

# Bariatric Procedure

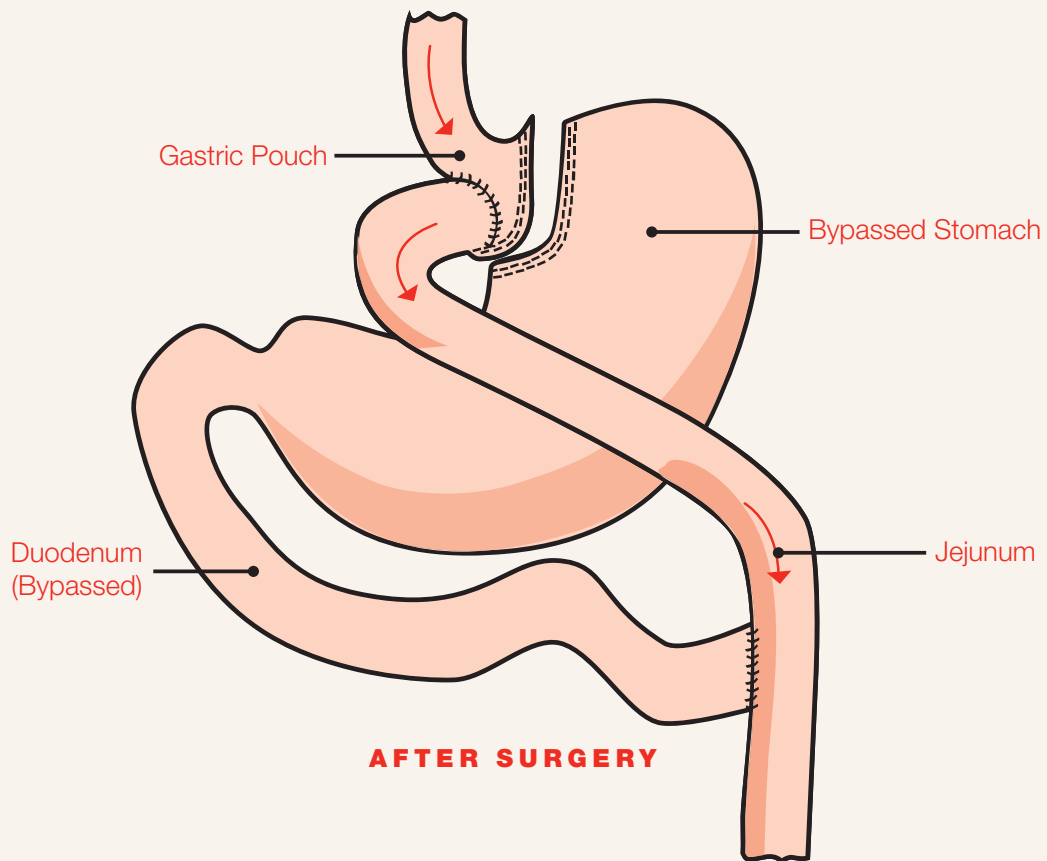
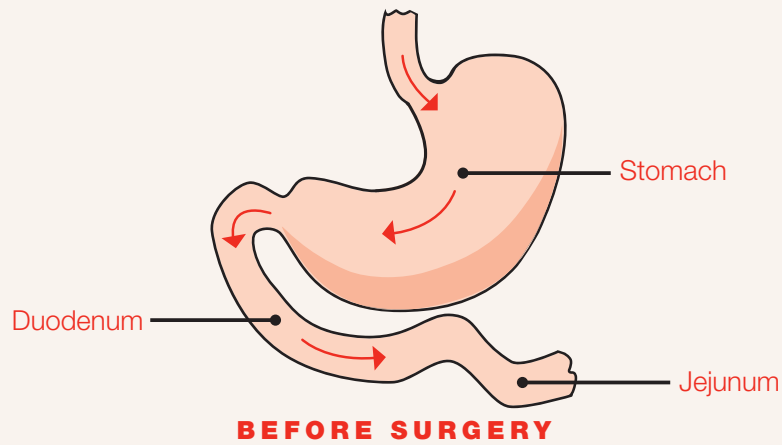
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**G A S T R I C   B Y P A S S   S U R G E R Y**



Congratulations on your decision to pursue gastric bypass surgery.

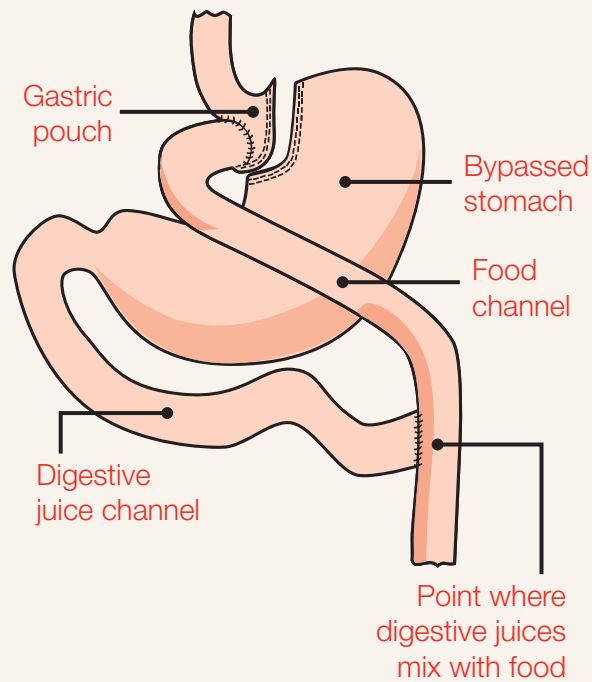
Gastric bypass has long been accepted as the gold standard for surgical Weight-loss—and for good reason. When combined with lifestyle changes, this surgery is a very useful tool to help you lose weight and keep it off. On average, people who have had gastric bypass lose about 60-75 percent of excess weight. In addition to losing weight, most people gain self-confidence and improve their quality of life after surgery. The Weight-loss & Wellness Center (WLWC) is excited to walk alongside you and support you as you start down the road toward better health. Thank you for choosing us to be a part of your journey.



**LAPAROSCOPIC GASTRIC BYPASS  
RESTRICTIVE AND MALABSORPTIVE**

# Gastric Bypass (Roux-en-Y)

- ▶ The procedure involves surgically separating the stomach into two sections using parallel rows of titanium staples.
- ▶ The small upper segment of the stomach, which connects to the esophagus, continues to receive food much as it did prior to surgery, while the lower portion, or “remnant stomach,” no longer comes in contact with food.
- ▶ A portion of the small intestine is disconnected, allowing the surgeon to reroute food directly from the newly created small stomach pouch directly into the remaining intestine for digestion.
- ▶ Gastric bypass is typically performed laparoscopically and requires a hospital stay of one to two days followed by two to four weeks of restricted activity.
- ▶ Follow-up care is an important component and several postsurgery appointments will be needed to monitor healing and progress.



## Laparoscopic Gastric Bypass

It is important you understand the benefits as well as the risks associated with the procedure you choose. We encourage you to discuss your questions and/or concerns with your bariatric team.

### EXPLORING THE BENEFITS

- ▶ Most patients lose weight rapidly and continue to lose for 18 to 24 months postoperatively.
- ▶ Can offer significant and sustained Weight-loss.
- ▶ Offers restriction and malabsorption to aid in Weight-loss.
- ▶ Overall Weight-loss tends to be greater compared to restrictive procedures such as the sleeve gastrectomy or laparoscopic adjustable gastric banding procedure. On average, patients achieve an average of 60-75 percent excess Weight-loss (EWL).
- ▶ Improves or eliminates most obesity-related conditions such as type 2 diabetes, sleep apnea, hypertension and gastroesophageal reflux disease.

- ▶ Blood sugar levels for most patients with type 2 diabetes can improve nearly immediately after surgery and may normalize within a year after surgery.
- ▶ Currently the gold standard for bariatric procedures with long-term experience and outcome data.
- ▶ It may be more difficult to “cheat” due to dumping syndrome. This occurs when high-sugar foods are eaten. The undigested, high-sugar food contents of the stomach are emptied, or “dumped,” into your small intestine too rapidly. Common symptoms include abdominal cramps, sweating, fast heart rate and nausea, which are negative reminders when eating foods high in sugar.

## **UNDERSTANDING POSSIBLE RISKS**

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The complications of gastric bypass are typically noted in two phases: those which occur shortly after surgery and those which take a longer time to develop.

The most serious acute complications include leaks at the junction of the stomach and small intestine. This dangerous complication usually requires the patient be returned to surgery on an urgent basis, as does the rare acute gastric dilatation, which may arise spontaneously or secondary to a blockage occurring at the Y-shaped anastomosis or jejunostomy (or the new connection made between sections of the small bowel after surgery).

- ▶ There are certain complications to which any obese patient having surgery is prone, including degrees of lung collapse (atelectasis) which occur because it is difficult for the patient to breathe deeply when in pain. A great deal of attention is paid in the postoperative period to encourage deep breathing, use of an incentive spirometer and patient activity to try to minimize the problem.
- ▶ Blood clots affecting the legs are more common in overweight patients and carry the risk of breaking off and being carried to the lungs as a pulmonary embolus. This is why we follow a standardized clinical pathway to help prevent blood clots, including having patients quit smoking and remain smoke-free for at least six months, speedy operations (usually between one and one-and-a-half hours), early ambulation after surgery, use of compression boots during the procedure and hospital stay, use of blood thinner after surgery and anti-embolic exercises.
- ▶ Stricture is a narrowing of the stoma (the junction between the stomach pouch and intestine), which results from scar tissue development. This opening has been made smaller. With a smaller opening, even a little scarring will squeeze the opening down to a degree that affects the patient’s eating. Vomiting that occurs during weeks four through twelve may be a sign of a stricture. The problem can be resolved by stretching the opening to the correct size by endoscopic balloon dilatation, which involves minor procedures to correct the problem.
- ▶ Intestinal obstruction occurs in approximately 2 percent of patients, an occurrence rate similar to that following any general surgical abdominal procedure.

- ▶ One possible postoperative complication following bariatric surgery is an internal hernia. This complication is only seen in patients with a Roux-en-Y gastric bypass. An internal hernia is when a loop or portion of the small bowel herniates through a gap created during surgery. During the procedure this gap is closed using non-absorbable sutures; however, the rapid Weight-loss after surgery will sometimes cause these sutures to unravel or come apart. It is also possible for a new gap to form.

This internal hernia occurs as a result of the rapid Weight-loss and new arrangement of the anatomy. The risk of having an internal hernia increases with more drastic Weight-loss. Most commonly, it occurs greater than three months postoperatively, but there is not definitive timeliness of this complication. Signs/symptoms of an internal hernia can vary, but often patients present with abdominal pain in the left upper quadrant underneath the rib cage. The pain can radiate through to the mid back region. There can be a decrease in oral intake. Leaning forward will sometimes help alleviate the symptoms, while standing up straight can exacerbate the symptoms. The symptoms can be intermittent or constant depending on the severity of the hernia. If a patient has concern for an internal hernia an appointment/evaluation by a bariatric medical provider is the first step to diagnosis. Depending on the history and exam findings a CT scan may be ordered. If an internal hernia is visualized on that CT scan the patient will be admitted to the hospital and taken to surgery. A laparoscopy is performed, the hernia is reduced and the gap is closed with non-absorbable sutures. This may be done as an outpatient procedure or may require a short hospitalization (usually less than two days). After the procedure the patient is allowed to go back to their current diet regimen. There is a small risk that an internal hernia could occur more than once.

