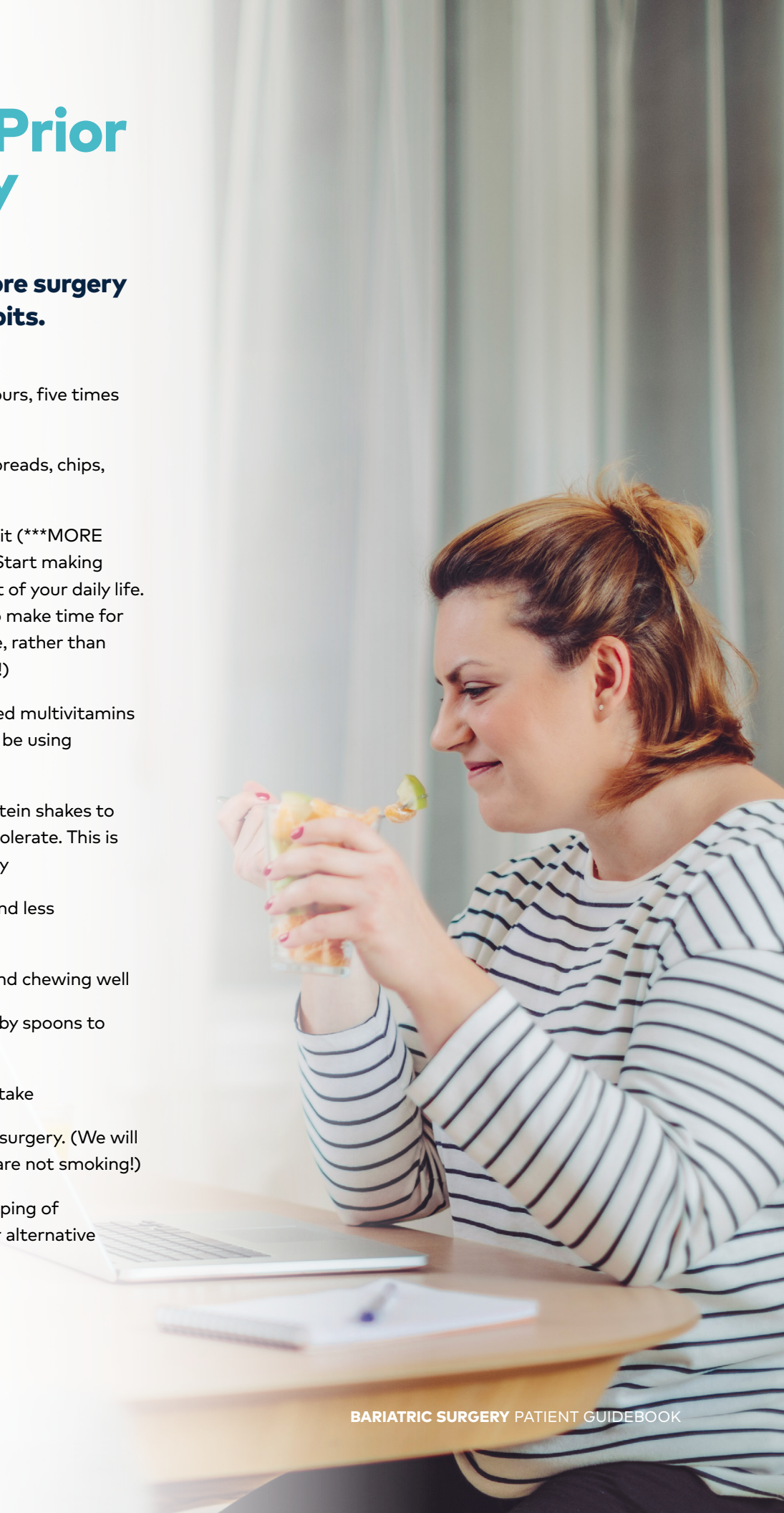


Nutrition Prior to Surgery

Begin your journey before surgery by adjusting to new habits.

These include:

- Eat small meals every three hours, five times a day
- Cut down on carbohydrates (breads, chips, rice, pasta, sweets etc.)
- Begin an exercise / fitness habit (**MORE SPECIFIC AND REALISTIC** Start making “getting up and moving” a part of your daily life. For now, it is about starting to make time for yourself and being more active, rather than starting a big workout routine!)
- Start taking your recommended multivitamins and supplements that you will be using after surgery
- Experiment with different protein shakes to learn which ones you like and tolerate. This is important to do before surgery
- Practice being more mindful and less distracted during meals
- Practice taking smaller bites and chewing well
- Use appetizer silverware or baby spoons to reduce portions
- Reduce caffeine and alcohol intake
- Stop smoking 6 weeks before surgery. (We will do a blood test to ensure you are not smoking!)
- Discontinue any smoking or vaping of marijuana. Edibles are a better alternative before and after surgery



Medical Preparations

Pre-Op Physical

In the week or two before surgery, you will have a pre-op visit with your surgeon or nurse practitioner. They will review specifics of your procedure and answer any last questions you may have. This is the perfect time for you to voice any concerns or issues you have so they may be addressed adequately before your surgery. (Your surgeon is ALWAYS available to discuss issues of concern. If you want to speak to them directly, even if they are not seeing you at this pre-operative appointment, please let the staff know and this will be arranged.) If you live out of town a phone consultation the week or two prior will be arranged before your travel to Denver for surgery. The Surgical Readiness Center (SRC) will call you to complete the pre-registration.

Surgical Readiness

This visit normally occurs in the week or two prior to surgery at the Hospital Surgical Readiness Center; almost always on the same day as your pre-operative appointment. During your visit, the nurse will draw blood and go over your medications. Please remember to bring your complete and up-to-date list of prescription medications for review. You may also have an EKG ordered at this time if not already done at your pre-op evaluation for those with cardiovascular disease or >50yrs.

Anesthesiology

Your anesthesiologist typically calls the night prior to your surgery to review your medical history and explain the anesthesia, associated side effects and risks, and answer questions. (Note: You will get an “unknown number call” on the night prior to surgery. Please answer this call from your anesthesiologist, as it will help your process on the day of surgery and make you feel so much better knowing them ahead of time.) Please notify your anesthesiologist of the following:

- Any rare reactions or allergies to medications or anesthesia
- Family history of severe anesthesia complications

- History of a difficult airway (being told by a prior doctor that it might be difficult to place the breathing tube during surgery)
- History of severe nausea/vomiting
- Any recent illnesses

Visual Aid Preparation

We encourage you to document your journey! Take photos of yourself the week before surgery. You will regret not having a chronicle of your journey to see if you do not do this. Many patients also enjoy watching their measurements change. Take multiple measurements and record your pre-op sizes. Following surgery, you will be able to follow inches lost as you go along.

Skin Preparation

With an antibacterial soap such as Hibiclens, shower the night prior to surgery. Wash from your chest to mid-thigh, leave on for a few minutes before rinsing skin thoroughly. Pay attention to skin folds, breasts, and belly button. Use a liberal amount of soap, do not use sparingly!

Diet Preparation

It is important to eat a normal, balanced diet the week before surgery. You will follow a clear liquid diet for a minimum of 24 hours prior to surgery. Your surgeon may require more than 24 hours in certain circumstances. At that point, if you can't see through it, you can't have it! You may have clear protein drinks, sugar free options such as popsicles, flavored waters and jello, broth, decaf teas, and clear diluted juices such as apple or white grape (especially if you are feeling lightheaded). Additionally, you should be sure to drink plenty of water to stay hydrated, at least 64 ounces per day. You may increase your clear protein drinks if you get hungry. Also, in the 6-8 weeks before surgery, taper down your intake of caffeine, alcohol, and carbonated drinks (as these are restricted after surgery).

Stop drinking six hours prior to your surgery time.

Remember: NO solid food and only clear liquids 24 hours prior to surgery.

What to Expect During Your Hospital Stay

NOTE: Please do not bring valuables to the hospital. Have a loved one keep your belongings until you arrive in your hospital room. If you wear eye contacts, you must remove them prior to surgery. Please remove ALL piercings as well.

Surgery Preparation

Follow pre-op instructions regarding diet, prep, and what to bring (e.g., CPAP/BiPAP, travel O2 tank).

On the day of surgery please plan to arrive at the Hospital Surgery Center three hours before your surgery. For example, you should arrive at 7:30 a.m. if your surgery is scheduled for 10:30 a.m. Note that for the first cases of the day, 5:30 a.m. is the earliest you may arrive PLEASE have your cell phone handy the day of surgery, as we frequently move cases up and/or have to adapt our case schedule and may ask you to arrive at a different time.

Check in with pre-op admissions. Your medical history will be confirmed, and your family given waiting room instructions. You will change into a hospital gown and get comfortable while your nurse takes your vital signs, starts your intravenous (IV) line for medications and antibiotics, and puts sequential compression devices (SCDs) on your legs to decrease the likelihood of blood clots. You also will be given heparin/anticoagulants to prevent blood clots. You should receive a small handful of oral medications that should be taken 60+ minutes prior to your surgery. These medications are to help with postoperative discomfort and work differently than narcotics. Your surgeon and his team will stop by to greet you and help sooth any last-minute jitters you may be experiencing. Your surgeon and your anesthesiologist will be on hand to answer any last questions you or your family may have. Your family may be with you for most of pre-op but not in surgery or recovery (PACU).

Once it is time for your surgery, in most cases a relaxing agent will be administered via IV to help prepare you for going to the operating room. This will prevent you from being anxious when you are taken back to the OR. You may not recall anything from this

point until after you awaken in the recovery room. In the operating room, monitors will be placed, oxygen will be administered via a facemask, and you will be put to sleep by IV medication.

After you are completely asleep, an endotracheal tube (breathing tube) will be gently placed through your mouth and into your trachea (windpipe) to breathe for you. You will not have any recollection of the breathing tube going in or coming out, but you may recognize some slight throat soreness after surgery that should dissipate within a 24-hour period. Post-operative nausea and or vomiting can happen with all general anesthetic gases (passed through the breathing tube to keep you in a deep sleep) and all narcotics. Your anesthesiologist will have ordered multiple anti-nausea agents that work in different ways to help reduce this side effect. These medications given in advance really help to eliminate nausea and vomiting after your bariatric procedure.

Your surgery (time in the OR) will take approximately one to two hours. When finished, the anesthesiologist will administer IV medication to wake you up comfortably. We will never be able to keep you with zero discomfort. That is an unreal expectation, but your discomfort should be tolerable and you still should be able to drift off to sleep. Next, your team will take you to the recovery room where a nurse will monitor you one-on-one for one to two hours. Your surgeon will visit with loved ones once your surgery is complete and/or call your designated contact person(s). While you are in surgery and recovery, your family and loved ones will be in the waiting room and will next see you when you reach the surgical recovery floor (about two hours after surgery) where you will be for the remainder of your stay. Some patients may require a higher level of early post-operative care and will be admitted to the Intermediate Care (IMC) or the Intensive Care Unit (ICU).

After Surgery

After leaving recovery for the surgical floor, you will be able to rest a few hours in your hospital room. Within three hours of arriving in your room, the nurses will ask you to get up and walk around. It might just be to the door of your room and back, but it is imperative you begin moving as soon as possible to decrease the risk of blood clots and pneumonia. You are encouraged to walk as often as you can as soon as you can — starting the first day!

After you arrive to the surgical floor, your diet will start and advance to stage 2-3 slowly on direction of your care team.

- Stage 2 (1oz every 30 min)
- Stage 3 (1oz every 15 min)

You are encouraged to meet the goal of 4 ounces of fluid per hour for 4-6 hours prior to discharge to reduce risk of dehydration. You may increase fluids to more than 4 oz per hour as tolerated once home.

Discomfort

In the hospital, we ask you to rate your discomfort on a scale of 1 to 10, with 10 being the worst discomfort imaginable. We will work to keep your discomfort around a level 3-4 or below on this scale. If your discomfort is higher than this or you do not feel your discomfort is appropriately controlled, you must let the nurses know so we can adjust your discomfort medication accordingly. In the OR, your surgeon placed local anesthetic agents into your incisions and (often) in a regional blocking fashion — so this will also be quite helpful. Many non-narcotic medications are available for discomfort during your recovery. Ice and heat are good forms of relief for discomfort as well.



Post-Operative Recovery Period

What Can You Expect?

Throughout your 1-2 night stay, you will receive a blood thinner by injection in your abdomen, thigh, or arm to prevent blood clots. Lab work is drawn the morning after surgery and as needed for your surgeon to review. You may shower the first morning after surgery. A hospitalist provider may see you while you are in the hospital to assist your surgeon in making medical decisions concerning your care and discharge.

Each day in your private hospital room, you will be expected to walk in the hall every two to three hours (at least six times per day). You will be asked to use the provided incentive spirometer breathing device at least 10 breaths each hour while you are awake to improve oxygenation and reduce the risk of acquiring pneumonia. When you are in bed or the recliner for more than 30 minutes, you must wear your surgical compression devices (SCDs). Please ask staff for assistance. Fluids are very important to your recovery. It will be your responsibility to record your fluid intake after your diet is advanced. A clipboard and pen will be provided at your bedside.

What is an Upper GI Study (UGI)?

An upper GI study is a test performed in the radiology department to view your new anatomy under fluoroscopy (live X-ray). This will be ordered if your surgeon feels it is warranted. The exam usually takes approximately 45 minutes but may be longer depending on your anatomy.

What is a CAT Scan (CT)?

If your surgeon has any concerns, they may order a computed tomography (CT or CAT) scan, which is a specialized radiology study to review your new surgical anatomy.