- ▶ Another common problem after gastric bypass, especially in menstruating women, is anemia. Since the stomach is involved in iron and vitamin B12 absorption, these may not be absorbed adequately following bypass. As a result anemia may develop. The patient feels tired and listless, and blood tests show low levels of hematocrit, hemoglobin, iron and vitamin B12. The condition can be prevented and treated, if necessary, by taking extra iron and vitamin B12. Since the food stream bypasses the duodenum, the primary site of calcium absorption, the possibility of calcium and vitamin D deficiency exists. All patients should take supplemental vitamin and mineral products as recommended by the program dietitians.
- ▶ Dumping is often mentioned as a complication of gastric bypass, but it really is a side effect of the procedure caused by the way the intestine is attached. Dumping occurs when the patient eats refined sugar following gastric bypass causing rapid heartbeat, nausea, tremors and faintness, and is sometimes followed by diarrhea.
- ▶ Your age can increase your risk from surgery as well as excess weight. Certain diseases can increase your risk from surgery. There are also risks that come with the medications and methods used in the surgical procedure.

## POSSIBLE COMPLICATIONS FOLLOWING GASTRIC BYPASS

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### Early:

- ▶ Anastomotic leak
- ▶ Acute stricture at anastomosis
- ▶ Dehydration (can lead to water-soluble vitamin deficiencies, such as thiamine or B1)
- ▶ Roux-en-Y obstruction
- ▶ Atelectasis
- ▶ Stricture
- ▶ Ulcer
- ▶ Wound infection (typically the right upper quadrant site)
- ▶ Hemorrhage
- ▶ Herniations
- ▶ Blood clot (pulmonary embolism [PE] or deep vein thrombosis [DVT])
- ▶ Bleeding (could result in the need for blood transfusion if severe)

### Late:

- ▶ Anemia
- ▶ Vitamin and/or mineral deficiency
- ▶ Bowel obstruction/ twisting (volvulus)
- ▶ Internal hernia
- ▶ Gallbladder
- ▶ Reactive hypoglycemia

## BLOOD CLOT (PE/DVT) PREVENTION

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- ▶ No smoking
- ▶ Must be smoke-free for six months prior to surgery
- ▶ Stop hormone replacement therapies (estrogen/birth control pill, patch or ring) one month prior to surgery
- ▶ Compression boots during surgery and during hospital stay (when in bed)
- ▶ Early ambulation
- ▶ Blood thinner during hospital stay
- ▶ Anti-embolic exercises (exercises to prevent blood clots)
- ▶ Short operation (between 60-90 minutes)

## POPULAR MYTHS ABOUT BARIATRIC SURGERY INCLUDE:

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**Myth #1:** You'll never regain your weight.

**Truth:** While most patients will lose weight consistently over the initial 12-18 months post-op, there is typically a 5-10 percent weight regain or rebound from the lowest weight achieved. In order to maintain Weight-loss after gastric bypass surgery, it's essential to sustain lifestyle changes in regards to nutrition, activity, stress management and healthy coping skills.

**Myth #2:** You will never be hungry after surgery.

**Truth:** Most patients do not experience physical hunger in the initial months after gastric bypass surgery; however, some may. As you get further out from surgery, hunger levels will increase over time. You may also still experience "mental" hunger, so it is important to identify this and address ways to cope prior to surgery.

**Myth #3:** You can't eat "normal" food for the rest of your life.

**Truth:** There will be a diet progression after gastric bypass surgery from liquids to soft solids and so on until you have incorporated most foods back into your diet. Portion sizes will also go through a progression, from just a few tablespoons to ½-1 cup of volume over time. There are no "special" foods. You can still enjoy the same foods as your family, at home and even out at a restaurant.

**Myth #4: Weight-loss surgery is an easy way out.**

**Truth:** All weight-loss surgery programs have various requirements. However, surgery alone does not “fix” everything. It takes a lot of work from you to be successful. Behavioral changes serve as a foundation and are essential for long-term success.

**Myth #5: You’ll be happy after surgery.**

**Truth:** Surgery itself will not make you happy. If there are underlying issues that are not addressed as a part of your journey, they will continue to impact your happiness even after surgery.

**Myth #6: You will have a great body.**

**Truth:** Your body will go through tremendous change. The impact of obesity on your body may still be seen and felt after Weight-loss, such as loose skin. This will likely be a journey as well from body “tolerance” to body “acceptance” to body “compassion.”

**Myth #7: Weight-loss surgery will save your marriage.**

**Truth:** If there are any issues in a relationship prior to surgery, these may become more apparent after, and this journey can be an added stressor on the relationship. Open communication is important. Your team has resources to help navigate this journey with your spouse or support person.

**Myth #8: You don’t have to exercise to lose weight after surgery.**

**Truth:** You do need to incorporate exercise into your lifestyle for long-term success after gastric bypass surgery. Early post-op, you may lose weight rapidly; however, exercise is important in maintaining muscle mass. Muscle mass is essential for weight maintenance.

## **UNDERSTANDING THE “WHY” BEHIND RECOMMENDATIONS FOR BARIATRIC SURGERY**

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During this process, there are many changes and recommendations from the multidisciplinary team. This can be overwhelming. It’s often helpful to start by explaining the “why” behind all of these recommendations.

**Q#1: Why is structure and planning so important after bariatric surgery?**

**A#1:** After gastric bypass surgery, most patients may not feel physical hunger. Maintaining regular meals and snack times will help ensure you are taking in enough nutrition to support Weight-loss, maintain lean body mass during Weight-loss and set you up for good habits for weight maintenance.

**Q#2: Why do I have to take bariatric vitamins?**

**A#2:** Gastric bypass changes the way your digestive system works by bypassing a portion of your stomach and small intestine. This reduces absorption within the stomach and also changes the pH of the stomach. This affects the body’s ability to absorb certain nutrients. The risk of developing a deficiency increases as time goes on after surgery. This is why we strongly recommend you take bariatric vitamins for your whole life after



gastric bypass. Bariatric vitamins are specially formulated to help prevent deficiencies, some of which may have irreversible complications. They contain higher levels of certain micronutrients than regular vitamins and many of the nutrients are in a specific form to help them be better absorbed.

### Q#3: Why do I have to wait to get pregnant after bariatric surgery?

**A#3:** Women of childbearing age, or who have suffered from infertility prior to bariatric surgery, have the ability to become pregnant in the early stages postoperatively due to improvements in hormone regulation or failure to implement a contraception plan. Increased risks exist to the mother and fetus during this time of rapid Weight-loss (prior to 12 months post-op) including:

- ▶ Greater incidence of premature birth
- ▶ Challenge meeting maternal weight gain goal to promote appropriate fetal growth
- ▶ Increased metabolic and vitamin/mineral disturbances resulting in growth retardation and neural tube defects
- ▶ Greater risk of miscarriage
- ▶ Increased risk of malnutrition for mother and fetus with restricted oral calorie and protein intake
- ▶ Increased incidence of Cesarean deliveries

With the above complications noted, it is required that a plan for early pregnancy prevention (barrier, intrauterine, condoms or stated abstinence/denying sexual activity) be in place for the first year postoperatively to prevent early pregnancy and the high risks that accompany it. Oral birth control is not a preferred method of contraception postoperatively due to the malabsorption mechanism present after surgery, thus making it an ineffective method. A documented plan for early pregnancy prevention during the preoperative evaluation phase (while working with our team) will be developed in the event you are noted as a safe candidate for bariatric surgery.

Planned pregnancies after one year post-bariatric surgery have demonstrated safe outcomes for mother and child. Consultation with the bariatric team, surgeon, OB/GYN and PCP can ensure screenings are in place and care can be coordinated to ensure the most safe and successful outcomes.

### Q#4: Why can't I smoke or use nicotine products?

**A#4:** Memorial Bariatric Services requires patients to eliminate the use of nicotine (cigarettes, cigars, chew, hookah, e-cigarettes, patches and other nicotine-replacement therapies) six months prior to bariatric surgery and to remain abstinent from nicotine after surgery. This reduces the incidence of postoperative risks. Here are a few reasons why:

- ▶ The use of nicotine, whether passive or active, increases surgical risks for developing complications, such as:
  - ▶ Decreased oxygen to your heart
  - ▶ Poor wound healing due to loss of blood flow

- ▶ Increased risk of wound infection
- ▶ Increased risk of chest infection and pneumonia
- ▶ Increased risk of blood clots
- ▶ Smoking makes liver enzymes metabolize anesthesia drugs differently, changing the effect and duration of anesthesia and making it less predictable.
- ▶ Nicotine users tend to require more pain management medications after bariatric surgery.
- ▶ Nicotine use increases the risk of postoperative ulcers, which can lead to perforation or GI bleeding.

Research shows that individuals who have assistance with being nicotine-free are more successful. If you are interested in becoming nicotine-free, please contact 866-205-7915 to discuss the tobacco cessation tools available to you through our program.

#### Q#5: Why is support important after bariatric surgery?

**A#5:** One of the most powerful things you can do to help with your weight-loss and management efforts is to receive support and encouragement from other people. When others encourage you to keep working, you feel like you can do anything!

Consider this:

- ▶ Ask others for encouragement in your weight-control efforts. Ask key people whom you know will be positive and supportive.
- ▶ Share your concerns and struggles with those key supporters.
- ▶ Explain what they can do to help. Be specific. For example, “Ask me how I am doing, then listen,” or “Please don’t offer me junk food.”
- ▶ Let them know their support is meaningful to you and describe how you need their encouragement for the long run.
- ▶ Even if a support person fails to ask how you are doing, go ahead and tell them. This starts the conversation and provides an opportunity for encouragement.
- ▶ Give back in return. Reward your support people with your attention and your support for them.

Memorial Weight-loss & Wellness Center (MWLWC) also offers our patient community several opportunities for support outside of our clinic to help you along your journey. Some examples include:

- ▶ Support groups
- ▶ MWLWC Facebook page
- ▶ MWLWC secret Facebook groups
- ▶ Support person booklet

## SUPPORT GROUPS

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Studies show that bariatric surgery patients who attend support groups maintain about 20 to 30 percent greater excess Weight-loss as compared to patients who do not attend support groups.

Bariatric surgery support groups share knowledge and support as we work to regain and maintain good health. Plan to join us so we can help each other while we help ourselves.

Memorial Weight-loss & Wellness Center offers several support groups at our main location in Springfield as well as our satellite/affiliate locations. Check out our support group schedule and locations at [MemorialWeightLossandWellnessCenter.com](http://MemorialWeightLossandWellnessCenter.com).

**MWLWC support group.** Licensed healthcare professionals facilitate this monthly group, offered to all of our patients. Typically structured in two parts, the first hour focuses on small group discussion while the second hour involves a presentation on a health-related topic. At this support group, there is also a “surgeon session.” A surgeon session is required for all surgical pre-op patients.