Diet Progression

Patients start on the Bariatric Stage 1 Diet (ice chips) once surgery is complete. You may advance to a Bariatric Stage 2-3 Diet (clear liquids & clear protein drinks) as tolerated. You may have clear fluids such as water, sugar-free gelatin and popsicles, broth, decaffeinated tea, and coffee. Once you start this diet, you will be asked to record everything you put in your mouth for the rest of your hospital stay. This is extremely important and provides the surgeon and staff with your accurate intake for safety. By the time of discharge, you need to be managing 4 oz per hour of fluids. This is necessary to avoid dehydration.

In-Hospital Bariatric Diet Stages and Advancement

We have teamed with our surgeons and dietitians to provide a variety of safe nutrition options for bariatric patients.

Stage 1 Diet (Ice Chips Only): You may have one ounce of ice chips per hour, if tolerated. Ice chips help provide mouth and throat comfort. You may also ask for a mouth swab for symptoms of dry mouth.

Stage 2 Diet (Clear Liquid Menu): You may have one ounce of clear fluids every 30 minutes (total of two ounces per hour) but no protein drinks yet. You will receive a tray of water, broth, sugar free Jell-O, decaf tea, sugar free popsicles and protein drinks. These liquids are the tools to help meet your hydration needs. Once tolerating for a couple of hours, you may advance to stage 3 diet.

Clear Liquid Diet Options

Broths:

- Chicken
- Beef
- Vegetable
- Low Sodium Chicken
- Low Sodium Beef
- Diet Lemonade

Beverages:

- Bottled Water
- Decaf tea or coffee
- Decaf herbal teas
- Decaf flavored waters or electrolyte beverages

Other:

- Diet Gelatin
- Sugar Free Popsicle

If you are tolerating this diet well after one to three hours, you may be progressed to Stage 3 diet.

Stage 3 Diet Protein Drink Liquid Menu:

You may have one ounce of clear fluids every 15 minutes (four ounces per hour). Sip slowly, a minimum of 48 ounces per day. Protein drinks are added at one ounce per hour. Stage 3 is your target diet before you leave to ensure you will stay hydrated at home. You can drink more than four ounces per hour, but this is the minimum to indicate you will be safe at home as well as to avoid readmission or ER visits for IV hydration.

You may have all clear liquid menu items AND add provided protein drinks (1oz per hour). You may have protein supplements provided at the hospital. When you are taking oral fluids well, your IV may be capped. For the first week after you leave, you will continue the Stage 3 diet: FLUIDS ONLY + protein drinks. You need a minimum of four to eight ounces of water per hour. Protein drinks do not need to be clear if you are tolerating clear protein drinks.

Drains, Discomforts, and “Buyer’s Remorse”

If you have any drains placed during surgery, they will be stripped and emptied periodically by staff during your stay. Some leakage is common around drain sites. Bandages will be changed as necessary by staff. You may shower with drains. Most drains are removed prior to your discharge from the hospital. However, if your surgeon determines you will need to go home with any drains, instructions will be provided prior to discharge.

Some discomfort and discomfort are an expected part of the surgical experience. This is normal. However, your discomfort should be appropriately managed, so you are comfortable enough to be active and walking in the hospital and taking deep breaths, while limiting effects that may sedate or cause concerns. Note: if you chronically take notable discomfort medications before surgery, it will take more work and more advanced medical regimens to better control your discomfort, as your discomfort tolerance is more medication resistant.

You will need to make arrangements with your family or support people for transportation home from the hospital and to be with you the night of discharge.

People report feelings of regret after surgery caused by stress hormone changes from the procedure which will dissipate over 24-48 hours post-operatively. Communicate with your team if these feelings are concerning you, and we will help you work through it all. If you are on psychiatric medications, we will usually continue these on the day of surgery. If you feel you need them the evening of surgery, let us know and we can start them if appropriate.

Managing Your Discomfort

A number of non-narcotic discomfort medicines will be used to help you feel more alert and be up moving faster. In addition to intravenous (IV) and oral discomfort medications, you may try movement, rest, re-positioning, hot/cold therapy. Your discomfort level should be improving as you approach discharge, but you may still feel a little discomfort. It is common for patients to have 1-2 days of “gas discomfort” in the left shoulder after surgery. This is related to gas used in the abdomen during laparoscopic surgeries. This CO2 gas irritates your left diaphragm and causes a feeling of shoulder discomfort. A warm pack on your shoulder and walking help to dissipate this discomfort.

Use medications as prescribed. This will help your comfort, help you stay active, and breathe better. If you feel new leg or chest discomfort, call your surgeon. You will be given discomfort medicine upon discharge. Usually this will be a non-narcotic such as a muscle relaxer or Tylenol. It is recommended that you use only as prescribed. Do NOT take additional meds on top of the ones prescribed.

Discharge Process

Most surgery patients stay a minimum of one night. By the day of discharge, you should be able to drink at least four ounces of fluids per hour for at least several hours. This indicates you will be able to stay hydrated when you return home.

Supplemental Oxygen Requirements

After surgery, it is common for patients to require use of supplemental oxygen at home. This is due to anesthesia and surgery. Denver's altitude also plays a role in an increased need for oxygen. Home oxygen will actually help with healing and the recovery process. The night before discharge, a nocturnal oximetry study (NocOx) will be conducted, to measure your need for overnight oxygen. If you have a CPAP or BIPAP, you will wear this for your test.

The day of discharge, you can expect to be tested for daytime resting and walking oxygen needs. If you require daytime oxygen, a tank must be delivered to you before your hospital departure. If you require nighttime oxygen, the respiratory team will work with you and your insurance company to make arrangements. Nighttime oxygen will be retested in 2-3 weeks to determine if it needs to be continued. Your PCP's office will order this test. If you need daytime oxygen, your surgeon's office will recheck at your first appointment.

Preparing for Discharge

On the day of discharge, in the hospital you will watch a discharge video and receive one-on-one instruction. Patients receive a lot of information prior to surgery. Your discharge class helps narrow the focus to ensure you can go home safely and be independent after surgery. Discharge instructional handouts will be provided at this time.

Generally, you will be discharged by early afternoon, depending on your condition. However, if you are not ready and/or your surgeon does not feel you are ready, you may stay an additional day. Please voice any concerns about going home to your surgeon and hospital team.

When you get home, please refer frequently to your discharge paperwork and this guidebook. Do not hesitate to contact your surgeon's office if you feel that you are having any issues of concern.

If you are acutely worried, please call 911 and/or report to the ER. If possible, it is always best to go to the ER at the hospital where you had surgery. At a minimum, make sure that the ER team calls your surgeon or their on-call MD to help organize your care. (Not every ER is as knowledgeable about post-op bariatric surgery issues as we are.)

Discharge Key Points

- Drink – Drink – Drink! Staying hydrated is critical to success.
- Consume at least four ounces per hour minimum (goal is 64 or more ounces per day; minimum 48 ounces per day)
- Protein: Protein is vital to your nutrition and healing/recovery. Your goal is 60-70 grams of protein per day. (Early post-op, you may be only able to get in 40 grams... but the goal is to increase to 60+ within the first two weeks.)
- Start multivitamins and B-12 supplements (and ADEK, if you are a duodenal switch patient or certain type of bypass revision) when you get home. See page 13 for more information on this.
- Use the nausea medication as needed. If nausea is hindering your ability to drink, let your team know, as there are many options in medical treatment of nausea that we can use to help.
- Keep up activity and walking at least 6 times per day to keep you safe and on track. When awake, try to get up and move around every hour at a minimum.
- Many patients go home with at least night time oxygen, and sometimes daytime oxygen as well. Use it! If you are self-pay, your medical insurance may pick up oxygen charge.
- Remember the bariatric surgery NO-NOs: no smoking, no alcohol, no high-calorie liquids, no solid foods, no carbonated drinks, no NSAID medications (e.g. aspirin, ibuprofen, Motrin, Aleve, naproxen).

Hydration and Fluid Balance

Not getting minimum of 48 ounces fluids can land you back in the hospital with dehydration. Your goal is 64 ounces of fluids or more every day... forever!

Your first priority is drinking enough fluid to maintain hydration. You need 60-80 ounces of fluid per day to maintain your fluid balance. An easy way to judge your hydration is to watch your urine color. In the morning, your urine should be a light straw color, becoming clearer through the day. Inability to void within six hours should be a red flag that your fluid may be compromised. It is a good idea to maintain your fluid intake in a planned fashion: for example, 25 ounces in the morning, 25 in the afternoon and 25 in the evening. There is no upper limit to the amount of fluid you can drink, as long as it feels comfortable. Try to avoid ice-cold beverages, as they may induce nausea.

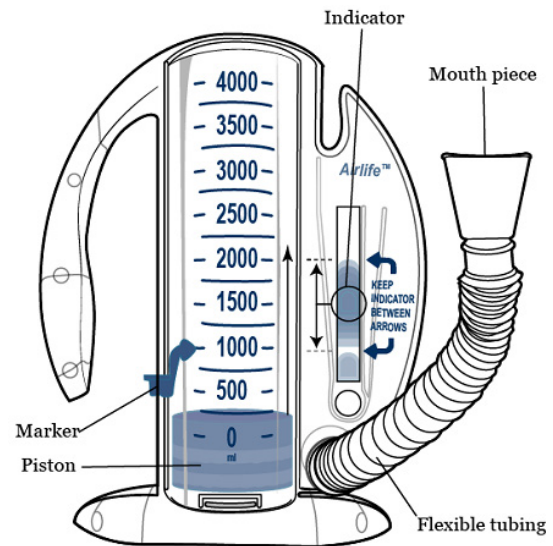
Water should be your primary source of fluid and hydration, as it contains no calories. Low to no calorie flavored waters and electrolyte beverages are ok too. High calorie liquids (such as undiluted juices or shakes) will defeat your weight loss goals and may cause unwanted side effects such as dumping syndrome (a side effect for Gastric Bypass patients only).

We discourage the use of caffeinated drinks, carbonated drinks, and alcohol, especially during the healing phase. These substances may irritate your new anatomy and do not add to the promotion of healing. In addition, their effects on your system are more variable due to your new anatomy. Small amounts of weak tea or decaffeinated coffee are OK. (If you have a caffeine withdrawal headache, small amounts of regular coffee or tea are ok.) Unsweetened herbal teas are an excellent choice. Try using Splenda or Stevia in moderation if needed for added flavor.

After solid food begins, you will no longer take liquids with your meals. Liquids should be low or no calorie (15 calories or less) and you should stop drinking 30 minutes before eating. Then, wait 30-60 minutes after eating before drinking. Consider Bariatric Timer or other app to help with timing.

Incentive Spirometer (the I.S.)

Deep breathing exercises have been shown to be vitally important to respiratory fitness after surgery. Deep breaths expand the small air sacs of your lungs for improved oxygenation. You will receive an incentive spirometer (I.S.) when you reach the post-surgical floor, which measures the volume of air you can breathe in and shows how effectively you are filling your lungs each time you inhale.



After surgery, deep breaths often are suppressed to minimize discomfort. The I.S. helps you resume a normal breathing pattern.

Please follow the directions given to you to reduce the risk of respiratory complications. You quickly will begin to receive the benefits of slow, deep breathing exercises. These speed your recovery and lead you to better breathing and reduced supplemental oxygen needs.

Following surgery, it is important to use your I.S. for 10 breaths per hour. You will do this in the hospital when awake and for the first week as you recover.

Coughing is not harmful to your surgery and is very important to loosen secretions after your procedure. You may use a pillow held against your abdomen to brace. Cough two to three times an hour. This is important! Coughing not only opens your airways after surgery, but also loosens secretions from the base of your lungs, which could lead to infection.

Meals (Protein Drinks)

You may drink as much as you can tolerate but be sure to have protein every hour. Protein intake should add up to 60 to 70 grams per day. This is sometimes difficult, so aim for at least 35-40 total grams of protein per day to start with and build from there.

- Protein is the essential food for healing. Find a supplement(s) you like before surgery and that meets your intake needs. You can use pre-made or powder forms.
- Protein Powders may be mixed with nonfat milk or 1% milk or unsweetened non-dairy liquids such as soy or unsweetened almond milk. Use a protein powder that tastes good to you and contains whey, egg, or soy protein.
- The shake or powder should contain about 20 or more grams of protein per serving, minimal carbohydrates (no more than five to 10 grams per serving), and minimal saturated fats (no more than two grams per serving).

Remember: Your daily goal is to drink at least 64 ounces of fluids per day. This means drinking four to eight ounces each hour throughout the 12- 15 hours you are awake throughout your day. With meals, stop drinking 15 minutes before you eat and wait 45 minutes after you start eating to drink. Work at this, and fit protein in as instructed.

If you feel full, stop drinking until the feeling goes away. If you feel nauseated after feeling full and the feeling goes away in five to 10 minutes, resume drinking. However, if nausea lasts 15 minutes or more, the new anatomy is giving you a strong message to stop any intake by mouth for at least one to two hours until the nausea and fullness is completely gone. You need to allow your stomach to empty. If nauseated and overly full, you may try spitting out your saliva, as there is no place for it to go. Trying to belch is not productive and may result in increased swallowing of air, which will make you more uncomfortable.

Heartburn

Some people may experience heartburn after surgery. You will be prescribed antacids to assist with this discomfort. Alert your medical team if this becomes problematic.

Diet Progression

You will be asked to watch your diet progression videos for 1 week (preselect) 3 weeks (soft food), and 6 week (solid foods). Advancing your diet before you receive instruction to do so may result in vomiting and/or damage to your procedure.