**Long-term post-op group.** These monthly groups in Springfield are designed for patients two years or more post-op from bariatric surgery. A healthcare professional leads the one-hour session designed to address topics, issues and/or barriers that may occur in the longer-term post-op period.

**Diabetes support group.** These monthly support groups are offered in a variety of locations. Anyone living with diabetes or supporting someone with diabetes is welcome to attend for a monthly dose of positive discussion and fun activities that support a healthy lifestyle. If you are not in Springfield, be sure to ask about diabetes support groups in your community. Several of our satellite and affiliate locations have groups as well.

**Q#6: Why do I have to worry about certain types of medications after gastric bypass surgery?**

**A#6:** Certain medications are not absorbed in the same manner after gastric bypass surgery. The pH of your stomach is altered. The rate of how quickly things move through your GI tract is changed. Bariatric surgery changes the way your body processes medications. The same biological changes that increase your risk of nutritional malabsorption can also impact the way your body absorbs medications. After surgery, pills have less time to dissolve in your stomach, the acid/pH level of your stomach changes and the absorption process in the small intestine is impacted. As a result, there are changes in both the anatomy and chemistry of your digestive tract.

It is reasonable to hope to experience a reduction in medications following bariatric surgery and significant Weight-loss. Medications for diabetes, hypertension and asthma are often significantly decreased or eliminated. However, the need for antidepressants and other psychological medications is less likely to be reduced. Be sure to consider how your body will process these medications after your surgery.

After bariatric surgery, smaller, more frequent doses of medication may be needed. In general, extended or sustained release medications are not recommended after surgery.

Medications in capsule form are also not recommended after surgery. The exception to this is the bariatric multivitamin, which is specially formulated for bariatric surgery patients and acceptable in capsule form. Talk with your doctor, who will decide what, if any, changes will be made to your medications.

Informed consent for bariatric surgery requires you to understand the potential for long-term, permanent problems while using medications to manage depression or other psychological problems. If you start to notice an increase in your depressive symptoms after surgery, contact your doctor immediately to discuss these issues.

#### Q#7: Why do I have to journal my food intake after bariatric surgery?

**A#7:** Keeping a food journal, or logging your intake, is the best way to record what and how much you take in. This helps ensure you consume enough calories and nutrients. Commonly, patients will overestimate how much they are eating. Logging helps to ensure you take in enough calories and protein throughout the day to fuel your daily activities as well as your exercise. Writing down what you eat can also help you monitor your tolerance to certain foods. Long-term studies on weight maintenance have shown those who log maintain their Weight-loss more compared to those who do not log.

#### Q#8: Why is fluid so important?

**A#8:** Dehydration is one of the most common complications after bariatric surgery. Avoid this complication by ensuring that you drink the recommended 64-80 ounces of fluid daily. After surgery, you are only able to drink 1-2 ounces every 15 minutes. You should also avoid drinking prior to, during or directly after your meals. This provides limited time in which you are able to drink hydrating (caffeine-free) fluids. Unlike prior to surgery, after surgery you are not able to consume large amounts of water at one time so you have to be sure to drink fluids throughout the entire day.

#### Q#9: Why can't I drink caffeine or carbonated drinks after bariatric surgery?

**A#9:** Both caffeine and carbonation can irritate the stomach. Caffeine is a diuretic, which means it increases urine production, which counteracts our efforts to keep you hydrated. Carbonation introduces air into the stomach and causes bloating and discomfort.

#### Q#10: Why can't I drink alcohol after bariatric surgery?

**A#10:** Memorial Bariatric Services requires patients to eliminate the use of alcohol before having bariatric surgery and to remain abstinent from alcohol after surgery. This reduces the incidence of postoperative risks. Here's why:

- ▶ Alcohol affects absorption of vitamins and minerals. Alcohol is a diuretic and can decrease the vitamins and minerals stored in the body.
- ▶ Alcohol can lead to dehydration. After bariatric surgery, it will take you a minimum of 6-10 hours a day to drink the required 64-80 ounces of fluid (you cannot drink with meals, which accounts for approximately five hours out of the day, and you cannot drink while you are sleeping, which for most individuals is six to eight hours out of the day). Consuming alcohol will decrease your hydration and require more time to hydrate.

- ▶ Your body absorbs alcohol faster, which increases your blood alcohol content (BAC). In one study, individuals who drank one serving of alcohol were past the legal limit of .08 percent within 10 minutes of drinking.
- ▶ Increased risk of becoming dependent upon or abusing alcohol. The faster you feel the effects of a substance, the more likely you are to become addicted.
- ▶ Your body takes longer to eliminate alcohol. Even though you can become intoxicated more quickly, the time it takes your body to sober will increase.
- ▶ Increased risk of developing ulcers.
- ▶ An increase in heartburn if the alcoholic drink is carbonated.
- ▶ Empty calories. There are no nutrients in alcohol so your body is not able to use the calories for daily functioning. Unnecessary calories can also lead to weight gain.

Research has shown an increased risk for becoming dependent or abusing alcohol two years postoperatively after gastric bypass surgery. While the exact cause of this is still undetermined, the faster absorption rate increases risk for becoming dependent. After surgery, individuals might use alcohol instead of food to socialize. Making healthy lifestyle choices after surgery is important.

**Q#11: Why do I have to eat slowly, take small bites and chew food thoroughly (mindful eating)?**

**A#11:** These strategies will help you to be more aware of your eating habits. After bariatric surgery, your stomach is small, about the size of an egg, and does not have as many of the acids your stomach currently does to help with digestion. It is important to chew food thoroughly enough to help with this digestion process. Take small bites to ensure you are chewing your bites thoroughly. Eating too fast can lead to frothing or foamy mucus-like vomiting.

**Q#12: Why do I have to go on a two-week presurgical diet?**

**A#12:** The presurgical diet, low-calorie and high protein, helps reduce the size of the liver prior to surgery. This helps decrease surgical risk.

**Q#13: Why can't I just drink protein shakes after surgery?**

**A#13:** Eating is essential to living a healthy lifestyle. Learn to eat a variety of foods to ensure you consume the nutrients you need. Chewing is a fundamental part of eating and helps your body recognize when it is full. Without chewing, your mind may trick your body into thinking it is hungry when it is not.

**Q#14: Why do I have to take so much time off after surgery?**

**A#14:** Adjusting to life after bariatric surgery takes time. Immediately postoperatively, you will track your intake and fluids to ensure you stay hydrated and consume enough nutrients. Without hunger cues, you may forget to eat, and it is easy to forget to drink. Ensuring you are getting the fluids and nutrients you need each day will be the more important task. Your body also needs time to heal from the procedure. Recovery is different for everyone. The length of time off after surgery will depend on the surgery type, pain management, adjustment to changes and tolerance of intake.

Q#15: Why do I continue to see my bariatric team after surgery?

**A#15:** After surgery, you are part of our family. Follow-up with your team is important so they can ensure you experience the optimal results and support for the use of your weight-loss tools. Remember, Weight-loss and maintenance is a journey, and we are here to help if you feel you are struggling. We can also help assess structural reasons for weight regain. Surveillance of long-term complications is also very important, such as strictures and vitamin or mineral deficiencies.

Q#16: Why do I have to make all of these changes before surgery?

**A#16:** Demonstrating the recommended changes prior to surgery helps the team identify you are a safe candidate. It also helps you begin to practice habits that will help you to be successful both pre- and postoperatively.

Q#17: Why is protein so important? Why do I have to take protein supplements after surgery?

**A#17:** Protein is emphasized, especially in the first few weeks and months after surgery, because it supports recovery and is essential for maintaining muscle mass during Weight-loss. During the two weeks before and in the early postoperative period, the main source of protein will come from liquid protein supplements.

Q#18: Why does it matter what kind of protein my shake contains? Protein is protein, right?

**A#18:** The kind of protein in your protein shake matters a lot! After bariatric surgery, you will need to consume a significant amount of protein, and only a small portion of this will come from your solid foods—especially in the early weeks after surgery. Your chosen protein shake will give you the majority of the protein you take in each day, so it needs to be a high-quality protein.

MWLWC recommends protein supplements that contain whey protein isolate or whey protein hydrolysate as the best choice for protein shakes. Whey protein is a complete protein, which means it contains all the amino acids your body needs to build and maintain muscle while burning fat. Protein shakes that contain whey concentrate are generally not recommended. These products do contain protein, but it is usually not as much as the isolate or hydrolysate forms and may also contain lactose (milk sugar) and fats, which are not always tolerated in the early weeks after bariatric surgery. Whey protein isolate or hydrolysate is the highest-quality protein.

Q#19: What kind of protein powder should I buy? How should I shop for a protein powder?

**A#19:** There are many suitable protein products available. In fact, there are so many acceptable products that shopping for a protein powder can be overwhelming at first. But once you know what to look for, it's quite simple. Find a product that fits in your budget, one you tolerate well and one that tastes acceptable to you.

## LIQUID PROTEIN SUPPLEMENTS

### What to look for on the nutrition label:

- ▶ At least 20 grams of protein per serving
- ▶ Less than six grams of sugar per serving
- ▶ Look at the ingredient list.
  - ▶ Whey protein isolate or hydrolysate should be listed as the first ingredient.

### What are some brands to try?

These are not the only acceptable brands, but these are some suggestions to get you started.

BRAND	ORDER INFORMATION	CONSIDERATIONS:
Nectar	MyBariatricPantry.com Vitacost.com GNC store Amazon.com	Not all Nectar brand products contain the recommended form of protein. Also, some contain caffeine. Make sure to read the label.
Isopure	GNC store Amazon.com	This is a clear liquid drink. There are 40g of protein per bottle.
Beneprotein	Walgreens.com Amazon.com	This one comes unflavored. Serving size on label is small, so you may need to put more than one serving in each of your protein shakes to consume enough protein.

## WHAT VITAMIN AND MINERAL SUPPLEMENTS CAN I USE?

There are four baseline vitamin/mineral supplements you will take after gastric bypass:

1. Bariatric multivitamin\*
2. Calcium (usually as calcium citrate)\*\*
3. Vitamin B12
4. Iron\*\*

\*A bariatric-formulated multivitamin is required.

\*\* Calcium and iron supplements must be taken at least two hours apart to maximize absorption.

**Q#20:** What kind of vitamins should I buy? How do I know which is the right vitamin for me?

**A#20:** There are many brands of bariatric vitamin and mineral supplements on the market, but not all of them meet the specific recommendations of the Memorial WLWC. Our recommendations rely on peer-reviewed research, consultation with other bariatric nutrition experts from all over the country and more than ten years of experience in our own clinic. Vitamin and mineral deficiencies do occur in some people who have had gastric bypass. Taking vitamins that meet the recommended guidelines should help prevent them. Your dietitian or medical provider can assist you with any questions you have about bariatric post-op vitamins and make sure the ones you choose will meet your nutrition needs.

There are a few things to remember when speaking with your dietitian about which vitamin is right for you:

**Vitamin D:** Vitamin D is a common deficiency both before and after surgery. It is important you take in enough vitamin D. However, it is possible to get too much. Vitamin D is found in fortified foods, multivitamins, calcium supplements and in vitamin D supplements. You should take no more than 3000 IU vitamin D total per day for daily maintenance. If you are treating a vitamin D deficiency, you may need to take more than that for a specified length of time and then reduce intake to 1000-3000 IU daily.