Multivitamins

You must take multi-vitamins once (Gastric Sleeve patients) or twice the RDA dose per day (Gastric Bypass, MGB/OAGB, and Duodenal Switch patients) when you get home — once in the morning and once at night. Choices include:

- OTC adult vitamins cut in half
- OTC adult chewable vitamins
- Online resources for bariatric formulated vitamins
- Liquid vitamins

B-12: Start your B-12 (1000mcg/daily) when you get home, either a daily sublingual tablet, or monthly injection.

ADEK: Duodenal Switch and some gastric bypass revision patients also will need to start an ADEK vitamin daily when at home.

We encourage bariatric formulated vitamins lifelong to prevent nutritional deficiency. Brands that are recommended include Bariatric Advantage, Celebrate, Bariatric Fusion; however, if other supplements are consumed please make sure they are chewable/liquid and reviewed by your dietitian. If using capsules, they can be opened and put into liquid or greek yogurt.

Discomfort

For discomfort, you have been given either a liquid or pill form of medication. Pills may be cut in half before being taken. If you need something to help get them down, you can take with a tablespoon of low calorie yogurt or sugar free pudding. You may have gone home with a muscle relaxant. You may alternate this with Tylenol.

To judge whether a pill is “safe” to take, place it in a glass of water. If it dissolves within five to 10 minutes, it is okay to take. If it dissolves more slowly then it may be more difficult to tolerate early on and a substitute medication should be considered. Extra strength Tylenol is generally a safe size pill. Gastric Bypass patients should never swallow a pill larger in diameter than a pencil eraser or longer than ¾ inch.

Constipation and Diarrhea

Bariatric patients usually have bowel movements less frequently because they are eating less. If this is uncomfortable and/or it is hard to go to the bathroom, then that may be considered constipation. Good hydration is key. Daily stool softeners are recommended until you are able to consume fiber from your solid food diet at 6 weeks.

If you become constipated (i.e. firm stools or bowel movements less than once every two days), use a stool softener such as Colace (docusate sodium). If you are uncomfortably constipated, use Milk of Magnesia or a Dulcolax suppository. Do not use fiber laxative at this point!

Diarrhea may occur with change of diet but if symptoms last for more than 3 days, consult your provider. You may use one to two doses of Imodium (loperamide) if diarrhea. If you feel that the diarrhea is dehydrating you (it is occurring more than three to four times per day or is liquid and voluminous), or lasts more than a few days, contact your surgeon's office. We will help you with hydration recommendations and may wish to check you for possible infection.

Wound Care and Infection

You may shower after you return home and get your wounds wet; but no bathtubs, hot tubs or pools for three weeks or until the skin is sealed and healed at all surgical sites. Use bandages or gauze to cover any weeping surgery sites and change your dressings after showering or if they become wet. Change dressing daily if needed.

Please check incisions daily for signs of infection at surgical sites including increased redness, warmth, fever, foul drainage or discomfort that does not resolve. Call us if you suspect an infection.

Exercise

Avoid heavy lifting or use of your abdominal muscles for a full four to six weeks post operatively. Do not do anything that will require you to grunt or strain and put pressure on your abdominal wound. Your surgeon's office will tell you when resistance exercises may be added into your routine.

After six weeks, you will be working up to aerobic exercise 45-60 minutes per day. This is the only known antidote to the fall in your metabolic rate. Exercise is essential to significant weight loss and the return of your sense of energy and well-being.

During your first week at home, walk at least six times per day in a safe (non-slippery) environment. Push yourself as you can tolerate. Gradually build up from there.

Those who cannot walk or who are wheelchair-bound will receive alternative exercise recommendations.

Overall Symptoms

When your new anatomy over-stretches, nausea, discomfort and heartburn can result. This discomfort usually is felt just below your breastbone or in the middle of your back. If this happens, then you should stop all intake by mouth. A heating pad to the chest may relax the muscle and help with discomfort.

Next, sit upright and try to relax. The discomfort usually goes away in 10 to 30 minutes. Vomiting may help if it occurs spontaneously, but do not make yourself vomit. If the discomfort persists or occurs frequently, please call your surgeon's office.

Driving

Do not drive within the first week of surgery. After one week, you may drive once you are off narcotic discomfort medications for at least eight hours AND feel that you can handle your car without limitations in an emergency and without straining. This is not recommended until after your first week.

Essential Bariatric Surgery No-No's

- No smoking
- No alcohol
- No high calorie liquids such as soda, smoothies, sugary drinks, or undiluted juices
- No carbonated drinks
- No straws for drinks
- No NSAID medications—e.g. Aspirin, Ibuprofen, Motrin, Aleve, Naproxen, etc.
- No meat or solid foods until authorized. Not even one bite! You may injure the new anatomy and you will most likely vomit.

Post-Surgery Follow Up

You will have a post-operative surgical office visit one to two weeks after surgery. Each surgeon has a specific post-operative appointment schedule – work directly with the surgeon’s office to schedule all follow-up appointments. Stick to your appointment schedule; it is important!

Prior to discharge, make an appointment with your primary care provider for one week after surgery to review your medications and to continue to manage your comorbidities (such as diabetes, hypertension, sleep apnea, etc.)

Take advantage of the post-op nutrition videos and classes held weekly. Videos cover diet progression at one, three, and six-weeks post-op. There are also live webinars for 6 and 12 weeks.

Remember

You have made a wonderful commitment to your health and improved quality of life. We admire all that you have done to get to this point! The most dramatic transformation of your life has now begun. You have the right to be proud of yourself. Your progress starts here.

During this early healing phase, it is critically important that you take care of yourself. Live within the guidelines established and detailed in this guidebook. Ensure that you get an adequate amount of rest and get help with your daily responsibilities. Everyone you know will benefit from the success of your surgery and recovery.

There will be emotional ups and downs, you may become frustrated, and your weight loss will hit plateaus. However, take your new life one day at a time and realize that the transformation will happen as you follow our program, and your body adapts to the physiologic and metabolic changes that you are consciously making.

We have faith that you will succeed. Remember, weight loss is a journey. We’ll help you along the way.



When to Be Concerned

Minor Warning Signs / Conditions

Minor warning signs usually require a consultation with your surgeon's office (call or visit), but not necessarily an emergency room visit.

Seroma or abscess: A blister fluid collection under the surface of an incision area requiring follow up if unresolved. Sometimes this is associated with infection and may contain pus. Call if signs of infection are present such as heat at site, increasing redness, pus or foul discharge.

Temporary numbness in extremities: This may be a result of positioning during the surgery. This should resolve in the first few weeks after surgery.

Loose stitch/suture knot: If incision remains closed there may be no need to follow up as the stitches simply approximate edges of the healing wound and will dissolve in 4-6 weeks.

Mild nausea: It is normal in the first few weeks to have mild nausea as a result of the surgical changes to your anatomy and the changes in diet as you progress through the different stages. You should always be able to stay hydrated and if needed can discuss options with your nurse practitioner.

Constipation: Use stool softeners with adequate fluids and exercise to minimize constipation. Milk of magnesia may be used when above does not provide relief.

Diarrhea: Get plenty of fluids! If unresolved after 2-3 days. Call your surgeon's office if you have issues beyond this timeframe. You may use Imodium for relief as directed.

Low grade temperature less than 101 degrees: Dehydration can elevate your body temperature. Check your fluid intake and make sure you are having the right amount. Only call the office with a temperature over 101 degrees.

Oral yeast infections (thrush): Thrush is not uncommon after major surgery and the use of antibiotics. Thrush is characterized by white areas on the tongue, you may have some discomfort to the mouth and a metallic taste. Call your surgeon for a prescription to use at home.

Mild edema/swelling: After periods of inactivity and hospitalization you may experience swelling, often in the lower extremities. Applying heat and taking Tylenol may offer some relief. HOWEVER, call your surgeon if you have discomfort in your lower legs, one-sided swelling or increased discomfort in the extremity. These are

signs of possible blood clots. Do not massage or apply heat if you are symptomatic, instead call for possible evaluation. If you experience more than a 3 pound weight gain or shortness of breath, call your surgeon's office especially if you were on diuretics before surgery.

Major Warning Signs / Conditions

Major warning signs require a consultation with your surgeon's office and/or may require an emergency room visit.

Persistent fever greater than 101 degrees: This could be an indication of an infection or dehydration.

Leg/arm discomfort or swelling: Follow-up needed for the following: One-sided swelling, increased discomfort when pointing foot back towards head, and/or warmth to touch or increasing discomfort. Do not use heat until blood clot ruled out.

Shortness of breath: If your lips turn pale or blue and you have trouble catching your breath this may be an indication of increased oxygen needs or pulmonary embolism.

Severe nausea or protracted vomiting: This may indicate a blockage or stricture (narrowing of the outlet of your new stomach). You may also have excessive salivation.

Dizziness: A possible sign of hypoglycemia, lack of cerebral oxygen needs due to a blood clot or other cause that needs emergent evaluation.

Chest Discomfort: There should never be severe discomfort to your chest area. There is some shoulder discomfort due to gases used in surgery and this type of mild discomfort may be relieved with heat or discomfort medicine. If you have severe discomfort in your chest, however, do not wait for resolution when discomfort persists or increases. This may be a sign of a blood clot or cardiac event.

Dehydration: You may be dehydrated if your fluid intake is less than 48 ounces day and you are urinating less than four times per day. If you have not urinated in eight to 12 hours, if you have a headache or if you haven't had at least four ounces per hour for six to eight hours.

Call 9-1-1 and use closest emergency room. Explain that you are a bariatric patient. If you can go to the hospital where your surgery took place, the doctors are very familiar with your surgeon's protocols.

Always let your surgeon's office know when you head to the ER, so they can facilitate your care.

Bariatric Food Journey

What to Expect

- Know that following a specific diet after surgery is crucial, as part of an overall and durable lifestyle change to improved health.
- Expect this journey to be unique to you. Everyone is different in how they tolerate foods after surgery. Foods easily eaten by one patient may cause another to 'dump,' have discomfort or not tolerate.
- Expect to have changes in your favorite foods and food cravings. Foods you loved prior to surgery may no longer sound appetizing. Foods you did not really care for in the past may become your new favorite.
- Expect to gain a heightened sensitivity to sweet and salty foods. You will want to pursue a "less is more" philosophy when seasoning foods in the beginning.
- Expect to have water in your hand, on your desk, on your table, and in your car at all times. Even if you were not a big water drinker prior to surgery, **YOU WILL BE NOW!** This is a necessary aspect of your success, both short-term and long-term.
- Remember that in order to achieve proper healing and success, it is imperative that you follow the diet progression as specified in this guidebook and as instructed by your surgical team. Our recommendations in regard to food consistency advancements post-op are first related to promoting healing and later related to striving for fullness. Liquids and soft foods move through your new stomach anatomy quickly, while soft and solids stay longer (think about a funnel!).
- Expect that your stomach/pouch size will change through time. To avoid stretching your new anatomy and overfilling, measure everything (by volume), and start slow (with less than you think your pouch can hold). Serving sizes are approximations; you will slowly increase your serving size as your body changes, listen to your tool (your new stomach!).

Post-Surgery Cooking Rules

- Fry nothing.
- Remove visible fat from meat prior to cooking.
- Limit added calories to the cooking process (such as butter or oil)
- Limit high calorie condiments.
- It is preferred that you bake, broil, poach, barbecue or use slow cookers.

Your Expected New Stomach / Pouch Size

Time From Surgery	Surgical Procedure	Approximate Stomach Pouch Size
0 days to 6 weeks	Gastric Bypass	1-2 oz
	Gastric Sleeve	2-3 oz
	Duodenal Switch	2-4 oz
6 weeks to 3 months	Gastric Bypass	2-3 oz
	Gastric Sleeve & Duodenal Switch	3-4 oz
3 months to 6 months	Gastric Bypass	3 oz
	Gastric Sleeve & Duodenal Switch	3-5 oz
6 months to 1 year	Gastric Bypass	4-8 oz
	Gastric Sleeve & Duodenal Switch	4-8 oz
1 year and beyond	Gastric Bypass	6-8 oz
	Gastric Sleeve & Duodenal Switch	6-8 oz

*** MGB/OAGB sizing is in line with the Sleeve and Switch

Quick Measurements

1oz (ounce) = 30cc = 30 ml 6tsp (teaspoon) = 1oz
 2tbs (tablespoon) = 1oz 1c (cup) = 8oz = 16tbs

Example Meal Schedule

Time		Meal/Fluids
7 am	Meal 1 (Within 1 hour of waking up)	½-1 oz low carb, low sugar yogurt
8 am		4-8 oz Water
9 am	Meal 2	½-1 oz Egg Beaters or egg whites
10 am		4-8 oz Protein drink
11 am	Meal 3	½-1 oz Low fat refried beans
12 pm		2-6 oz sugar free jello/water
1 pm	Meal 4	½-1 oz low fat cottage cheese with protein powder
2 pm		4-8 oz Protein drink
3 pm	Meal 5	½-1 oz sugar free pudding with protein powder
4 pm		4-8 oz water
5 pm	Meal 6	½-1 oz refried beans
6 pm		4-8 oz broth/water
7 pm	Meal 7	½-1 oz low carb/low sugar yogurt and protein powder
8 pm		2-6 oz Protein drink
9 pm	Meal 8	½-1 oz sugar free pudding with protein powder
10 pm		4-8 oz Water
Totals		Protein: 60-70 grams Fluid: 48-64 oz (ideally ~ 2 Liters)

Relative Protein Value

Low Calorie Protein	Moderate Calorie Protein	High Calorie Protein
Less than 10 calories per gram of protein	11-19 calories per gram of protein	Greater than 20 calories per gram of protein
Choose most of the time	Choose occasionally	Only choose 1-2 times per day

To calculate Relative Protein Value (RPV) divide total calories by grams of protein. If the food is below 15, that food is a good choice for you. **Total Calories / Grams Protein = <15**

Protein Basics

We know that it is difficult to consume enough protein from foods alone during the first few weeks after surgery. Integrating liquid protein supplements such as (higher protein/lower carbohydrate) shakes, cold or hot drinks, soups, and puddings into your diet provides a balanced, convenient source of protein and nutrition. By the time you are ready to move on to a solid diet, you will not use protein drinks to replace your meals, but as a meal supplement.

Protein is key to success! The proper use of your bariatric surgery (your tool) is using denser proteins, which remain in your new stomach for longer periods. In other words, solids remain in your pouch (and make you more full) while liquids pass through quickly.

Rules of “15”

First Rule of 15:

15 total calories or less per gram of protein

Second Rule of 15

No more than 15 grams of carbs per meal

Third Rule of 15

Aim for 15 grams of protein per meal

Note: Use rules of 15 when buying protein bars too

Preferred Low Calorie Protein Choices

- Fish and shellfish
- Dairy: low-fat cottage cheese, Greek yogurt, low-fat mozzarella
- Poultry: light or dark meat
- Lean beef and pork
- Egg whites and egg substitutes
- Tofu

Medium and High Calorie Proteins (LIMIT!!)

- Nuts and seeds (25 to 30 calories per gram protein)
- Vegetable proteins, such as beans (18 to 23 calories per gram protein)
- High fat pork: bacon, sausage, ham (20 to 35 calories per gram protein)
- High-sugar yogurts, milk, soft cheeses (15 to 25 calories per gram protein)
- Whole eggs (12 calories per gram protein)

White Carbohydrates: No-No's (AVOID)

- Popcorn
- Pastas
- Potatoes
- White breads (including crackers and cereals)
- White rice and grains
- Refined sugar products, which includes most packaged products

Post-Surgery Eating Considerations

- Always eat a little less than you think you need
- Plate your food and “measure” in some way the volume you are planning to eat; and be methodical about what the breakdown is of foods on your plate (Building your meals around the protein!)
- Do not eat until you are full; it can take 20 minutes for your stomach to send signals to your brain
- Focus on lean animal proteins and low-fat dairy
- Fruits and vegetables will be added back at about six weeks
- Limit soups and salads

Protein Goals

Daily protein intake: At each stage of your diet, a minimum of 40 grams of protein per day is needed to keep energy and nutrition intact. Your goal is at least 60 to 70 grams of protein daily.

Liquid Only (arrival home through first week): All your meals should be protein drinks during this phase, taken in addition to your clear liquids.

Pre-Select Diet (day 7 through day 20 after surgery): Ninety to 100% of all meals should be protein; the majority of your meals are still shakes with just a few soft foods added.

Soft Food Diet (day 21 through day 41 after surgery): Ninety to 100% of all meals should be protein. Your complex carbs are 10% or less. Be sure to reach your protein goal first before adding carbs!

Solid Food Diet (week 6 and onward; your new bariatric diet for life!): Seventy-five percent of all meals should come from protein. Your complex carbs and fats are 25% or less. Remember, denser proteins work better.

Your daily meal quantity is five to six meals per day, eating every two to four hours.

What is Protein?

Amino acids are the base component of all proteins. When you eat protein, it is broken down into amino acids, which aid in the repair and building of muscle and production of the body's enzymes. There are 20 amino acids, of which the body can produce 11. The other nine are known as essential amino acids. Complete protein food sources contain all the essential amino acids needed by the body. Incomplete proteins lack one or more essential amino acids. Good sources of complete proteins are animal proteins such as lean meats and dairy products. Vegetable and plant proteins are incomplete proteins. Thus, plant-based protein should be used in conjunction with animal protein sources to provide all the essential amino acids your body needs to function. If you are vegan or vegetarian, we can work with you to ensure you consume all essential amino acids.

The Importance of Protein

Foods high in protein should always be your priority and should be eaten first during meals. The preferred

sources of protein from food include lean meats (chicken, beef, pork, lamb, poultry, and fish), eggs or egg substitutes, low fat cheeses, and tofu/beans/lentils. Keep in mind that some red meats may be difficult to digest — especially during the first three months after surgery.

Why is Protein Critical?

- It maintains and replaces tissue/cells in the body.
- It is necessary for life, for cell growth, and for healing.
- It is part of every cell and enzyme in your body from your bones: found in muscles, organs, hormones and most living cells.
- It produces antibodies to fight off infection and disease.
- It is needed to replace worn out cells and repair damaged tissue.
- It helps your body burn fat instead of muscle for healthy weight loss.
- It is an energy source; it is broken down slower than carbs to allow for greater satiety.
- It helps maintain lean muscle mass, which helps you be more metabolically efficient in burning calories.
- It keeps you full! Protein curbs physical hunger between meals, which may help to limit emotional eating or “head hunger”.

When the body is stressed, physically or mentally, protein is lost. Research shows that meals high in protein help keep you awake and alert while meals high in carbohydrates can make you tired and sleepy. After bariatric surgery, you must take in enough protein every day to speed wound healing, preserve your lean body mass, enhance your fat-burning metabolism, and minimize hair loss.

How Much Protein Do I Need to Eat?

For bariatric patients, it is recommended that you eat 60 to 70 grams of protein each day to meet minimal requirements. If you exercise heavily (more than one hour per day) or are recovering from surgery or illness, your protein needs may increase. Please contact your dietitian to individualize your protein goal if you are concerned.

How Often Do I Need to Eat Protein?

Eat protein with every meal! When food portions are reduced, protein requirements often are more challenging to reach. Eat your protein first to be sure you are reaching the minimum goal is >60 grams per day. You should be eating five to six small meals a day (every two to four hours). Eat at least 10 grams of protein per meal to reach your goal. One ounce of animal-based protein is equivalent for five to seven grams of protein. After six weeks post-op, you should consume 75% of your food volume from low-fat protein and 25% from complex carbohydrates such as vegetables and fruits. It is very important to eat in the proper ratio. It is not healthy for your body or for your metabolic rate to have a meal void of protein. Therefore, a serving of protein (between 10 to 15 grams) should be consumed at each 3 to 4-hour interval.

Why Do I Need to Eat Protein First?

To get enough protein while eating a small volume of food, most of the foods eaten must be protein! At least 90 to 100% of each portion should be protein and low-fat. A very small amount (less than 10%) can be complex carbo-hydrates (soft fruits and veggies) if you are getting adequate protein. Use low-fat condiments (light mayonnaise, light or fat-free dressing) because foods that are too dry may be more difficult to get down. Eat protein first and enjoy veggies and fruit after as your new anatomy increases in size and volume tolerance.

Why Are Some Proteins Harder to Digest Than Others?

After surgery, some proteins may treat your new stomach less kindly than others. This is normal. To metabolize proteins, it is necessary that we have a certain amount of hydrochloric acid and pancreatic enzymes available for digestion. In your smaller stomach, these acids are less plentiful, and digestion can be more difficult. If you find you have less tolerance to one form of protein, you can try again at a later point when your new system matures. Remember, high fat and fibrous proteins (red meats in particular) may be tolerated less than low-fat proteins.

Do I Need to Count Calories Along with My Protein Intake?

No. However, it is necessary to pay attention to the Rules of the Tool — getting 60 to 70 grams of protein per day. It also is important to limit moderate or high-calorie protein choices as they contain extra calories, usually in the form of fat. The recommendation is no more than one high-calorie protein choice per day with the remainder being mostly low-calorie protein choices.

What Happens if I Do Not Get Enough Protein?

Protein deficiency takes time to recognize. At first, your body uses the protein it has stored. Prolonged protein deficiency can lead to symptoms such as fatigue, insulin resistance, hair loss and loss of hair pigment, loss of muscle mass, low body temperature, and hormonal irregularities. It is important that you make protein in your diet of primary importance to avoid protein deficiency.

Protein-on-the-Go

Examples of protein-packed, easy-to-pack foods:

- Edamame: fresh or roasted soybeans
- Roasted chicken with herbs/spices
- Non-fat cottage cheese with fruit, veggies, or salsa
- Non-fat Greek yogurt with fruit (berries)
- Light and low-carb yogurt (e.g. Dannon Light & Fit)
- Hard-boiled egg (cut out the yolk to save fat and calories)
- Beef jerky/turkey jerky
- Tuna/salmon meal-to-go pouches
- Light string cheese
- Deli meat and low-fat cheese (2%)
- Canned chicken
- Hummus
- Fish with herbs/spices (e.g. Mrs. Dash)
- Beans with spices and tomatoes (salsa)
- Grilled fish: salmon, halibut, cod
- Frozen fully-cooked grilled chicken strips
- Boca/Morning Star veggie patties

Do not get stuck in the snack bar mentality! Use bars as a back-up or eat only one a day. Watch for too much hidden carbohydrates and sugars in these — as always, READ THE LABEL

Vitamins and Minerals Overview

Supplements Required After Bariatric Surgery

The following supplements are required for life. These supplements also are detailed within the specific diet stages that follow.

Vitamin	Start	Dose	Notes
Multivitamin	Immediately following surgery	1 to 2 doses per day	Multivitamins are required due to malabsorption (Gastric Bypass and Duodenal Switch patients) and inability to attain all required vitamins from food Tablets, chewable or liquid Take each dose at a separate time
Vitamin B12	Immediately following surgery	500 to 1,000 mcg per day May use daily sublingual tab, weekly nasal spray, or monthly injection	OTC daily sublingual tab melts under tongue Prescription nasal spray once weekly Prescription injection once monthly (self-administer or at physician's office)
Calcium Citrate	Six weeks post-op start of Solid Food Diet	1,000 to 1,500 mg per day (two to three doses of 500 mg)	As you lose weight, you lose bone density, so calcium is extremely important Chewable or liquid is preferable Take calcium doses (500 mg per dose) at least two hours apart Do not take calcium with multivitamin or iron
Vitamin D	Can be started with multivitamin	3,000 IU/day	Salmon, tuna, sardines, milk, eggs Calcium supplements have some vitamin D Most people are low prior to surgery
Fiber	Six weeks post-op start of Solid Food Diet	Two doses per day of three to five grams fiber from supplement. Total fiber 25 to 35 grams per day from food and supplement	High fiber food contains more than three to five grams per serving Fiber supplements should have about three to five grams per serving Distribute servings throughout day and be sure to drink plenty of water
Additional Fat soluble A, D, E, K	Some GBP Revisions and DS	Start week one	Malabsorption of fats with the Duodenal Switch require lifetime supplementation of A, D, E, and K vitamins

Supplements Required For Some Patients Based on Surgeon Evaluation and Labs

Vitamin	Start	Dose	Notes
Iron	Per surgeon or primary care provider	30 to 60 mg elemental iron per day	Do not take with calcium Do not take with milk products
Biotin (B7)	Recommended, not required	5000 mcg per day	To help with regrowth of hair after surgery You may experience extra shedding about three months post-op
Omega 3 Fatty Acids	Per surgeon or PCP	1,000 to 2,000mg per day	Fish and flaxseed are considered healthy Omega 3 sources, recommended for all patients
Thiamine (B1)	Per surgeon or PCP	One to two mg per day	Good sources include: tuna, black beans, sunflower seeds, and pistachios

Notes for Gastric Bypass Patients

- Avoid large capsules or extended-release tabs
- The size of your medications should be about the size of a pea
- Medication tablets should be able to be dissolved in 1oz warm water over 10-15min

Dietary Progression

Discharge Diet

Discharge through Day 6

- Fluids only — (unlimited fluids, minimum four ounces per hour) with a goal of 64 oz per day.
- Water, low-calorie / no-calorie fluids, protein drinks and shakes, water with a splash of juice, decaf tea and decaf coffee, sugar-free popsicles.

Pre-Select Diet

Day 7 through Day 20 after surgery

- Easily Tolerated and Appropriate Soft Protein Foods
- Consume 60 to 70 grams of protein every day.

Add pre-selected soft foods if you are tolerating your minimum intake of water (48 ounces) and protein.

Your goal is one ounce of pre-selected foods (below) every two hours as your meals (start with ½ oz) for gastric bypass patients; goal of one to two ounces every two hours as tolerated.

- Light and low-carb yogurt or low-fat Greek yogurt (no fruit)
- Low fat refried beans or any low-fat pureed beans
- Plain hummus
- Egg whites or plain Egg Beaters: no yolks as they are too high in fat and generally not tolerated well.

- Low fat cottage cheese: small curd, 1-2%; ricotta cheese
- Pudding (sugar free): add protein powder or PB2 to increase protein intake
- Low-fat, bland, strained cream soups like butternut squash and split pea

Each food above equals approximately two to three grams of protein per ounce and is selected as a well-tolerated and appropriate protein option.

- Continue supplementing with protein drinks and powders until you can reach your protein goal with food alone. It is OK to consume fluids at the same time; the fluid timing rule starts with the Solid Food Diet at six weeks.
- In between meals, consume protein drinks and/or fluids for added protein and hydration (about one to eight ounces every two hours).
- Log your protein and fluids to ensure you are reaching your minimum goals! Logging options include: notebook, calendar, online Apps and Gadgets such as Fitbit, Garmin, iWatch.
- If you do not KNOW exactly what you are eating, you cannot be sure that you are reaching your goals.
- Add protein powder (flavored or unflavored) to pre-selected foods to increase protein concentration in meals.
- Do not attempt to eat solid foods. Do not even think about it; it is not worth it!