**Calcium:** A calcium supplement will be taken in addition to your multivitamin because multivitamins do not generally contain the full recommended daily amount of calcium. You can also take in calcium from calcium-rich foods. Some people are able to take in a great deal of calcium from the foods they choose after surgery, however most people still need to take a supplement as well. Remember, no more than 500-600 mg of calcium should be taken at a time. We recommend the calcium citrate form for best absorption.

**Iron:** After gastric bypass, your ability to absorb iron is reduced. This means that after surgery you will need to take significantly more iron than you did before surgery. For best tolerance, we recommend the iron you take be in the ferrous fumarate form. For best absorption, we recommend that iron be taken at least two hours before or after any calcium supplements, calcium-rich foods and any decaf coffee or tea. Iron supplementation can cause constipation and you may need to take a stool softener with your supplementation.

**Vitamin B12:** Having a gastric bypass reduces your ability to absorb B12 with your digestive system. For this reason, we recommend you take either a sublingual (dissolved under the tongue) or an injected form of vitamin B12.

**Always remember:**

The risk of vitamin deficiencies increase over time. Scheduling your labs every year on time helps identify and stop the progression of vitamin and mineral deficiencies.



MICRO-NUTRIENT SUPPLEMENT	CONSIDERATIONS	HOW MUCH TO TAKE:	SUGGESTED BRANDS
Multivitamin	<ul style="list-style-type: none"> <li>Supplements may be in capsule, tablet or chewy form.</li> </ul>	<p>Look at the label to determine the full daily serving size. Most post-op multivitamins need to be taken two-four times per day.</p>	<ul style="list-style-type: none"> <li>We recommend your multivitamin always come from one of these two brands: Bariatric Advantage and Celebrate.</li> <li>You and your registered dietitian will work together to determine an appropriate multivitamin options.</li> </ul>
Calcium	<ul style="list-style-type: none"> <li>Doses should be 500-600 mg (milligrams).</li> <li>Needs to be from calcium citrate.</li> <li>Total amount of vitamin D provided by your calcium and multivitamin should total no more than 3000 IU daily.</li> </ul>	<ul style="list-style-type: none"> <li>Women should aim for a total of 1500 mg (three doses) daily from supplements and food sources.</li> <li>Men should aim for a total of 1000 mg (two doses) daily from supplement and food sources.</li> </ul>	<ul style="list-style-type: none"> <li>Bariatric Advantage Calcium Citrate Chewable</li> <li>Celebrate Calcium Citrate Chewable</li> <li>There are many tablet and soft-chew forms of calcium citrate available over-the-counter (OTC) and from bariatric companies. Make sure you read the labels too.</li> </ul>
Iron	<ul style="list-style-type: none"> <li>Ferrous Fumarate is best tolerated by most people, however there are several acceptable forms.</li> <li>Make sure to separate from calcium-rich foods, calcium supplements and coffee/tea by at least two hours.</li> <li>Taking vitamin C with iron improves absorption.</li> </ul>	<ul style="list-style-type: none"> <li>Menstruating women should aim for 60 mg iron daily.</li> <li>Women who do not menstruate and men should aim for 45 mg iron daily.</li> </ul>	<ul style="list-style-type: none"> <li>Bariatric Advantage or Celebrate chewable iron</li> <li>Bariatric Advantage/ Celebrate soft-chew (look at dosage) Vitron C</li> <li>Ferretts (look at dosage), take with 500 mg vitamin C</li> </ul>
B12	<p>Needs to be either sublingual or injected</p>	<ul style="list-style-type: none"> <li>1000 mcg (micrograms) each week if taken sublingually.</li> <li>1000 mcg taken each month if injected.</li> </ul>	<ul style="list-style-type: none"> <li>There are many OTC brands of sublingual vitamin B12.</li> <li>Injectable form is available by prescription only.</li> </ul>

# What should I do to prepare for surgery?

## Stay psyched up

- ▶ Keep focused on the reasons you want to have surgery.
  - ▶ Weight plateaus happen.
- ▶ Keep a record of your journey (pictures, measurements, ups and downs).
  - ▶ Write a letter to yourself at the start of your journey to remind yourself of the reasons that you are making these changes.
- ▶ Keep a log of your successes.

## Family affair

- ▶ Once you decide to have the surgery, talk this over with your children and family.
- ▶ Identify the reasons you want surgery.
- ▶ Outline what they can do to help.
  - ▶ Provide a list of chores/activities for each family member when you return home.
- ▶ Consider how things will be different while making lifestyle changes.
- ▶ Allow the family to have some control over tasks and meals.

## Prepare your home

- ▶ Stock your kitchen.
  - ▶ Think sugar-free, carbonation-free and popsicles. Do not forget the popsicles!
- ▶ Create a relaxing environment.
- ▶ Use the reclining chair.

## Tie up loose ends

- ▶ Pay outstanding bills and, if possible, pay a few ahead of time.
- ▶ Have medication and vitamins ready.
- ▶ Clean your house and do laundry before you go.
- ▶ Stock up on activities like books, puzzles, movies and crafts.
- ▶ Have a family member come and stay or help with cleaning and laundry.
- ▶ Prepare meals for your family ahead of time.
- ▶ Order your medical ID bracelet.

## MEDICAL ID BRACELETS AND NECKLACES

Be sure to make doctors, nurses and EMTs aware you have had bariatric surgery. Knowledge of your condition will help ensure safe treatment. Your medical alert bracelet or medical ID necklace will alert doctors, nurses and EMTs of your medical history so time is not wasted. We recommend including your name, bariatric procedure, physician or surgeon name and contact numbers.

### Helpful sites:

- ▶ LaurensHope.com
- ▶ AllegroMedical.com
- ▶ MedicalIDAlertBracelet.com
- ▶ American Medical ID: 800-363-5985 or AmericanMedical-ID.com

### Recommended engraving:

Jane Doe (your name)

Weight-loss Procedure (gastric bypass)

Dr. John Smith (your primary care physician or bariatric surgeon)

217-000-0000 (your primary care physician's or bariatric surgeon's number)

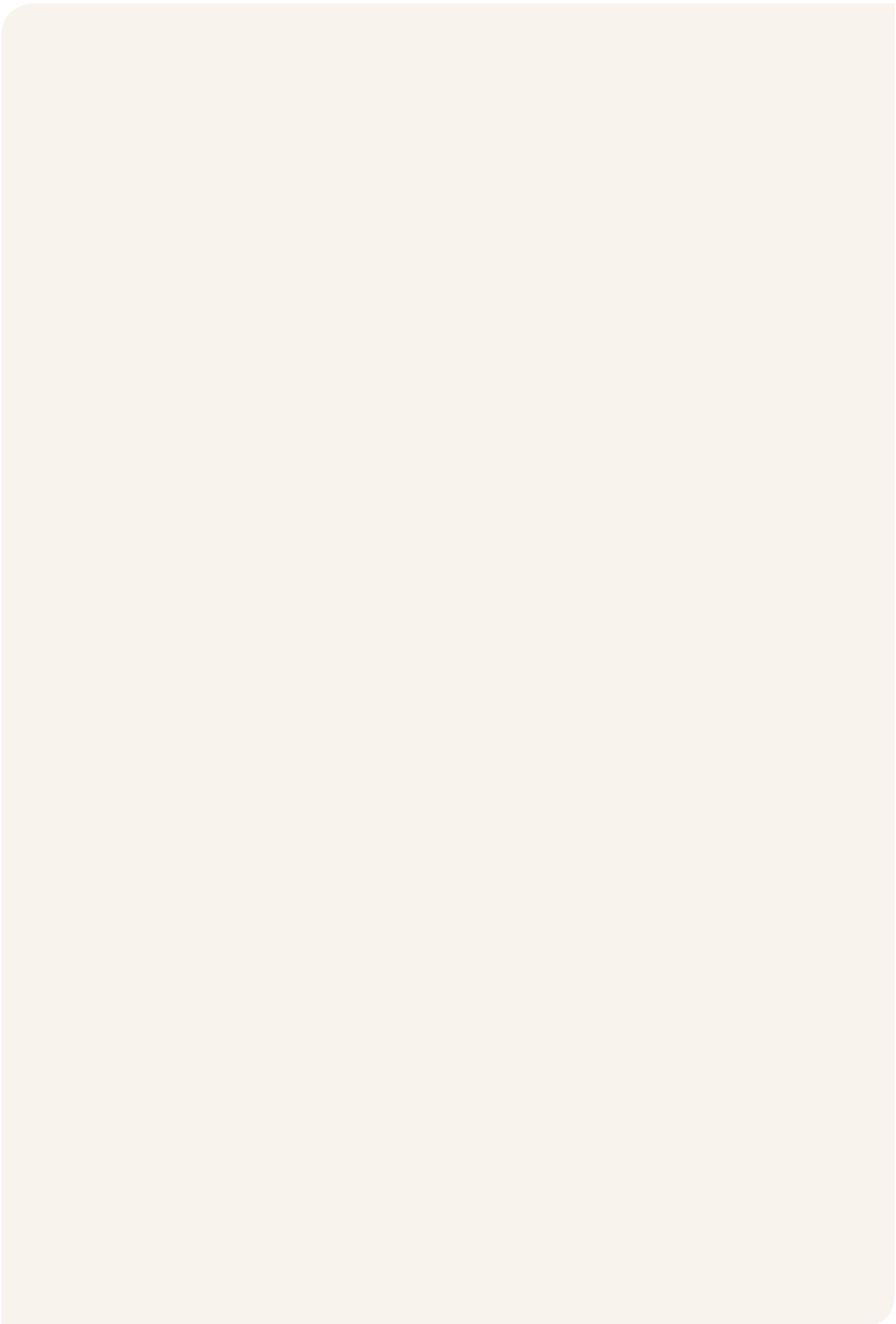
## Checklist of Items to Bring to Hospital

### Nursing staff recommend:

- ▶ CPAP machine (if applicable)
- ▶ Incentive spirometer
- ▶ This gastric bypass surgery book
- ▶ List of all medications, herbal supplements, vitamin/mineral supplements
- ▶ Copy of your living will and/or Durable Power of Attorney for Healthcare

### Previous patients recommend:

- ▶ Underwear
  - ▶ Personal hygiene toiletries
  - ▶ House slippers (with non-slip soles)
  - ▶ Lip balm (such as Chapstick)
  - ▶ Pen and paper or notebook
  - ▶ Protein supplements (if desired)
  - ▶ Sugar-free drink mix sticks (such as Crystal Light)
  - ▶ Books or magazines
  - ▶ Small change for newspaper
  - ▶ Slip-on walking shoes
  - ▶ Knee-length robe
  - ▶ Form of payment for copayment for new medications and bedside delivery (such as pain medicine)
  - ▶ Cellphone charger
- Label your personal possessions with your name.
- Do NOT bring large sums of cash.



# Gastric Bypass Knowledge Assessment Test

This test is not intended to be an exhaustive review of bariatric surgery information, but it does provide a good review and helps ensure you have read and understand the educational material provided to you. Please complete this test and bring it with you to your next visit with your surgeon. We will review it together and answer any questions you may have.

Please use the written education material in your bariatric manual as a reference.