Sample Pre-Select One Day Diet

Time		Meal/Fluids
7 am	Meal 1 (Within 1 hour of waking up)	½-1 oz low carb, low sugar yogurt
8 am		4-8 oz Water
9 am	Meal 2	½-1 oz Egg Beaters or egg whites
10 am		4-8 oz Protein drink
11 am	Meal 3	½-1 oz Low fat refried beans
12 pm		2-6 oz sugar-free jello/water
1 pm	Meal 4	½-1 oz low fat cottage cheese with protein powder
2 pm		4-8 oz Protein drink
3 pm	Meal 5	½-1 oz sugar-free pudding with protein powder
4 pm		4-8 oz water
5 pm	Meal 6	½-1 oz refried beans
6 pm		4-8 oz broth/water
7 pm	Meal 7	½-1 oz low carb/low sugar yogurt and protein powder
8 pm		2-6 oz Protein drink
9 pm	Meal 8	½-1 oz sugar-free pudding with protein powder
10 pm		4-8 oz Water
Totals		Protein: 60-70 grams Fluid: 48-64 oz (ideally ~ 2 Liters)

Food Guidelines and Preparation:

Always start with less than you think your pouch can hold. Start with ½ oz and stop if satisfied. Increase volume to one ounce and so on.

Remember to sip, sip, sip protein drinks. Immediately decrease your volume to ½ oz (or dilute) if you feel “stuffed” or nauseated.

Protein drinks still play a major role in your protein intake. If you are having trouble tolerating milk-based protein, try clear liquid or milk-substitute protein supplements as alternatives.

Fluids:

Consuming fluids is crucial to prevent dehydration. Your goal is to drink 64 or more ounces of water per day (two liters) and a minimum of 48 ounces per day. Start with one to two ounces at a time to prevent overfilling pouch.

Sip, sip, sip... It’s ok to drink more if tolerated well, it will not break anything.

Fluid Rules for Safety

- No straws: straws make it easy to drink too quickly, which can cause discomfort
- No carbonation: carbonated drinks can irritate the pouch and takes up space
- No caffeine: caffeine can irritate your new anatomy and cause ulcers
- Choose low-calorie options: low-calorie drinks help prevent dumping syndrome (for bypass patients) and weight gain. (Fluids do not provide long-lasting fullness.)
- Water is the best choice: you may also have decaffeinated tea, Crystal Light (sugar-free drink), sugar-free gelatin or popsicles, broth, etc.

Tip: DO NOT need to keep fluids separate from meals until Solid Food Diet (at six weeks).

Vitamin and Mineral Supplementation

Your surgery (depending on the type of procedure you have) may cause your body to bypass or spend less time in the main absorption site for some vitamins and minerals. In addition, you are not eating as much food, which may contain vitamins and minerals. As such, vitamins and minerals now are a lifelong requirement to prevent deficiencies.

To start, purchase the following in liquid or chewable form or crush or cut pills (when appropriate and approved by medical team). After three months, you may switch to pills. Depending on your tolerance, the may have to be a smaller size. You may need to use a cutter or knife to make appropriate size, but you can remain on liquid or chewable, if preferred.

Multivitamins: You should have already started these prior to surgery. Take two pills each day (one adult pill two times per day for Gastric Bypass, MGB/OAGB, and Duodenal Switch patients; one per day for Gastric Sleeve patients)

B12 – 1000mcg/day: Take this supplement sublingual – melts under tongue. This can be purchased over-the-counter or you may take a prescription weekly nasal spray or a monthly injection at the physician's office or by self-injection.

Calcium and fiber supplements will start at solid food diet (six weeks). Additional vitamin/minerals will be recommended based on labs. Doses may change based on lab values. Continue taking until each until your dietitian or physician gives you the order to discontinue.

Exercise

Exercise is as important as water and protein and must be used together to ensure success! Exercise helps by promoting circulation, improving mood and energy, and increasing metabolism. It will be part of your lifestyle change! Start your routine.

Walk four to six times a week at first and try to get in an optimum 30 minutes per day. You can split time between several sessions. It is important to set obtainable goals and start slow. You may be fatigued but try to continue to move! Remember: still no heavy lifting (no more than 15 pounds), pushing, pulling or straining.

Wound Care

If your incisions are still oozing, dress with gauze and paper tape. Change your dressings daily and check for incisional infection. Do not soak or swim due to risk of infection. Wait until three to four weeks after surgery for wounds to completely seal and heal before you soak or swim. Showering continues to be OK!

Medications

Follow up with primary care provider (PCP) within one to two weeks of surgery, especially with medication changes. Small amounts of weight loss can make a big difference in medication dosages. Do not change dosage based on how you feel. Work with your PCP to address the medication regimen. If diabetic, monitor your blood sugars frequently. If you have high blood pressure (hypertension), monitor your blood pressure daily.

Other Things to Expect

Left-sided abdominal discomfort is very common. There was a lot of manipulation on the left side of your body during surgery. Make sure your discomfort is not accompanied by unexplained nausea, vomiting, fever, unresolved diarrhea or constipation.

Mild nausea can be a normal symptom of your recovery and the healing process. Make sure you are not overfilling your pouch. You may or may not feel fluid coming back up to the back of your throat.

Listen to your pouch! Attempt to meet your daily minimal fluid intake so as not to become dehydrated. Meeting protein goals will reduce hunger and improve energy and recovery.

It is normal to experience changes in your bowel habits. Loose stools are common on the liquid diet and less frequent stools on solid diet (mostly protein). Remember, you are intaking less food and less fiber. You will begin to add fiber back into your diet at six weeks. Diarrhea is defined by frequent loose stool. This puts you at risk for dehydration. Call us if your urine is dark, you feel tired, dizzy, nauseous and have a dry mouth. Constipation is defined by no bowel movement for three or more days .

Soft Food Diet

Day 21 through Day 41 after surgery: This is a time of gradual transition from liquids to solids.

- Consume 60 to 70 grams of protein every day. Add easy-to-chew, moist protein-based foods. Eat a combination of soft and pureed foods.
- Do not have anything that crunches or must be cut with a knife or fork.
- Avoid anything spicy. Eat one ounce every two to three hours (three ounces maximum) as tolerated. Start with less and listen to your pouch.
- Always measure volume, not weight. Go slow with new choices!
- During this time, puree your food into a thick paste by mashing or blending—like yogurt consistency—or choose soft food, foods that can be forked into a soft consistency, like flaky fish.
- Go slowly with new choices: No more than one to two new choices a day until you know the food is tolerated (tolerance varies by person).
- Try mixing various soft foods together once each is tolerated separately.
- All protein foods consumed should be moist, falling apart, and easy to chew. Do not have tough, stringy or overcooked meats.
- Everything should be measured. Nothing should be consumed off a bone as it is difficult to know the portions consumed.

What Soft Foods Are Appropriate: An appropriate food is a source of pure, low-fat protein. Foods from animals are optimal protein options. (We will guide vegans/vegetarians, as needed. Please let us know. Be sure you can make it into a soft or pureed consistency.

Optimal Food Choices:

- Eggs: egg whites or Egg Beaters (still no yolks)
- Dairy/ cheese: cottage cheese, string cheese, shredded cheese, light and low-carb yogurt or low-fat Greek yogurt (no fruit)
- Fish and shellfish (no bones): canned tuna, salmon, tilapia, cod, lobster, shrimp, crab
- Poultry: canned or ground chicken, turkey, and pork (nothing baked or grilled yet as it is too dense)
- Beef: ground beef only; beef may be difficult for some people to tolerate post-surgery
- Plant-based proteins are not as high in protein as animal-based proteins, but some options to consider: creamy nut butters (peanut butter, almond butter); beans; soy products (tofu, packaged foods, edamame/soy beans) * Note: it takes four ounces of plant protein to achieve five to seven grams of protein; it takes only one ounce of animal protein to get to five to seven grams of protein. Animal protein is a more concentrated source!
- Protein drinks: Continue to supplement with protein drinks and powders until you can reach your protein goal with food alone; No more than one protein shake a day
- Log all protein intake to ensure you meet minimum and goals
- Drink protein shakes in between meals as a protein supplement if needed
- Add protein powder (flavored or unflavored) to soft foods to increase protein concentration in meals, especially when eating plant-based protein foods

Foods to Avoid:

- Avoid raw fruits and vegetables with skins, seeds, and strings as they are difficult to digest and not a protein option
- Spicy foods
- Tough/stringy or overcooked meats

Food Preparation:

- It is preferred that you bake, broil, poach, barbecue or use slow cookers
- Remove any visible fat before cooking
- Do not deep fry anything
- Puree foods by placing in blender or food processor with liquid (water or broth) and puree to the consistency of yogurt

Medications

Start with serving size and compare to what your pouch can hold. Determine how many protein grams you are consuming.

Looking at the label, think “Is this a good option?”
“Is this the best fuel for my body?”

It is important to consume the most protein for the lowest amount of calories/serving, the Relative Protein Value (RPV).

Reading the Label

Divide total calories by total protein grams to find RPV

- Sample: 90 calories and 3 grams protein
- $RPV = 30$ calories per gram of protein (High RPV)

It is preferred to find 15 or fewer calories per gram protein. This keeps you in a safe place in terms of cost of calories for each gram of protein.

RPV Quick Guide

- Low: 10 or less calories per gram of protein
- Moderate: 10 to 20 calories per gram of protein
- High: More than 20 calories per gram of protein
- Your goal is no more than one to two high RPV foods per day

Protein:

Your goal is to have five to 15 grams of protein per meal during soft food stage.

You may have more than five to six meals per day until solid food stage; we prefer low RPV.

Fat:

Keep it LOW! Take your time eating.

The ingredient list is written in descending order of weight from most to least used. Watch for low total carbohydrates: maximum of 10 to 15 grams carbs per meal; if you are eating lots of carbs, there is not enough room for adequate protein, which is the best fuel.

High Fiber:

Look for three to five grams per serving.

Low Sugar:

This is included in carbohydrate total and you should keep this less than five grams per serving; sugar is not the best fuel!

Low Sugar Alcohol:

This is also included in carbohydrate total and can be listed on ingredient list as sorbitol, xylitol, mannitol. Keep it at less than five grams per serving. It can cause diarrhea and an stomach upset.

Fluids:

Remember! Fluid intake is crucial to preventing dehydration and you should be getting a minimum of 48 ounces per day, with a goal of 64 or more ounces per day (two liters).

This should be getting easier! Still sip slowly to prevent overfilling pouch. There is no limit on drinking if it feels comfortable. You DO NOT need to keep fluids separate from meals until Solid Food Diet (six weeks).

What If I Get Hungry?:

It is normal for your new stomach anatomy to gradually increase in size after healing/swelling is reduced. You can start by increasing protein grams — they will keep you fuller longer. Log your foods so you can be sure you are getting the right foods at the right time.

Wait a minimum of 30-45 minutes after meals before fluids, but you don't need to start separating fluids until six weeks. You also may increase density of foods, eating soft versus pureed and decrease the low gram protein foods (e.g. plant proteins). Remember! Eat every two to three hours. Schedule your meals and start identifying “head hunger” and “emotional eating.”

Sample One Day Soft Foods Diet

Time		Meal/Fluids
7 am	Meal 1 (Within 1 hour of waking up)	1-3 oz low fat cottage cheese with canned peaches
8 am		8-10 oz Water
9 am	Meal 2	1-3 oz egg Beaters with sprinkle of cheese
10 am		4-8 oz protein drink
11 am	Meal 3	1 oz string cheese
12 pm		8-10 oz Water or sugar-free popsicle
1 pm	Meal 4	1-3 oz low carb vanilla yogurt with a tsp of creamy PB
2 pm		8-10 oz Water
3 pm	Meal 5	1 oz ground turkey with 1T of marinara
4 pm		8-10 oz Water
5 pm	Meal 6	1 oz tuna with low fat mayo (no pickles or onions)
6 pm		8-10 oz Water
7 pm	Meal 7	1 oz broiled tilapia
8 pm		4-8 oz protein shake
9 pm	Meal 8	1-3 oz black beans with non-spicy green chili
10 pm		8-10 oz Water
Totals		Protein: 60-70 grams Fluid: 48-64 oz (ideally ~ 2 Liters)

Solid Food Diet

Day 42 (six weeks post-op) after surgery and for life!

Find your balance. Use your tool (bariatric surgery) with your diet (way of eating) properly for success!

As you begin your solid food diet, take one bite at a time, chewing well. Take your time and start slowly with new choices. Stop at feeling of comfort, before discomfort. Feelings of fullness takes at least 20 minutes.

- Consume primarily protein with a goal of 60 to 70 grams of protein every day
- You can now have spicy, crunchy, and dense foods!
- Focus on the volume of your foods to be 75% protein and 25% complex carbohydrates (high fiber)
- Your appropriate portion depends on pouch/stomach size and protein intake
- When eating veggies and fruits, start with veggies and when eating fruit, gastric bypass patients should be careful of dumping syndrome due to carbohydrate content
- Go slow in incorporating whole grains (high fiber) because they may cause discomfort
- Eat one ounce every three hours (with three ounces maximum, as tolerated); five to six meals a day
- Start with less and listen to your stomach. Always measure all foods. Go slow with new items
- Have your first meal in the first hour after waking and last meal one hour before bed if needed
- Avoid snacking: Snacking or grazing is the top cause of post-op weight gain. And, if you are eating every 3 hours, 5-6 meals per day... when will you have time to snack?)
- Occasional treats are not forbidden but should be planned to prevent overconsumption and possible emotional eating. Have a treat no more than one time per week
- Remember your portion sizes and measure! Listen to your new anatomy
- Choose low-sugar options
- Gastric Bypass patients: Avoid dumping syndrome by avoiding high carbohydrates/sugar
- If it tastes sweet, it probably contains some sugar, so take in moderation

- Be careful at restaurants and social gatherings; plan in advance
- Choose low-fat options
- No more than one to two high fat choices per day (RPV)
- When dining out, be prepared in advance. Choose high protein, low-fat options ask for no butter and no oil. Limit portions. Take along your restaurant card

Optimal Food Choices:

- Protein first: 75+%
- Add complex carbohydrates such as fruits and vegetables at 0-25%
- Choose dense proteins such as chicken, turkey, fish, and beef; they will be more filling so go slowly
- Food preparation
- Boil, broil, bake, poach, barbecue, use slow cookers and pressure cookers
- Remove visible fat before cooking
- Do not deep fry anything

Foods to Avoid:

- Tough/stringy/overcooked meats
- Hard-to-chew foods that might get stuck
- Refined white carbs
- Fried or high fat foods
- Protein drinks

Do Not Forget Fluids:

- Your goal is 64 ounces of fluids per day
- At this point, you should start separating eating from drinking
- Drink 10 to 15 minutes before meals
- Drink 45 to 60 minutes after meals

Continue drinking plenty of fluids— 60 to 80 ounces. Water is best and sip, sip, sip! Wait about one hour after meals to drink to prevent pushing food through pouch too quickly. Wean protein drinks and shakes. Do not use them as a meal replacement. Attempt to reach protein goal exclusively from solid foods. Fluids will not keep you full as they empty out of your pouch quickly.

Sample Solid Food Diet Menu

Time		Meal/Fluids
7 am	Meal 1 (Within 1 hour of waking up)	1-2 scrambled eggs with salsa
8 am		8-10 oz Water
9 am		8-10 oz Water
10 am	Meal 2	Cheese and turkey rollup (1 slice of each)
11 am		8-10 oz Water
12 pm		8-10 oz Water or sugar-free popsicle
1 pm	Meal 3	1-2 oz Tuna salad on cucumber slices
2 pm		8-10 oz Water
3 pm		8-10 oz Water
4 pm	Meal 4	1-2 oz Taco meat with sliced avocado
5 pm		8-10 oz Water
6 pm		8-10 oz Water
7 pm	Meal 5	1-2 oz Grilled chicken with mango salsa
8 pm		8-10 oz Water
9 pm		8-10 oz Water
10 pm	Meal 6 (if needed)	2-3 oz Greek yogurt with blueberries
Totals		Protein: 60-70 grams Fluid: 64-80 oz (ideally ~ 2 Liters)

Supplements

Continue:

- Multivitamins
- B-12 (1000mcg)

Begin Your Calcium Supplements:

As you lose weight, you could lose bone density, which places you at risk for osteoporosis/osteopenia. (Yes, even the men are at risk for this!).

- Calcium Citrate is the most absorbable form of calcium. Take it in chewable or liquid and look at

label to identify form of calcium. Your supplement should also contain vitamin D.

- Take two to three doses of 500 mg per day divided over the course of the day.(Total: 1000 to 1500 mg per day); and
- Take doses at least two hours apart from each other.
- The body can only absorb approximately 500 mg at a time. Take calcium two hours separate from multivitamins, which often contain iron, and two hours from iron supplements if recommended. Calcium interferes with iron's absorption.

Begin Your Fiber Supplements:

Bariatric patients tend to become constipated as it is difficult to get enough fiber from food alone. This is because bariatric patients are taking in a smaller amount of food after surgery (less waste), we are focusing on protein (animal foods), and limiting plant foods (which are highest in fiber). Fiber is important for overall health (colon, cholesterol) and fullness (satiety) and the ideal is 25 to 35 grams per day. Therefore, a fiber supplement (one to two doses per day) is necessary. Options include Benefiber, ground flaxseed, Psyllium (Metamucil or generic). Psyllium expands so consume cautiously.

Behavior Changes?

- Reduce portions. Use small plates and bowls as well as small serving utensils such as baby spoons and cocktail forks.
- Set aside 30 minutes for meals. Distractions can lead to overfilling (overloading) the pouch. Instead, concentrate on the process of eating and sit at a table. Remember, the feeling of satisfaction may not occur for 20 minutes.
- Eat slowly. Take small bites by using small serving utensils and put your fork down between bites.
- Chew each bite of food 20 to 30 times until consistency of applesauce. This will help prevent food getting stuck or vomiting and many potential complications.
- Choose appropriate food choices for nutrition to set yourself up for success. Make home safe with a healthy kitchen!
- Stay connected! Weight loss is a team effort. Participate in regular follow ups, support groups, review classes, behavioral modification classes, and other ancillary specialists classes.

Emotions

Surgery has physical and psychological effects. You can expect some relationship changes with family, friends, co-workers. If you are sharing your journey, you will be stunned by the constant (often unwanted and uninformed) input and opinions from others about what you are doing and eating. Your meal times will change as will social gatherings and holidays. It is important to be prepared for these changes. Help others understand what will help you, but do not

expect them to always give you what you need and want for support. Remember: Outside help is available through program team members, counseling, support groups, and “select” family and friends.

As your weight changes, remember every person’s weight-loss journey is different. (Consider limiting social media groups in this regard if you are feeling concerned.) Weigh no more than once per week on the same day at the same time. Your weight will fluctuate due to water changes in body. Weight plateaus are expected. Look for trends in your weight loss. The number on a scale can affect your emotions so focus on all the reasons why you had surgery and your current successes!

Exercise

Exercise helps you lose and maintain weight. After surgery, exercise is the only way to combat the fall in metabolic rate. It also stimulates endorphins that make you feel good.

Make realistic weekly goals and schedule your time. Determine length and activity, then make an appointment with yourself. There are many exercises options available. Choose what works best for you. Your capacity for exercise will improve as weight changes, which can be motivating. Change your goal as you change. Start small and build up.

Include weight resistance training after six weeks, but wait until cleared by your surgeon’s office. Start with low weight and build up slowly. Then change up your routine every six to eight weeks. This helps prevent boredom and plateaus. If you hit a plateau, remember FITT: Frequency, Intensity, Type, Time... and alter one component

BMI Categories

Healthy Weight: 18.5-24.9

Overweight: 25.0-29.9

Obese Class 1 and 2: 30.0-39.9

Obese Class 3: 40 and over

Rules of Too

You will become sick to your stomach, even throw-up in some instances, if you eat **too much, too big, too fast.**

Determine Your Body Mass Index (BMI)

Weight lbs	Height (inches)																		
	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
150	31	30	29	28	27	27	26	25	24	23	23	22	22	21	20	20	19	19	18
160	33	32	31	30	29	28	27	27	26	25	24	24	23	22	22	21	21	20	19
170	36	34	33	32	31	30	29	28	27	27	26	25	24	24	23	22	22	21	21
180	38	36	35	34	33	32	31	30	29	28	27	27	26	25	24	24	23	22	22
190	40	38	37	36	35	34	33	32	31	30	29	28	27	26	26	25	24	24	23
200	42	40	39	38	37	35	34	33	32	31	30	30	29	28	27	26	26	25	24
210	44	42	41	40	38	37	36	35	34	33	32	31	30	29	28	28	27	26	26
220	46	44	43	42	40	39	38	37	36	34	33	32	32	31	30	29	28	27	27
230	48	46	45	43	42	41	39	38	37	36	35	34	33	32	31	30	30	29	28
240	50	48	47	45	44	43	41	40	39	38	36	35	34	33	33	32	31	30	29
250	52	50	49	47	46	44	43	42	40	39	38	37	36	35	34	33	32	31	30
260	54	53	51	49	48	46	45	43	42	41	40	38	37	36	35	34	33	32	32
270	56	55	53	51	49	48	46	45	44	42	41	40	39	38	37	36	35	34	33
280	59	57	55	53	51	50	48	47	45	44	43	41	40	39	38	37	36	35	34
290	61	59	57	55	53	51	50	48	47	45	44	43	42	40	39	38	37	36	35
300	63	61	59	57	55	53	51	50	48	47	46	44	43	42	41	40	39	37	37
310	65	63	61	59	57	55	53	52	50	49	47	46	44	43	42	41	40	39	38
320	67	65	62	60	59	57	55	53	52	50	49	47	46	45	43	42	41	40	39
330	69	67	64	62	60	58	57	56	53	52	50	49	47	46	45	44	42	41	40
340	71	69	66	64	62	60	58	57	55	53	52	50	49	47	46	45	44	42	41
350	73	71	68	66	64	62	60	58	56	55	53	52	50	49	47	46	45	44	43
360	75	73	70	68	66	64	62	60	58	56	55	53	52	50	49	47	46	45	44
370	77	75	72	70	68	66	64	62	60	58	56	55	53	52	50	49	48	46	45
380	79	77	74	72	69	67	65	63	61	60	58	56	55	53	52	50	49	47	46
390	82	79	76	74	71	69	67	65	63	61	59	58	56	54	53	51	50	49	47
400	84	81	78	76	73	71	69	67	65	63	61	59	57	56	54	53	51	50	49
410	86	83	80	77	75	73	70	68	66	64	62	61	59	57	56	54	53	51	50
420	88	85	82	79	77	74	72	70	68	66	64	62	60	59	57	55	54	52	51
430	90	87	84	81	79	76	74	72	69	67	65	63	62	60	58	57	55	54	52
440	92	89	86	83	80	78	76	73	71	69	67	65	63	61	60	58	56	55	54
450	94	91	88	85	82	80	77	75	73	70	68	66	65	63	61	59	58	56	55
460	96	93	90	87	84	81	79	77	74	72	70	68	66	64	62	61	59	57	56
470	98	95	92	89	86	83	81	78	76	74	71	69	67	66	64	62	60	59	57
480	100	97	94	91	88	85	82	80	77	75	73	71	69	67	65	63	62	60	58

Rules of the Tool

The true power of bariatric weight-loss surgery lies in effectively using your procedure as a tool for success. It is fundamentally true that activity level, attitude, and commitment are of utmost importance. Your bariatric procedure tool, however, is the cornerstone to your successful program and progress.

The Rules of the Tool Deserve Special Attention

Surgery provides you with a new tool for weight loss — following the Rules of the Tool empower you to succeed! Ongoing utilization of the tool's components ensures life-long success.

Surgery creates a physical change in your body that requires training on its use and proper maintenance over time.

Surgery alone will not ensure weight loss and ignoring the Rules of the Tool will result in poor weight loss or eventual weight gain.

Surgery was a decision you made to be able to actively participate in your life. Always remember why you had surgery and how much this decision meant to you!

Components of the Tool

- Diet
- Exercise
- The Tool
- You! (Behavior Modification)

Diet

- Stop and think before you eat it!
- Drink water (or other suitable low-calorie drink, preferably without aspartame) with a goal of 60 to 80 ounces per day. Within reason, more is better, especially if you are doing heavy exercise. Always have water with you!
- Eat five to six meals per day. Eating every three to four hours is just right. Set a regular schedule. For example, you may eat at 6 a.m., 9 a.m., 12 p.m., 3 p.m., 6 p.m. and 9 p.m. Set your watch or use a mobile app as a reminder. Carry meals with you to stay on schedule when you are out. Planning is vital

because if you do not eat regular meals, your body will think you are depriving it and hold onto fat! Giving your body frequent, small, high quality/high protein meals tricks the body into giving up the fat.

- Take in no more than one to two high-fat choices per day. Choose protein with every meal. Eat your first meal within the first hour of waking up and eat your last meal one hour before bed.
- Avoid protein drinks after you begin solid foods. They are not meal replacements, just supplements. Protein bars are OK to use as back up meals but choose low to moderate calorie per gram of protein options.
- The ideal volume of your meals depends on how far out you are post-operatively. At about one year after surgery, most people stabilize meal volumes around five to six ounces, with a maximum of eight ounces. Measure your meals to avoid the mistake of eating until you feel full. Your brain is on a 20-minute delay from your new stomach. If you eat until you feel full, you have eaten for 20 minutes too long! Measure the appropriate amount of food on your plate, eat it, sit back for 20 minutes and you will feel full. High bulk foods (such as salads) are fine in extremely limited quantities and infrequently, but only if they fit your volume limits. It is easy to overeat with salads. If they are a large part of your diet and you are eating a large volume, then you may permanently stretch your new anatomy.
- There is no time or need for snacking if you eat five to six meals per day.
- Think about your off-plan or cheat meals in advance. Off-plan food should not exceed 10% of your weekly intake (one time per week). The enemy of weight-loss surgery is mindless eating. Off-plan items are impulse items. Therefore, if you need to be off-plan, examine the “what,” “when”, and “why” you are eating a particular food before you take your first bite. When you are at least six months

post-op, you may allow yourself an off-plan meal once or twice per week, but make sure you plan it out and stay within your volume limit. These off-plan meals will help keep you from feeling deprived which will aid in your long-term success.

- Remember: Just because you CAN eat it, does not mean you SHOULD eat it!

Protein:

- Protein is critical to your success. 75% or more of your diet needs to be high quality, dense protein. The other food you eat should have a minimum of processed white foods such as rice, bread, pasta, potatoes, popcorn. Ideally, your additional 25% should be complex carbohydrates such as fruits and vegetables.
- Protein bars are OK as meals, but they are not a free food to be eaten at leisure. The best bars contain protein (at twice the amount of carbohydrates), have minimal saturated fats and zero trans fats. Protein drinks should not be consumed after the first six weeks unless specifically directed by your surgeon's office. If you need extra protein, you can add unflavored protein powder to your foods.
- Choose primarily low-fat protein with no more than one or two high-fat protein choices per day. High-fat proteins are those with more than 20 calories per gram of protein. These proteins add unnecessary calories.
- Eat a serving of protein with every meal (10 to 15 grams).
- Eat protein within one hour prior to a workout and within one hour following a workout.
- Protein should be consumed within the first hour awake and last hour before bed. This does not have to be any more than one small serving (five to 10 grams).
- Eat protein along with produce together at most every meal to optimize energy expenditure (75%/25%)
- BEST: Low calorie per gram of protein: Less than 10 calories per gram of protein (low fat meats, chicken, fish)
- OKAY: Moderate calorie per gram of protein: Between 11 and 19 calories per gram of protein (moderate fat meats, some protein bars, grains)

- POOR: High calories per gram of protein: More than 20 calories per gram of protein (nuts, peanut butter, high-fat meats - bacon)
- Fats: Most fats should be monounsaturated and polyunsaturated fats.
- Take in no more than one to two high-fat protein choices per day.