The following statements are either TRUE or FALSE. **Please circle the correct answer.**

- |      |       |   |
|------|-------|---|
| True | False | 1. Clinically severe (or morbid) obesity is caused by a lack of self control and laziness.  |
| True | False | 2. Gastric bypass surgery is the only procedure available for treatment of obesity.   |
| True | False | 3. Blood clots and pulmonary embolism are two possible complications from gastric bypass surgery. Blood clots can form in the legs or pelvis. If a clot breaks loose and travels through the veins to the lungs, it is called a pulmonary embolism. |
| True | False | 4. BMI is calculated by using a person's height and weight.   |
| True | False | 5. A gastrointestinal leak is one possible complication of gastric bypass surgery.  |
| True | False | 6. All people with morbid obesity should undergo gastric bypass surgery.  |
| True | False | 7. Gastric bypass surgery guarantees lifelong Weight-loss.  |
| True | False | 8. If you have authorization of payment from your insurance for surgery, you are guaranteed to have the surgery.  |
| True | False | 9. Walking (or similar exercise/activity) should begin before surgery and continue daily for the rest of your life.   |
| True | False | 10. It is important to exercise and to avoid sweets after gastric bypass surgery.   |
| True | False | 11. In order to stay healthy, after gastric bypass surgery I will need to take daily vitamin and mineral supplements for the rest of my life.   |

- True False 12. Following surgery, I can take any over-the-counter medications. There is no need to consult my surgeon or doctor first.
- True False 13. Diabetes, high blood pressure, back pain and similar ailments always improve after obesity surgery.
- True False 14. Scheduling medical follow-up is the patient's responsibility. Follow-up is lifelong.
- True False 15. Serious complications may occur following gastric bypass surgery. These may require additional surgery, a longer stay in the hospital or a move to the intensive care unit. Complications may mean additional financial costs to the patient.
- True False 16. When gastric bypass surgery is successful, improvement in associated conditions such as diabetes, hypertension and joint problems is often seen.
- True False 17. Complications only occur during the hospitalization period after surgery. After discharge, it is unnecessary to call your doctor with concerning problems or symptoms.
- True False 18. Drinking plenty of fluids after surgery may prevent or decrease the problem of constipation.
- True False 19. Nausea is a common problem after gastric bypass surgery.
- True False 20. Weight-loss during the first 12 to 18 months after gastric bypass surgery is rapid, but patients who do not follow the exercise requirements, postoperative diet guidelines and follow-up recommendations may eventually regain their weight.
- True False 21. I may experience hair loss during the first 12–18 months after gastric bypass surgery.
- True False 22. Gastric bypass surgery is a cure for obesity—not just a tool.
- True False 23. In the absence of complications, the hospital stay after initial gastric bypass surgery is usually one to two days.
- True False 24. Depression never occurs after gastric bypass surgery.
- True False 25. I will receive a blood transfusion during or after gastric bypass surgery.

The following questions each contain only one correct answer. **Please circle it.**

26. Which medications must be avoided after gastric bypass surgery?
- a) Prescription or over-the-counter medications recommended by your physician
  - b) Medications for hypertension
  - c) Medications for depression
  - d) Lortab, Codeine, Vicodin and other prescribed pain-relief medication
  - e) Aspirin, Motrin (ibuprofen) and/or any other non-steroidal anti-inflammatory drugs
27. Choose one of the following that may increase the risk of developing potentially fatal pulmonary emboli (blood clots that travel to lungs):
- a) Walking four hours after surgery
  - b) Use of blood thinners
  - c) Compression boots while in bed during the hospital stay
  - d) No movement, lying flat at complete bed rest
  - e) Adequate fluid intake
28. Changes in your digestive system occur following gastric bypass surgery. Which one of the following is completely untrue:
- a) Bowel movements may decrease in frequency to once every two to three days.
  - b) Smells of food may cause nausea.
  - c) Foods may taste different.
  - d) Patients may eventually return to their old dietary habits without concern.
29. Keys to long-term success with bariatric surgery are:
- a) Commitment to lifestyle changes
  - b) Daily exercise for the rest of your life
  - c) Multivitamin and mineral supplements for the rest of your life
  - d) Adequate water intake and a high-quality protein diet
  - e) All of the above
30. Which of the following life-threatening complication(s) can occur during or after gastric bypass surgery:
- a) Heart attack
  - b) Stroke
  - c) Lung failure/pneumonia
  - d) Blood clots (usually in the legs or pelvis)
  - e) All the above

I understand this assessment is part of my informed consent and certify I have answered these questions on my own. I also understand I may be asked to retake this assessment and may be required to attend further educational activities if it is found I do not fully understand the risks, complications, requirements and concept of this surgery. I am willing to pursue additional education as recommended by the Memorial Medical Center Bariatric Surgery Program team in order to reduce risks and to increase my opportunity for long-term success and good health.

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Patient signature date

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Reviewer date



# What should I expect each day at the hospital?

## Nursing staff

- ▶ Will check on you hourly to answer questions and help with needs.
- ▶ Early morning: Bariatric team rounds. The bariatric team (surgeons, midlevels, dietitian, social worker, pharmacist and nursing staff) will conduct rounds to check on you and conduct teaching, typically at 7 a.m.
- ▶ Blood thinner will be given to prevent blood clots.
- ▶ Monitor heart rate, breathing, oxygen levels, blood pressure every four hours. Monitor blood sugar levels every six hours.
- ▶ Bandage removed prior to shower.
- ▶ Liquid pain medicine will continue to help with pain.
- ▶ Blood draws and continuous monitoring.

## Pain management

- ▶ Remember to let staff know if you are uncomfortable.
- ▶ Everyone experiences pain differently.
- ▶ Don't delay taking pain medication. Adequate pain control will help you have a smooth recovery.

## Daily checklist

- ▶ Only way to know how much fluid is being consumed.
- ▶ Helps to prevent dehydration.
- ▶ Decreases postsurgical complications.
- ▶ Gives you more control over your healing process and recovery.

## Get out of bed

- ▶ Practice at home prior to surgery.
  1. Turn over on your right side and cross your left arm over in front of you.
  2. Use your left arm to push yourself up so you can swing your legs down.
  3. As you start to lift, use your right arm to push yourself up into a sitting position.

## Support people

A few things your family member or friend can help with:

- ▶ Record intake of fluids.
- ▶ Help with putting on and taking off leg compression boots.
- ▶ Walk halls at a minimum of five minutes every four hours; more minutes and frequency, if tolerated.
- ▶ Request medication you may need.

- ▶ Keep you company.
- ▶ Make sure you follow recommendations with walks, sips and incentive spirometer.

**Speed up your recovery:**

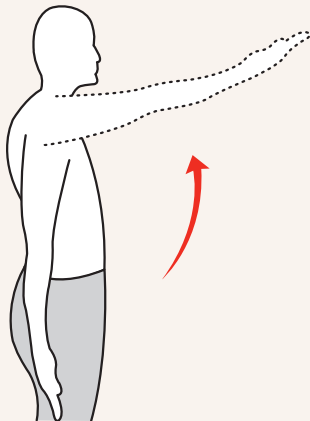
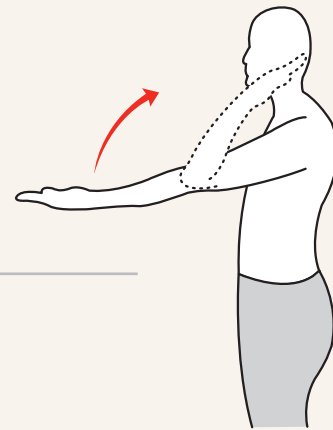
- ▶ Walk, walk, walk
- ▶ Use incentive spirometer
- ▶ Sip, sip, sip
- ▶ Keep track

**EXERCISES TO HELP PREVENT BLOOD CLOTS**

You should do two arm exercises and two leg exercises for two minutes every two hours after surgery during your hospital stay.

**ELBOW—Elbow Up**

Stand or sit with one arm out in front, palm up. Slowly bend elbow and raise forearm toward shoulder. Relax arm. Repeat with other arm. Repeat 10 times each arm.



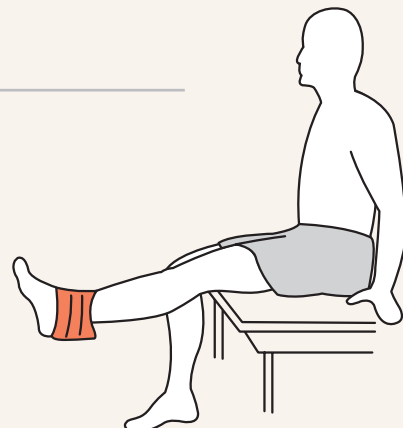
**SHOULDER—Range of Motion:**

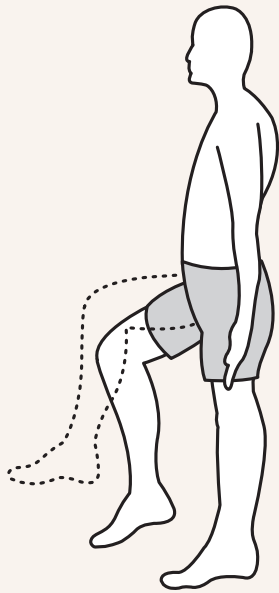
**Flexion**

From standing or sitting position, place arms at side. Slowly raise arms up until stretch is felt. Repeat 10 times each side.

**HIP/KNEE—Knee Extension (Sitting)**

While sitting at edge of bed or in a chair, straighten knee, then let down slowly. Repeat 10 times per leg.





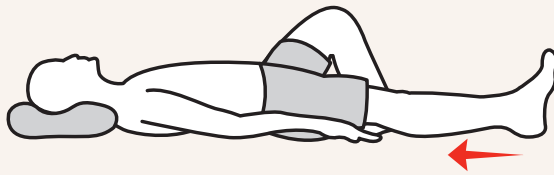
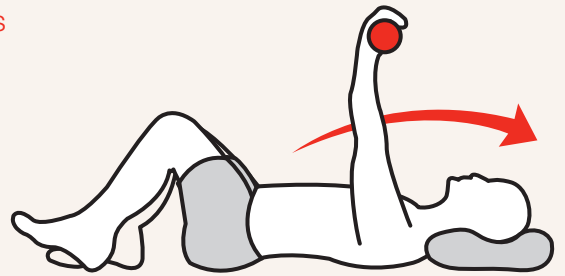
**HIP**—Knee Lift

Using a chair if necessary, march in place 10 times each leg.

times per arm.

**SHOULDER**—Arm Raises

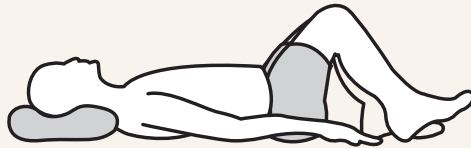
Raise arms over head, and go as far as possible without pain. Repeat 10



**HIP/KNEE**—Self Mobilization:

Heel Slide (Supine)

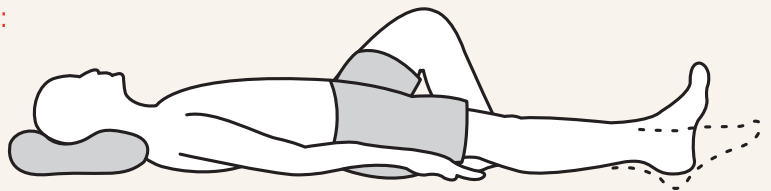
Slide right heel toward buttocks until a gentle stretch is felt, then straighten leg again. Repeat with other leg. Repeat 10 times each leg.