Carbohydrates:

- Remember the rule of 15: No more than 15 grams carbs per sitting or meal
- The carbohydrates you eat should be complex: mostly from fruit and vegetables
- Never eat carbohydrates without a protein

Exercise & Activity

Activity is the component that will be essential to your long-term success. Be sure to exercise to optimize your weight loss and maintain a healthy lifestyle. Start the day you arrive home from surgery and work your way up! Exercise gets easier as you lose weight and gain energy.

An exercise program is like any other habit. It may be hard to get into but becomes easy to maintain once established. Work to establish a habit of exercising five times a week for at least 30 to 60 minutes. You must increase your heart rate to a level where you feel yourself working hard. If you are not a little sweaty or can comfortably talk through your routine, you probably need to bump up your routine a notch.

Weight resistance training is necessary to help your body build lean body mass (muscle). Include weight resistance training after six weeks and cleared for activity. Start with low weight and build up. This is important, as rapid weight loss can cause you to lose lean muscle. Lean muscle has a higher metabolic rate than fat and can therefore help in your continued weight loss. Plan on three to four times per week with alternating days off as your muscles need time to rest between workouts. It is important to re-evaluate your exercise program every couple of months. You will become more fit as you gain strength and may need to increase the workload to compensate. Altering routines also may help prevent or break weight plateaus.

Pillars of Fitness:

Evaluate the following aspects of your fitness program every eight to 12 weeks to help ensure you maximize your returns.

- F = Frequency
- I = Intensity
- T = Type
- T = Time

Doing the Math:

You must burn 500 calories a day for seven consecutive days to lose one pound in a week. However, after surgery you do not focus on counting calories! Instead, focus on creating good habits by eating the right proportions of protein to carbohydrates, eating the right volumes, attending classes and support groups, and following the Rules of the Tool.

The Tool – Your Bariatric Procedure

You made the decision to have bariatric surgery to renew your life. You have made a real commitment to succeed with your weight loss goals. Bariatric surgery is a powerful tool — but, it is only a tool.

There is no golden ticket, no magical spell, no “one-time-only” offer involved in your process. In the beginning, you will lose weight quickly. As time passes, you will learn to methodically think more about what you eat, when you eat, and how much you eat. Like anything in life, if you choose to cheat, you will find a way to cheat. It is vitally important that you remain committed to your journey and that you remain an active participant in your life. Do not underestimate the power of your new tool and never underestimate your ability to succeed and find your balance.

Doing the Math:

- PROTEIN FIRST. Make this your new mantra.
- Following surgery, it is imperative that you adhere carefully to your diet progression; the six stages.

- In the beginning, your mouth is literally bigger than your stomach! Do not eat the way you did before surgery.
- Avoid absolutes and listen to your tool. You do not (and should not) need to eat to capacity. If you feel fullness, stop eating. Stop eating even if you still have food on your plate. Your stomach may feel a little smaller during one meal and slightly bigger at the next.
- Be constantly assessing the effective use of the tool and listen to your tool.
- Eat an adequate amount of food for nutrition: 10 to 15 grams protein every three hours.
- Behavioral changes and diet will help you assess the effectiveness of your tool.
- Your tool is effective for life, depending on if you use and respect it!
- Your ideal mealtime is 15 to 20 minutes or less in duration to avoid the very bad habit of grazing.
- The keys to maintaining satiety (non-hunger) is eating five to six times a day; eating on schedule; not drinking immediately before, during or immediately after meals; getting your 75% protein to 25% carbohydrate ratio at mealtimes; not skipping meals just because you are not hungry.

You:

“YOU” will be the most challenging part of the program to change. The more you remain connected with the program, the easier the transition to your new body and new life will be. Get involved in as many elements of our program as you can.

This includes regular follow-ups through the first five years plus post-op and participation in support groups, classes and other programs offered throughout the year. Support systems are imperative to your success. You may need to frequently re-evaluate behaviors related to food, and this may take a little time and effort on your part. Be aware of when you need additional help and guidance and demand it of us. That is what we are here for!

Tips:

- Stay connected: socially and online. (But, be careful of unsupervised online groups that wallow in the ways to cheat and fail. Expect more from your peers and yourself!)
- Adjust to your tool and trust yourself
- Regular follow-ups are critical to ongoing success
- Take advantage of support groups/Bariatric Buddy
- Behavioral modification; know how you are wired and what works for you
- Avoid emotional eating, boredom eating, stress eating

Depression:

Depression is a strong force for stopping weight loss or even causing weight gain. A small number of patients do well at the beginning but disappear from follow-ups. They later return having gained weight back. As is often the case with depression, they may self-destruct and do the opposite of the rules.

Perhaps they graze through the day, drink high calorie liquids, eat foods that travel quickly through their new anatomy, drink immediately before/during and directly following meals, and stop exercising. If this resembles you, seek out the support and help needed to spring out of this depression. We do not judge and we want to help... especially when life may be challenging.

When you hit a difficult time with food, remember to get out of your own way!

Stop and think, "Is it worth it?" and remind yourself that reaching out for help is a necessary and courageous move. Contact your surgeon's office, get back to support groups and take advantage of behavioral health counseling or medication if needed to get back on program and embrace all four components of the rules!

Compliant But Stuck – The Weight Plateau:

Sometimes you can be generally compliant with your food plan, not depressed, have no physical problems with your pouch, but still stop losing weight or even gain a small amount of weight. A true plateau is four to six weeks of no weight loss or inches lost. It is normal to see a week or two of nothing moving. Just stay with your program.

If you do hit a plateau, do not get discouraged! This is simply a time when you need to re-evaluate your program. Ask yourself:

- Are you going to support groups on a regular basis? Have you been able to get to your follow-up appointments?
- Are you challenging yourself with exercise that raises your heart rate and makes you build up a sweat?
- Are you consistent in your routine on a daily/weekly basis?
- Are you following the Rules of the Tool about drinking fluids while eating? Waiting 20 minutes to feel full? Keeping with a 75% protein and 25% complex carb mix?
- Have portion sizes crept back up?
- Are you drinking with your meals?

Often, if you stop and examine your activities, you will catch yourself doing the little things you did not even realize are sabotaging success.

Unfortunately, we know that everything around you will encourage you to live like a "normal" person. But that person is a myth! Think about whether you may be taking little sips of liquid during meals, eating too quickly, not making protein the top priority in your diet, drinking alcohol more often than you think or not getting enough fiber.

If so, it is time to get back on track. We are excited to help, and it is important to review the components of the tool and reconnect with your program — and us!

If you need additional coaching in the above rules and/or how to adapt them to your life, please contact your surgeon's office. We love to help and are so proud of your efforts and successes.

Exercise 101

The importance of exercise/physical activity to the success of your surgery cannot be overstated! Exercise increases muscle mass, helps increase your metabolic rate, burns calories, increasing fat loss. It is essential to counteracting the predictable and inevitable fall in your metabolic rate. Your appetite control center sees the changes in your diet as starvation and will change your metabolism to try to prevent you from losing weight. Exercise with your individual health limitations in mind, and focus on what you can do vs what you can't do.

Weeks One and Two

No limitation on reasonable distance or time walking, but you must be up and moving a minimum of every two hours while awake. No heavy lifting (nothing more than 20 pounds) or significant straining during the first few weeks post-op and cleared by your medical team. If you have small children, have them crawl up on to your lap as much as possible.

Weeks Three Through Six

You can begin swimming/water activity once all incisions have healed completely. Continue with your daily exercise regime and begin to incorporate alternate forms of exercising that do not require notable abdominal exertion at this point. This may include biking or walking on a treadmill.

Week Six and Beyond

Begin to incorporate your long-term exercise plans at this time. You may begin abdominal exercises at six weeks. After clearance from your surgeon, there are no limitations on exercise moving forward. Adding weight resistance training will optimize your weight loss and increase your metabolic rate. Perform weight resistance training three to four times a week. Lean body mass burns more calories than fat. Exercise with caution and use a personal trainer as needed to protect yourself as you begin a new exercise regimen.

Exercise Guidelines

Build up slowly! You probably will not be able to do a full daily exercise routine until after six weeks.

- Start with small amounts — three 10-minute sessions are equal to 30 minutes at one time. Exercise should make you breathe a little harder and maybe even sweat a little
- Check with your primary care provider first if you haven't been exercising regularly
- Perform an adequate warm-up of three to five minutes of light activity using the same muscle and motion that you will be using in the activity you are about to perform
- Develop an exercise routine you can and will follow is key to your success
- Gradually build up to a new exercise routine. Do not start out "full steam ahead"!
- Cool-down and stretch after exercising with three to five minutes of light activity, gradually lowering your heart rate
- Do not do strenuous exercise right after eating
- Drink plenty of liquids before, during and after exercising
- Keep active around your home
- Exercise with a companion when you can and choose activities you enjoy
- Wear adequate shoes and non-restrictive clothing appropriate for the temperature and activity

Precautions and Signs of Overexertion

General Exercise Precautions: Stop exercising if you have any of the following symptoms:

- Angina (discomfort/tightness/squeezing in the upper body, neck, or arms)
- Nausea
- Dizziness/lightheadedness
- Shortness of breath (beyond what is usual for exercise)
- Excessive sweating (beyond what is usual for exercise and you do not feel well)
- Irregular heart rate (palpitations)
- If your doctor has prescribed nitroglycerin, always carry it with you
- Dress properly for the conditions
- Hydrate before, during and after exercise
- Diabetics — carry source of sugar with you such as Glucotabs

Orthopedic Injury Precautions

When you exercise, soreness is usually seen primarily and/or as delayed onset muscle soreness; this is normal. However, if you experience sudden joint or muscle/tendon discomfort while exercising (acute discomfort), stop the exercise immediately and sit down. Tell someone what the problem is, and he/she will further advise you. Never continue to exercise through the discomfort if you have twisted an ankle, fallen, and/or have sharp joint/muscle discomfort of any kind.

Chronic orthopedic problems include low back discomfort syndrome, tendonitis, arthritis or other problems that limit joint range of motion.

Pay attention to how your body feels during exercise. If you experience any of the symptoms described above or something doesn't feel right, stop your exercise and inform someone, as these symptoms suggest that you may be placing too much of a

demand on the heart and/or your muscles and need to stop and rest or find an alternate activity.

Warm Up Guidelines

Warm up should be five to 10 minutes of slow movements that gradually increase in intensity. It should not leave you fatigued or out of breath. Warming up before exercising helps the body to prepare itself for exercise. It dilates the blood vessels of the exercising muscles and heart. This helps to prevent injury and increases exercise capacity. Your warm up should incorporate the muscles that you will be using during exercise sessions — such as the thighs, hamstrings, calves, and arms. Begin warming up at an intensity that is light and then increase the intensity to your desired exercise level of “moderate” to “somewhat hard.”

Cool Down Guidelines

Never stop suddenly once you have been exercising. Cool down should be around five to 10 minutes to allow blood vessels to return to resting size. Always decrease your intensity back to warm up levels or lighter to bring your heart rate and blood pressure down gradually. Failure to cool down can lead to blood pooling in the extremities as well as feeling of dizziness and lightheadedness. By allowing the body to return to its natural resting state, slowly the body can adjust to keep the blood flowing and the heart happy.

Cardiovascular Training

Cardiovascular exercise is also referred to as aerobic activity. It includes any activity that uses major large muscle group in a rhythmic and continuous fashion for an extended period (biking, walking, jogging, swimming, rowing, etc.).

The intention of cardiovascular exercise is to enhance and train the heart, lungs, blood vessels and exercising muscles. To achieve the training benefits of cardiovascular exercise, you should strive for a minimum of 20 minutes of an increased heart rate. A heart rate monitor or smart watch may be able to help guide you.

Walking is a great way to get exercise. Start slow and build up. There are no limits on walking! Perform a minimum of 30 minutes per day.

Frequency

Aerobic activity should be conducted most days of the week. Three days per week provides a minimum to maintain fitness level. Five to six days per week will improve fitness level. Always allow one day off to avoid injury.

Intensity

A simple way to determine appropriate intensity is to use the Talk Test. You should be able to talk in sentences or whistle comfortably without shortness of breath while exercising. You also may use the Perceived Exertion Scale of 0 – 10, with the acceptable target pace range of 3 – 5.

Perceived Exertion Scale	
0	No Exertion
1	Very, Very Light
2	Very Light
3	Moderate
4	Somewhat Hard
5 to 6	Hard
7 to 8	Very hard
9	Extremely Hard
10	Maximum

Resistance Training

This type of exercise is intended to strengthen the muscles, bones and connective tissues of the body. Strength training can be performed with weights such as dumbbells, elastic bands, special resistance machines or by using your own body weight.

Resistance training should be performed two to three days per week. You should not train the same muscle groups two days in a row. Your muscles need time to rest and recover.

Flexibility Training

Also known as stretching, flexibility exercises help the body maintain the ability to move easily and attain an appropriate range of motion for joints, muscles, and connective tissues.

Stretching is especially beneficial when following an aerobic or weight training session. For the most benefit, try to stretch three to four days a week.