**ANKLE /FOOT**—Range of Motion:

Plantar/Dorsiflexion

With leg straight, gently flex and extend ankle. Move through full range of motion. Repeat 15 times per set.

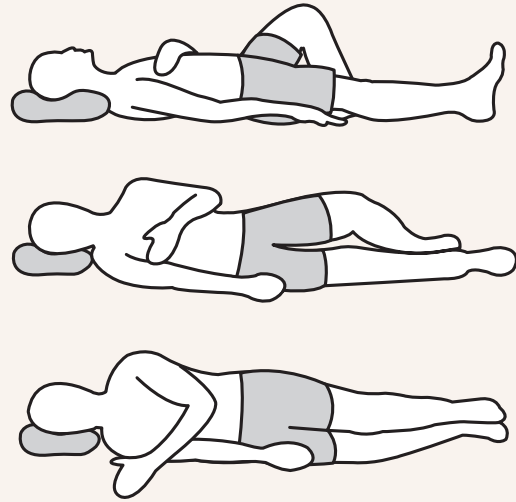
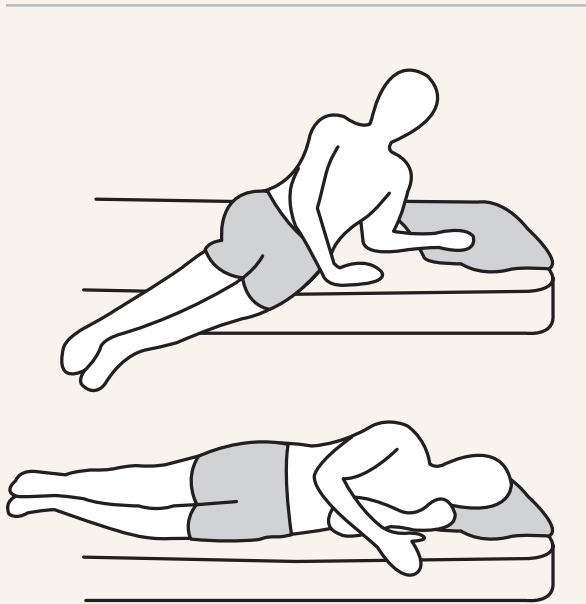


## GETTING OUT OF BED POST-OPERATION

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### Movement—Log Roll

Lying on back, bend left knee and place left arm across chest. Roll all in one movement to the right. Reverse to roll to the left. Always move as one unit.



### Movement—Get Into/Out of Bed

Lower self to lie down on one side by raising legs and lowering head at same time. Use arms to assist moving without twisting. Bend both knees to roll onto back if desired. To sit up, start from lying on side, and use same movement in reverse. Keep trunk aligned with legs.

## Day of Surgery

### WHAT SHOULD YOU DO/NOT DO?

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#### To ease breathing

- ▶ Keep the head of your bed elevated at **30 degrees**.
- ▶ Use your incentive spirometer (breathing device) while awake.

#### Do NOT drink fluids until NURSE gives the OK.

- ▶ Use the medicine cup at bedside to take 30 cc (1 ounce) of ice chips while awake.
- ▶ Record your intake.

### Diet information

- ▶ **Advance Stage 2 Diet: Once cleared by the bariatric team OR instructed by nurse**
  - ▶ Advance as tolerated after four hours of ice chips

### To prevent blood clots

- ▶ Do ankle and arm exercises while awake. (See instruction sheets)
- ▶ When in bed, wear anti-blood clot boots (PAS boots).
- ▶ Walk **every four hours** when you are awake, but can do more often if you choose.
- ▶ Record your exercise.

### Wear heart and oxygen monitor at all times.

- ▶ This allows staff to detect complications more quickly.
- ▶ Oxygen makes breathing easier and improves healing; nurse will let you know when to remove oxygen.

### Let us know

- ▶ If your pain is more than you are comfortable with or can tolerate.
- ▶ If you feel nauseated, are vomiting or extremely anxious.

### Wear your CPAP/BiPAP when you sleep.

- ▶ Ask any questions you may have about your care at home.

## **WHAT WILL CAREGIVERS DO FOR ME?**

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- ▶ Regular checks (rounding) hourly by staff to meet your needs and questions.
  - ▶ (Potty) Staff will help you to the restroom. Please call; don't fall.
  - ▶ (Position) Help you with repositioning in bed and walking.
  - ▶ (Possessions) Ensure ice/drinks, call bell and belongings are within reach.
  - ▶ (Pain) Pain assessments to help keep you comfortable.
    - ◆ **Start transition** from IV pain medication to oral liquid pain medication (Hycet).
- ▶ **Monitor** heart rate, breathing, oxygen levels, blood pressure **every four hours**. Monitor blood sugar levels **every six hours**. Monitor surgical incisions sites frequently initially then **every four hours**.
- ▶ **Apply** abdominal binder/or reinforce dressing.
- ▶ **Home medications restarted** according to surgeon's orders.
- ▶ **Keep you hydrated** with IV fluids constantly over the **first 24 hours**.
- ▶ **Measure urine output every eight hours**.

# Bariatric Nutrition During Hospital Stay

## Stage 1

This stage of the diet is 1 ounce (30 cc medicine cup) of ice chips every hour awake.

## Stage 2

Clear liquids are essential to keep you hydrated during this phase of your diet progression. This stage consists of sugar-free and caffeine-free liquids (gelatin is included) that you can see light through.

- ▶ When starting this stage of the diet progression, begin to sip 1 ounce over a 15-minute timeframe.
- ▶ Stop drinking if you feel overfull, uncomfortable or nauseous.
- ▶ Some patients tolerate different types of clear liquids at various temperatures after surgery, so you may have to try several to see what works for you. For example, warm vs. cold vs. room temperature.

### Remember

- ▶ Sip small amounts slowly.
- ▶ No straws.
- ▶ When beginning this stage, allow 15 minutes to sip 1 ounce (30 cc medicine cup) for a total of 4 ounces per hour (120 cc or 4 medicine cups per hour). Doing this will help prevent distress to your new pouch, intestinal discomfort, excess gas and bloating.

Once you are able to comfortably drink 1 ounce over 15 minutes, advance as you tolerate to drinking 1 to 2 ounces of clear liquids over 15 minutes to start working towards your goal of 64-80 ounces of fluid per day.

## Day 1 after Surgery

### **WHAT SHOULD YOU DO/NOT DO?**

---

#### Continue previous day program

- ▶ Use your incentive spirometer (breathing device) while awake.
- ▶ Do ankle and arm exercises while awake. ( See instruction sheets)
- ▶ When in bed wear anti-blood clot boots.
- ▶ Walk **every four hours** when you are awake with assistance or independently if cleared by nursing, noting that is safe for you to do so.
- ▶ Record your exercises.
- ▶ Wear heart and oxygen monitors **at all times**.
- ▶ Manage your pain; notify nurse if your pain increases or is uncomfortable to tolerate.
- ▶ Wear your **CPAP/BiPAP** when sleeping.

### Notify nurse

- ▶ If you have pain, pass gas or if you have any other needs or questions.

### Showering

- ▶ Staff will assist and protect your surgical sites and IV site with clear wrap.

### Record urine output

### Diet information: Once cleared by the bariatric team

- ▶ **Stage 3 diet:** Typically after morning rounds, if cleared by the bariatric team. Call Memorial Room Services (8-3463) to order (Refer to bariatric menu to check your options).
- ▶ **Walk** to the kitchen on the unit and help yourself to **approved fluid choices**.
- ▶ Record your intake.

### Do NOT

- ▶ Use straws, drink caffeine, carbonation, consume added sugars, soda or fruit juice.

Ask any questions you may have about your care at home.

## **WHAT WILL CAREGIVERS DO FOR ME?**

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- ▶ **Regular checks hourly** to ensure your needs are met and questions are answered.
- ▶ 4 a.m. blood draw to determine how your body is responding to your surgery.
- ▶ Early a.m.: Bariatric Teaching Rounds (7 a.m.)
  - ▶ Bariatric team surgeons, midlevels, dietitian, social worker, pharmacist and nursing staff will check on you and conduct teaching.
- ▶ **Lovenox** will be given to prevent blood clots.
- ▶ **Monitor** heart rate, breathing, oxygen levels and blood pressure **every four hours**.
- ▶ Band-aids removed at surgical sites.
- ▶ **Monitor intake/output** of liquids.
- ▶ **Oral liquid pain medication** will be continued to help with pain.
- ▶ **Test blood sugars four times** every day.

## Day 2 after Surgery

### **WHAT SHOULD YOU DO/NOT DO?**

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#### Continue previous day program

- ▶ Use your incentive spirometer (breathing device) while awake.
- ▶ Do ankle and arm exercises while awake. (See instruction sheets)

- ▶ When in bed wear anti-blood clot boots.
- ▶ Walk **every four hours** when you are awake with assistance or independently if cleared by nursing, noting that it is safe for you to do so.
- ▶ Record your exercises.
- ▶ Wear heart and oxygen monitors **at all times**.
- ▶ Manage your pain; notify nurse if your pain increases or is uncomfortable to tolerate.
- ▶ Wear your **CPAP/BiPAP** when sleeping.

### Notify nurse

If you have pain, pass gas or if you have any other needs or questions.

### Showering

Staff will assist and protect your surgical site and equipment with clear wrap.

### Record urine output

### Diet information

- ▶ **You may walk** to the kitchen on the unit and help yourself to **approved fluid choices**.
- ▶ Record your intake.

### Do NOT

- ▶ Use straws, drink caffeine, carbonation, consume added sugars, soda or fruit juice.

Ask any questions you may have about your care at home.

## **WHAT WILL CAREGIVERS DO FOR ME?**

---

- ▶ **Regular checks hourly** to ensure your needs and questions are met.
- ▶ **Early a.m.: Bariatric teaching rounds (7 a.m.)**
- ▶ Bariatric team surgeons, midlevels, dietitian, social worker, pharmacist and nursing staff will check on you and conduct teaching.
- ▶ **Lovenox** will be given to prevent blood clots.
- ▶ **Monitor** heart rate, breathing, oxygen levels, blood pressure **every four hours**. Monitor blood sugar levels **every six hours**.
- ▶ **Monitor intake/output** of liquids.
- ▶ **Oral pain medication** will be continued to help with pain.



## DISCHARGE CRITERIA

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- ▶ **Tolerating** 4-6 ounces of clear fluids per hour consistently.
- ▶ **Walking**
- ▶ **Urinating**
- ▶ **Pain well controlled** on oral pain medication **ONLY**.
- ▶ **Nausea resolved or well controlled** on oral medication **ONLY**.
- ▶ **Midlevels and dietitian will discuss discharge instructions.**

### Tips for heading home

- ▶ Wear loose-fitting clothing.
- ▶ Time your pain medication so you take a dose just before leaving the hospital.
- ▶ Have a pillow in the car so that you can hold it against your abdomen for support.
- ▶ Take a bottle of water with you so that you can sip all the way home.
- ▶ Do ankle exercise while in the car (if traveling for several hours).

### Stage 3 and Discharge Diet

At this stage of the diet progression, if you have not already, begin to try and increase your clear liquids to 1 to 2 ounces every 15 minutes. This rate will provide an average intake of 6 to 8 ounces per hour.

- ▶ Once you are able to drink 6 to 8 ounces of clear liquids per hour, start introducing liquid protein.
- ▶ Start with 1 to 2 ounces of protein shake, light soy milk, low-fat or fat-free milk or lactose-free milk per hour and the remaining ounces as clear liquid choices. Doing this will help reduce feeling overfull, bloated, nauseous and uncomfortable.
- ▶ Once you are able to tolerate 1 to 2 ounces per hour, start to slowly advance the amount you are drinking to reach your protein goal determined with your dietitian.

When you reach your goal protein shake amount, aim to drink them as “meals.” For example, if your goal is three protein shakes per day, try to drink them as breakfast, lunch and dinner. This will help you return to structuring your meals.

### Time interval:

Discharge through first post-op visit with surgeon

1. Any sugar-free, caffeine-free, carbonation-free, alcohol-free beverage
  - ▶ Water
  - ▶ Decaf tea or coffee
  - ▶ Broth
  - ▶ Sugar-free gelatin
  - ▶ Sugar-free drink mix
  - ▶ Sugar-free popsicles

## 2. Liquid protein

- ▶ Whey protein isolate protein drinks or whey protein hydrolysate
- ▶ Skim/1% milk
- ▶ Lactose-free milk
- ▶ Light soy milk

### Important reminders

1. Start your vitamins when you return home from the hospital. Take them as recommended by your dietitian.
2. If you are not tolerating liquid protein or vitamins, it is OK to reduce the amount or take a break from them. Focus on drinking clear liquids and try to restart protein and vitamins later.
3. Journal all your fluids daily.
4. Fluid goal is 64-80 ounces daily.
5. If you are drinking 40 ounces or less of fluid daily, please call the Memorial Weight-loss & Wellness Center or your surgeon's office.
6. Dehydration is the number one reason post-bariatric surgery patients are readmitted to the hospital.
7. Lactose intolerance can happen after bariatric surgery. If you are drinking low-fat or fat-free regular milk and you develop any gassiness, bloating or diarrhea, try switching to light soy milk or lactose-free milk.

### Post-op priorities

Order of importance for first 7-10 days post discharge:

1. Clear liquids
2. Liquid protein supplements
3. Post-op vitamin/mineral supplements

If after 10 days you still struggle with these three priorities, please reach out to our office.

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# Patient Discharge Instructions

## **PROCEDURE: WEIGHT-LOSS SURGERY**

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Discharge date: \_\_\_\_\_ Discharge to: \_\_\_\_\_

### Diet/Nutrition

- ▶ Continue diet as directed by your dietitian. Do not advance until directed to do so by your surgeon or dietitian.
- ▶ Begin vitamin/mineral supplements the first day home from the hospital. Follow regimen given to you by the dietitian.
- ▶ Please drink at least 64-80 ounces of fluid per day. Aim for one to two cups per hour, small frequent sips.

### Activity/Shower/Bathing/Incision care

- ▶ Shower daily and as needed. Please ensure incisions are patted dry.
- ▶ Leave steristrips alone. They will fall off or surgeon will remove.
- ▶ There are no sutures or staples to be removed for laparoscopic surgery patients.
- ▶ You may place ice packs on incisions as needed to help with pain relief during first week following surgery.
- ▶ No driving if taking pain medication.
- ▶ You must walk at least once every two hours (during waking hours) for the next four weeks.
- ▶ For longer car rides, in addition to ankle pumping, get out of the car and walk for five minutes every two hours.
- ▶ Expect to be off work two-four weeks. If you need a return-to-work note, that can be provided at the one week follow-up visit with your surgeon.
- ▶ Your stamina following surgery is often less than prior to surgery. The loss of stamina depends upon your age, general health and the complexity of the operation. It takes time to recover from surgery.

### Pain management

- ▶ You will be given a prescription for oral pain medication. If more is needed, please call your surgeon's office. DO NOT drive or perform activities which require close attention while taking oral pain medication.
- ▶ You may transition from oral pain medications to acetaminophen (Tylenol) as your pain decreases. This should be around three-four days after returning home. Transitioning off narcotics will help decrease constipation. You may take a 500 mg acetaminophen tablet one-two tablets every six hours as needed for pain relief. Do not exceed more than eight tablets within 24 hours. Do not take oral pain medication and acetaminophen together. The oral pain medication already contains acetaminophen.
- ▶ Constipation: Milk of magnesia or Miralax - follow instructions on bottle.

## Treatments

- ▶ Use incentive spirometry device (10 breaths four times per day) for one week after surgery.
- ▶ If diabetic, monitor your blood sugar fasting in the morning and at bedtime or as directed if more frequent monitoring is needed.
  - ▶ Call your surgeon if it is greater than 250 or less than 70.
- ▶ If you have high blood pressure, monitor your blood pressure at least twice daily. Record in your diary and bring to your surgeon's visit.
  - ▶ Call your surgeon for greater than 150/90 or less than 90/50.

## Medication resolution

- ▶ Take medications ordered by your surgeon (refer to list at discharge).
- ▶ DO NOT TAKE anti-inflammatory drugs (NSAIDS), such as ibuprofen, Motrin, Advil, Aleve, naproxen, meloxicam, toradol, nabumentone and Pepto-Bismal.
  - ▶ You will be given a plan by your physician about when aspirin or blood-thinning medication can be safely restarted. Examples of these medications include aspirin, coumadin, Eliquis, Pradaxa and Xarelto prior to surgery. Aspirin must be enteric-coated.

## CT Scan/Nasogastric tube precautions

- ▶ Limit oral contrast to 30–50 cc test.
- ▶ Nasogastric tube placement only by fluoroscopy.

## Reasons to call your surgeon:

- ▶ Any questions regarding your recent bariatric surgery
- ▶ Severe nausea, vomiting or dry heaves for longer than two hours
- ▶ If you vomit blood or have bloody diarrhea
- ▶ Severe pain (abdomen, chest, back, shoulder, leg or arm)
- ▶ Trouble breathing (**if severe, call 911**)
- ▶ Any abnormal feeling or concern
- ▶ Wound infection: Signs and symptoms such as temperature greater than 101°F; reddened or warm-to-the-touch incision; any drainage other than clear; swelling; odor or pain at the site
- ▶ Trouble drinking adequate fluid intake (minimum of 40 ounces per day)
- ▶ Chest pain or rapid heartbeat (more than 100 beats per minute)
- ▶ Leg pain or swelling
- ▶ Any pain not relieved by pain medication
- ▶ Urine output less than four times in 24 hours
- ▶ Any emergency room visit during first 12 months after surgery
  - ▶ Should it be necessary to go to emergency room in the first year after surgery, make sure the ER staff notifies your bariatric surgeon upon your arrival. Locally, please go to Memorial Medical Center Emergency Department.

### Follow-up visits

- ▶ Prior to leaving hospital, you will be given appointment information for your one-week follow-up visit with your surgeon, 500 class, two-week follow-up visit with your primary care provider and a one-month follow-up visit with the dietitian, behavioral health and physical therapist.

### Important telephone numbers:

- ▶ Abraham Lincoln Memorial Hospital  
217-732-2161
- ▶ Advocate BroMenn  
309-454-1400
- ▶ Decatur Memorial Hospital  
217-876-4249
- ▶ Memorial Bariatric Services  
217-788-3948  
Toll-free: 866-205-7915
- ▶ Passavant Area Hospital  
217-245-9541
- ▶ Sarah Bush Lincoln Health Center  
217-258-2525
- ▶ SIU School of Medicine  
217-545-8000
- ▶ Springfield Clinic surgeon's office  
217-528-7541 x 24200  
Toll-free: 800-444-7541

### Emergency contact:

- ▶ Memorial Medical Center  
217-788-3000
- ▶ SIU School of Medicine  
217-545-8000
- ▶ Springfield Clinic TeleNurse  
217-528-7541  
Toll-free: 800-444-7541

## **NORMAL POSTSURGICAL SYMPTOMS**

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### Swelling and bruising

- ▶ Moderate swelling and bruising is normal after any surgery.
- ▶ Severe swelling and bruising may indicate bleeding or possible infection. Notify your surgeon if this occurs.

### Discomfort and pain

- ▶ Mild to moderate discomfort or pain is normal after any surgery.
- ▶ If the pain becomes severe and is not relieved by pain medication, please contact your surgeon.

### Numbness

- ▶ Small sensory nerves to the skin surface are occasionally cut when the incisions are made or interrupted by undermining of the skin during surgery. The sensation in those areas gradually returns, usually within two to three months, as the nerve endings heal spontaneously.
- ▶ Because of some postoperative numbness, avoid heating pads until you heal.

## Itching

- ▶ Itching and occasional small shooting electrical sensations within the skin frequently occur as the nerve endings heal. These symptoms are common during the recovery period. Ice, skin moisturizers, vitamin E oil and massage are often helpful.

## Redness of scars

- ▶ All new scars are red, dark pink or purple and take about a year to fade.
- ▶ We recommend you protect your scars from the sun for a year after surgery. Even through a bathing suit, sunlight can reach the skin and cause damage. Wear a sunscreen with an SPF of at least 15 when out in sunny weather.

## **COMMON COMPLAINTS AFTER BARIATRIC SURGERY**

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### Nausea

Nausea can be related to poor chewing of food, overeating, under-eating, increased sensitivity to odors or tastes, pain medication, post-nasal drip or dehydration. Medications, called anti-emetics, are sometimes given. In rare cases, nausea can lead to repeated vomiting. Dehydration can result. If dehydration is severe, the patient may be readmitted to the hospital. Call the surgeon's office if nausea lasts more than 12 hours and/or there is persistent vomiting.

- ▶ Odors can sometimes lead to nausea after surgery. Post-op patients report that putting a few drops of peppermint essential oil, available at many health food stores, on a handkerchief can be very helpful if you are bothered by odors after surgery. Avoid perfumes and scented lotions. If food odors bother you, try to have someone else prepare your meals or prepare bland foods. Other patients have found relief by sucking on a cinnamon stick.
- ▶ If nausea is interfering with your drinking of fluids, you may want to try ginger, peppermint tea, fennel tea, decaffeinated green tea or water with lemon (hot or cold).
- ▶ If you develop nausea shortly after taking a dose of pain medication, call the surgeon's office to discuss whether you should have a change in your pain medication.
- ▶ Stay hydrated – fluids should be continuously sipped all day long to prevent dehydration. You need a minimum of 64-80 ounces of fluids per day. Increase this amount in hot weather.

### Vomiting

- ▶ Postoperative vomiting is usually due to poor eating technique and/or eating too much. It can take several weeks to adjust to your new pouch and to new eating habits. In the beginning, it can be difficult to gauge how much food will fill your pouch. (Fullness is experienced as a pain or pressure behind your breastbone.) Chew your food to the consistency of baby food. Use a baby fork or toothpick to eat, as this will help you slow down. Measure your food carefully before meals as this will help you avoid overeating.