Intensity and Time

Stretches should be held to a point of mild to moderate tension. You should not feel discomfort; avoid those stretches. Hold each stretch for 15 to 30 seconds.

Frequently Asked Questions

The Basics

What is the difference between overweight, obesity, severe obesity, and morbid obesity?

An adult is considered overweight when they are above a healthy weight, which varies according to a person's height and body shape and composition. The standard used by researchers to define a person's weight according to their height is "body mass index" (BMI). Overweight is defined as a BMI of 25–29.9, obesity is a BMI of 30–34.9, severe obesity is a BMI of 35 – 39.9, and a BMI of >40 is morbid obesity.

What are common tests before surgery?

Required tests are based on each patient's current medical challenges and may include:

- Complete Blood Count (CBC), Chemistry Panel, Lipid Panel, Hemoglobin A1C, studies of micro-nutrients
- Primary physician clearance
- Echocardiogram (EKG)
- Sleep studies
- GI Evaluation / Upper Endoscopy (EGD)
- Behavioral health / Psychologic consult
- Cardiology evaluation

Is bariatric surgery a cure for obesity?

Weight-loss surgery is a tool, not a cure. Morbid obesity is genetically-related, costly, potentially debilitating, and often fatal disease requiring lifelong treatment. For long-term success in achieving and maintaining a healthier weight, you must commit to lifestyle changes such as regular exercise, staying connected via support groups and a healthy food plan. You will need to be an active participant in improving your own health.

Is there a difference in the outcome of bariatric surgery between men and women?

Both men and women respond well to this surgery. In general, men lose weight slightly faster than women.

What if I am planning to have children following surgery?

There is a greater likelihood of conceiving after weight loss surgery. Your body is going through rapid and major changes and it is not advised to plan a pregnancy during your first year after surgery. Women of childbearing age should use effective birth control during the first 16 to 24 months after surgery to avoid any unplanned pregnancies.

Insurance Issues

How long does it take to schedule surgery?

Once you have completed all necessary pre-op testing, your surgeon's office can usually schedule surgery within approximately three to four weeks. Insurance approval or confirmed self-payment arrangements are also a prerequisite. When your doctor's office obtains approval, you will be contacted to determine if, and when, you wish to schedule surgery.

Why does it take so long to get insurance approval?

Insurance approval can be quite easy or it can take months. Even though your insurance may cover bariatric surgery, it may take time to gain approval. Insurance providers often require "medically supervised weight loss" programs as a hoop to jump through in the approval process. (Don't worry, we are experts in guiding you and will facilitate what is needed in this regard.) Depending on your insurance and their requirements, they may require medical proof of comorbidities along with a letter of medical necessity. Once this has been completed and submitted to the insurance company, the time it takes to get an answer can vary significantly. Your surgeon's insurance specialist will follow up regularly on approval requests. You also can ask your insurance

carrier to assign a case manager to you — this way you know whom to call and they know your situation.

What if I don't have health insurance or receive final denial of insurance coverage?

If you do not have insurance, do not give up! You may choose to be a self-paid patient. The benefit of paying for the surgery yourself is that you do not have to wait for insurance approval and can usually have surgery within a few weeks after pre-operative testing.

What can I do to help speed the process?

First, get all the information together in your case (diet records, medical records, medical tests), so the carrier cannot deny for failure to provide necessary information. Letters from your personal physician and consultants attesting to the medical necessity of treatment are particularly valuable.

When one or more physicians corroborate the necessity of treatment, it can be harder for the carrier to contradict them. After the letter is submitted, call your case manager to ask about your status. You also may be able to protest unreasonable delays through your employer or human relations/personnel office.

Surgery and Hospital Stay

Why do you use laparoscopic surgery?

Any surgery carries a certain level of risk, including laparoscopic operations. Laparoscopy typically means less discomfort, shorter hospital stays, earlier recovery and return to work, and significantly reduced scarring. Some of our surgeons also have embraced robotic surgery in appropriate situations; feel free to ask about that if you are interested.

How long does the surgery last?

Gastric Sleeve and MGB/OAGB surgeries generally take less than an hour. Gastric Bypass, Duodenal Switch, and most revision surgeries take about one to two hours to complete. Share with your visitors that the operation does not begin immediately after they leave your bedside, so please do not watch the clock. There will be a progress board in the waiting area keeping them posted and our team will alert

them if any delays. Once your surgery is completed, your surgeon will update guests (with your permission). If the surgery goes longer than expected, the surgeon is able to send word to them also.

Will I have a lot of discomfort?

Your surgeon will work very hard to manage discomfort after surgery. Most patients are pleasantly surprised at how little discomfort they experience. We used an enhanced, non-narcotic-based program to limit discomfort and also discomfort medication needs. In your pre-operative education, this will be outlined for you in great detail.

How long will I stay in the hospital?

You will stay at the hospital as long as it takes to be self-sufficient and your surgeon agrees that you are ready to go home. Typical hospital stays include an overnight for Gastric Sleeve and MGB patients and two nights for Gastric Bypass and Duodenal Switch patients.

How soon after surgery will I be able to walk?

Almost immediately! Patients walk or stand at the bedside within a few hours of surgery and take several walks starting the day of surgery and thereafter.

How long after surgery can I drive?

Your surgeon will recommend that you do not drive until you have stopped taking narcotic medications and can move quickly and alertly to stop your car, especially in an emergency. Usually this takes seven days after surgery.

If I'm from out of town, when can I leave to go home?

Patients who come from outside the Denver-metro area or out-of-state usually are required to remain in the vicinity for a couple post-op days. (We will work with you to define a safe and recommended plan.) There are important educational sessions, post-operative tests and follow-up appointments that must take place during this time. Most patients stay at a nearby hotel or with relatives or friends. Note: all of our rooms are private, so your significant other/support person may stay with you if you want them to.

Post-Surgery

How much weight will I lose the first week, first month, first year?

Everyone's journey is different. Do not compare your weight loss to that of another patient, as this may frustrate you and distract you from your long-term goals! Statistically speaking, most patients lose 50% of their excess weight in the first six months. Keep in mind that this is an average.

Will my weight loss slow down and stop?

This is an interesting phenomenon. Provided you follow the Rules of the Tool and your food program, your body will make these decisions for you. As you approach your ideal weight (as determined by your genes), your new anatomy will adapt. It can often adapt to allow for six to eight ounces in volume. (Remember that your stomach was 40 to 60 ounces in size before surgery.) This additional volume will allow you to get enough calories and nutrients to thrive, but it will also ultimately slow weight loss... but, not so much that you gain your weight back IF you use your new tool properly. It is imperative to learn proper techniques for your anatomy; so, as your volume tolerance increases, you will know how to maintain your weight at its desired level.

Will there be weight-loss plateaus?

During your first six months after surgery, your weight loss will be very rapid. The next six months may be a bit more frustrating as you may go weeks without losing a pound on the scale. It is during these times that you must become aware of the other changes taking place in your body. Often weight plateaus will be a time of aggressive loss of inches and of body surface area! The scale may not move much, but your waistline and clothing sizes usually will. Focus on these changes and try to ignore the scale. After a period at a certain weight, you will suddenly find the scale has relented with a quick five to 10 pounds lost when you were not looking.

What medical benefits will I reap other than weight loss?

A variety of medical concerns can be improved due to bariatric surgery. High blood pressure often can be alleviated or eliminated by weight loss surgery. In 80% of patients, high cholesterol can be alleviated

or eliminated. Heart disease may become less likely. Diabetes mellitus is usually notably helped or sent into remission. And, the problems associated with diabetes will usually be stopped in their progression when blood sugar is maintained at normal values. Abnormal glucose tolerance or borderline diabetes is more likely to be reversed by bariatric surgery. Asthma sufferers often experience fewer and less severe attacks. Obstructive sleep apnea syndrome sufferers frequently see dramatic effects, and many find their symptoms completely gone and even stop snoring or requiring a CPAP! Gastro-Esophageal Reflux Disease (GERD) symptoms may be greatly relieved within a few days of surgery. Low back discomfort and degenerative disc and joint disease can be considerably relieved with weight loss, and greater comfort may be experienced even after only 25 lost pounds.

Life After Surgery

Will my hair fall out?

There is a good chance you will experience some hair thinning or loss the first year after surgery when weight loss is most rapid, more commonly with bypass and duodenal switch procedures. This usually begins three months after surgery and concludes about a year after surgery when it is back to normal growth. You will not look like you are "balding" or have patchy loss. Rather, if you experience such loss, it will only be noticeable to you and your hairdresser temporarily. You may curb hair loss by taking Biotin starting pre-op and ongoing throughout your weight loss journey. Protein and water are also VERY important in decreasing hair loss. You may see more hair loss if you struggle if you limit your protein early in your journey. Use hair dyes with caution as they can be hard on your hair.

Can I drink carbonated beverages after surgery?

Drinking carbonated drinks is strongly discouraged! Carbonation can cause gastric irritation and can ultimately stretch out your new stomach anatomy, causing you to overeat. Stretching out your new stomach is to be avoided at all costs! Many patients experience discomfort from the gas carbonation causes as well. It is recommended to avoid any drinks such as soda pop, beer, champagne or seltzer.

Can I drink milk?

Some patients can, and some can't. Milk contains a natural sugar called lactose, which is sometimes not well digested after certain bariatric surgeries. This sugar passes through undigested until bacteria in the lower bowel act on it, producing irritating byproducts such as gas. Depending on individual tolerance, some people find the smallest amount of milk or milk sugar will cause diarrhea or possibly dumping syndrome. If you are finding this to be true for you, trial lactose free or ultra-filtered milk or a milk alternative.

Can I drink alcohol?

Alcohol is not recommended after bariatric surgery, but especially for the first 3-6 months after surgery. Alcohol contains minimal nutrition but packs many calories. Talk to your surgeon about alcohol consumption and keep in mind that small amounts of alcohol can create intoxication and low blood sugar. Also, be sure that you are not using carbonated beverages and sugary drinks as mixers. We always are concerned about shifting addictions and indulgences, so be wary of increased alcohol consumption and alert your medical team if questions or concerns.

What is dumping syndrome?

Dumping syndrome affects Gastric Bypass patients only and is caused by eating too many dense carbohydrates or sugar in one sitting. These food or drinks move quickly through the pouch and "dump" into small intestine. This produces a high osmotic load, which your body handles by quickly diluting the food with water, reducing blood volume and causing a shock-like state. The symptoms of dumping can be lightheadedness, dizziness, fainting, nausea, sweating, shakiness, racing heart, blurred vision, cramps or diarrhea. Dumping can last for 30-60 minutes and is very uncomfortable. You may have to lie down until it goes away. Avoid it by not eating more than 15 grams of carbohydrates at a mealtime and by eating carbohydrates with recommended protein.

Can I eat red meat after surgery?

Red meats for some can be more fibrous and therefore more difficult to digest. So make sure you introduce tender meat, moist cooking methods, and take small bites and chew well. Tough meat can feel like it plugs the outlet of your new anatomy and prevents anything from passing through, which is uncomfortable. Be cautious when reintroducing red meat.

Why is physical activity so important?

Activity is imperative before and after surgery. Pre-surgically, exercise helps prepare your body by strengthening your lungs and increasing your stamina. (Remember, you will need to get out of bed and begin moving just hours after surgery!) Post-surgically, exercise must become a habit you embrace and continue the rest of your life. When you have bariatric surgery, you lose weight because the amount of food energy (calories) you can eat is much less than your body needs to operate. It makes up the difference by burning reserves, i.e. unused tissues. Your body wants to burn unused muscle first before it begins to burn the precious fat it has saved up. Daily exercise reduces your body's consumption of muscle in favor of fat. Not exercising means you will lose muscle mass and strength, and ultimately slow your baseline metabolic rate.

Will I need a tummy tuck? Tell me about sagging skin and reconstructive plastic surgery.

It is very rare for sagging skin to repair itself. The best exercise routines will not help sagging skin recover completely. However, for most patients, tummy tucks and other plastic surgery are not necessary. Depending on age, degree of obesity prior to surgery, and many other factors, some patients will require or desire some form of reconstructive surgery to remove excess skin. The abdominal apron (belly) is a common area of concern. Upper arms, breasts, neck, thighs, and buttocks may be seen as problem areas. It is very important to document any skin issues or conditions that exist with sagging skin rashes, cracked or bleeding skin, foul odors, etc. This may be just the evidence you need to change the surgery from cosmetic to reconstructive surgery for your insurance company. Remember, insurance may pay for the reconstructive surgery, but never for cosmetic surgery.

How can I be successful when socializing and eating out?

Learn to be involved socially at restaurants with family and friends. Look up nutrition facts and menus online before going out and plan to choose protein-based meals. Remember to cut your food up and chew well. Try requesting a smaller portion meal or asking for "to go" box. Others will see your success by your example!

Home Medication Form

This sheet is very valuable to your care team and they will be referring to it regularly. Be sure to include any supplements or herbal medications that you take. Please answer the questions truthfully. It should be completed prior to your next physician appointment.

Patient Name

Height

Weight

Date Filled Out

Allergies

Do you have allergies to:

Latex? Yes No

Medications? Yes No

Foods? Yes No

Environmental? Yes No

Contrast? Yes No

Other? Yes No

If you answered "Yes" to any allergies, list names of known allergens:

Current Medication List

List all prescriptions, herbal supplements, vitamins and over-the-counter medications

Name e.g. Lasix	Dose e.g. 20mg	Route e.g. oral	Frequency e.g. twice per day	Time & Date Last Dose Taken Before Surgery

Immunizations

Have you had the Pnuemovax vaccine? Yes No

Have you had a flu shot? Yes No If "yes," when: _____

Other:

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