### **Remember, vomiting is usually caused by:**

- ▶ Eating too fast
- ▶ Not chewing food properly
- ▶ Eating food that is too dry
- ▶ Eating too much food at once
- ▶ Eating solid foods too soon after surgery
- ▶ Drinking liquids either with meals or right after meals
- ▶ Drinking with a straw
- ▶ Lying down after a meal

▶ If vomiting occurs in the first few weeks after surgery, stop eating solid foods and sip clear liquids (water, sugar-free drink mixes, broth, decaffeinated tea, etc.) for 24 hours before resuming solid foods.

▶ If vomiting continues for more than 24 hours, contact your surgeon's office.

### **Dehydration**

- ▶ Dehydration will occur if you do not drink enough fluids. This is particularly important in the first and second weeks after surgery. Symptoms include fatigue, dark-colored urine, dizziness, fainting, nausea, low back pain (a constant dull ache across the back) and a whitish coating on the tongue.
- ▶ Dehydration may lead to other complications. Contact your surgeon if you believe you may be dehydrated. In some cases, you will require admittance to the hospital so fluids can be administered. You may need to go to the infusion unit for outpatient intravenous fluid
- ▶ If you have difficulty drinking fluids due to nausea, suck on ice chips.

### **Mild to moderate dehydration is likely to cause:**

- ▶ Dry, sticky mouth
- ▶ Sleepiness or tiredness
- ▶ Thirst
- ▶ Decreased urine output
- ▶ Few or no tears when crying
- ▶ Muscle weakness
- ▶ Headache
- ▶ Dizziness or light-headedness

### **Severe dehydration, a medical emergency, can cause:**

- ▶ Extreme thirst
- ▶ Irritability and confusion
- ▶ Very dry mouth, skin and mucous membranes
- ▶ Lack of sweating
- ▶ Little or no urination—any urine produced will be dark yellow or amber
- ▶ Sunken eyes
- ▶ Shriveled and dry skin that lacks elasticity and doesn't "bounce back" when pinched into a fold
- ▶ Low blood pressure
- ▶ Rapid heartbeat
- ▶ Fever
- ▶ In the most serious cases, delirium or unconsciousness

### Bowel habits

Constipation can be a problem. A stool softener may be recommended to avoid rectal difficulties. Dehydration also contributes to constipation. For some following gastric bypass, lactose intolerance may develop. Lactose intolerance (a negative reaction to cow's milk products) can also lead to loose stools and diarrhea. For most, the lactose intolerance associated with bariatric surgery is temporary.

### Dumping syndrome

Symptoms include weakness, abdominal cramps, nausea, diarrhea, sweating, fatigue, weakness and a feeling of faintness and is brought on by eating foods with high concentrations of sugar. The sugar is "dumped" quickly from the stomach pouch to the small intestine, leading to these unpleasant symptoms. The symptoms usually last about 30 minutes. Avoid foods and drinks that contain sugar.

### Flatulence

Gastric bypass patients have a shortened bowel, causing gas to be more odorous and expelled more forcefully. Gas is caused by swallowed air and the normal breakdown of certain foods by harmless bacteria naturally present in the large intestines. Carbohydrates can be particularly troublesome, especially beans, whole grains, cow's milk products, vegetables and some fruits. Carbonated beverages and foods containing sorbitol can be problematic. If problematic, ask your bariatric dietitian if probiotic supplementation is right for you.

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<b>Commonly Reported Psychosocial Concerns After Bariatric Surgery</b>	<b>Weeks 1-4</b>	<b>Months 1-3</b>	<b>Months 3-6</b>	<b>Months 6-12</b>	<b>Months 12 +</b>
Pain from surgery	X				
Regret – “Why did I do this to myself?”	X	X			
Fatigue	X	X			
Medication malabsorption – symptoms of depression or anxiety return, discontinuation symptoms (see handout on Discontinuation Syndrome)	X	X			
Boredom with bariatric diet – not much variety in the pre-op diet and first month post-op	X	X			
Time management – difficulty prioritizing vitamins, fluids, meals, appointments when returning to work	X	X			
Food grief/loss – experiencing a sense of loss or sadness about food you are no longer able to eat or cannot eat at this time, not being able to turn to food for comfort	X	X	X		
A feeling of disappointment when “everything will be okay after surgery” doesn’t happen	X	X	X		
Too much exercise and not enough calorie intake	X	X	X		
Social gatherings with food – ambivalence or resistance from others to adjust to your new dietary needs	X	X	X	X	X
Increased attention from others – others making comments about your Weight-loss, asking about your Weight-loss, asking about surgery, others making insensitive remarks	X	X	X	X	X
Depression – sadness, tearfulness, worthlessness, hopelessness, loss of motivation, loss of pleasure, irritability	X	X	X	X	X
Anxiety – jitteriness, irritability, agitation, worry, obsessive thoughts, difficulty sleeping, “pit” in your stomach	X	X	X	X	X
Distorted self-image – not seeing Weight-loss when looking in the mirror or not “feeling” like you are losing weight		X	X	X	X
“Testing the waters” with alcohol, caffeine, unhealthy food choices			X	X	X

AFTER DISCHARGE	TASK	DATE	TIME	INSTRUCTIONS
24 Hours	<ul style="list-style-type: none"> <li>• Phone call from bariatric clinic nurses</li> </ul>			
1 Week	<ul style="list-style-type: none"> <li>• Surgeon Visit</li> </ul> <p>This visit will be scheduled upon discharge from the hospital.</p> <ul style="list-style-type: none"> <li>• Bari 500 Class</li> </ul>			
1 Month	<ul style="list-style-type: none"> <li>• Surgeon Visit</li> <li>• Nutrition Visit</li> <li>• Physical Therapy Visit</li> <li>• Psychosocial Visit</li> <li>• Labs</li> </ul>			<ul style="list-style-type: none"> <li>• Call surgeon's office if you need lab orders.</li> <li>• Bring food logs to nutrition visit.</li> </ul>
3 Months	<ul style="list-style-type: none"> <li>• Midlevel Visit (91 days after surgery)</li> <li>• Nutrition Visit</li> <li>• Physical Therapy Visit</li> <li>• Psychosocial Visit</li> </ul>			<ul style="list-style-type: none"> <li>• Bring food logs to nutrition visit.</li> </ul>
6 Months	<ul style="list-style-type: none"> <li>• Midlevel Visit</li> <li>• Nutrition Visit</li> <li>• Physical Therapy Visit</li> <li>• Psychosocial Visit</li> <li>• Labs</li> </ul>			<ul style="list-style-type: none"> <li>• Complete labs at least two weeks prior to your visits to ensure they will be resulted by the time of your visits.</li> <li>• Call the WLWC if you need lab orders.</li> <li>• Bring food logs to nutrition visit.</li> </ul>
12 Months	<ul style="list-style-type: none"> <li>• Midlevel Visit</li> <li>• Nutrition Visit</li> <li>• Physical Therapy Visit</li> <li>• Psychosocial Visit</li> <li>• Labs</li> </ul>			<ul style="list-style-type: none"> <li>• Complete labs at least two weeks prior to your visits to ensure they will be resulted by the time of your visits.</li> <li>• Call the WLWC if you need lab orders.</li> <li>• Bring food logs to nutrition visit.</li> </ul>
18 Months	<ul style="list-style-type: none"> <li>• Midlevel Visit</li> <li>• Nutrition Visit</li> <li>• Psychosocial Visit</li> </ul>			
Bari Annual Visit	<ul style="list-style-type: none"> <li>• Midlevel Visit</li> <li>• Nutrition Visit</li> <li>• Psychosocial and Physical Therapy as needed.</li> <li>• Labs</li> </ul>			<ul style="list-style-type: none"> <li>• Complete labs at least two weeks prior to your visits to ensure they will be resulted by the time of your visits.</li> <li>• Call the WLWC if you need lab orders.</li> <li>• Bring food logs to nutrition visit.</li> </ul>

## **TIMELINE FOR FOOD REINTRODUCTION AFTER DISCHARGE**

Reminder: Introduce one new food at a time

### **Seven to 10 days post-op**

- ▶ Soft, high-protein foods

### **Four weeks post-op**

- ▶ Soft, well-cooked fruits and vegetables

### **Five weeks post-op**

- ▶ Solid meats

### **Six weeks post-op**

- ▶ Reintroduce milk, if lactose intolerant

### **Eight weeks post-op**

- ▶ Healthy fats

### **Nine weeks post-op**

(Balanced Plate Model again; only smaller plate)

- ▶ Higher-fiber foods
- ▶ Protein bars can be introduced

## **Stage 4: Soft High-Protein Foods**

Time interval: After first post-op visit with the surgeon/Bari500

(Typically 10 days post-op) through first post-op visit with the dietitian

(Typically four weeks post-op) or as otherwise directed

- ▶ A high-protein diet is emphasized, especially the first few weeks and months after surgery.
  - ▶ Aids in wound healing
  - ▶ Essential for maintaining muscle during Weight-loss
- ▶ The amount of protein you need depends on your lean body mass.
- ▶ Refer to your personalized nutrition prescription form to see your protein goal (grams per day).
- ▶ Meal timeframe: 20 to 30 minutes.
- ▶ Amount per meal: no more than 1/4 cup. Note: 1/4 to 1/3 cup = 4 to 6 tablespoons
- ▶ Take small bites, the size of a pencil eraser.
- ▶ You may be able to only tolerate a few tablespoons at each meal initially.
- ▶ Do not drink fluids with your meals.
  - ▶ Stop drinking 15 minutes before a meal.
  - ▶ Wait 30 minutes after a meal before drinking.
- ▶ Drink protein shakes between your meals, as your “scheduled snacks,” to assist you in meeting your calorie and protein needs.

### High-protein choices:

- ▶ Egg or egg substitute
- ▶ Minced/chopped, skinless chicken or fish
- ▶ Tuna fish (water-packed only): May add 1 tablespoon plain, Greek yogurt to moisten
- ▶ Tofu
- ▶ Cottage cheese (low-fat/fat-free)
- ▶ Light yogurt (blended), Greek yogurt or Kefir
- ▶ Cheese (low-fat/fat-free)
- ▶ Cooked beans, bean soups (black, cannellini, fava, garbanzo, lima, navy, pinto, red, chickpeas, lentils)

### Low-protein choices for variety:

- ▶ Hot cereal, such as oatmeal or Cream of Wheat
- ▶ Sugar-free, fat-free pudding
- ▶ Unsweetened applesauce (Splenda-sweetened is acceptable)

- ▶ Thin slice of whole-grain toast with crust removed (i.e., Healthy Life bread toasted, sandwich thin, whole-grain tortilla toasted)
- ▶ Whole-grain cracker (i.e., Wheat Thins, Kashi, Wasa, Triscuits)

## BREAKFAST IDEAS

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### High-protein oatmeal or Cream of Wheat

Make cup of oatmeal (according to the directions on the package), mix in 1 to 2 tablespoons of vanilla or unflavored protein powder. Note: you can add sugar-free coffee syrups, PB2 (powdered peanut butter) or Splenda and cinnamon to flavor the oatmeal.

*Cream of Wheat:*

*protein: 10 grams; calories: 70*

### Eggtastic eggs

Scramble an egg or cup of Egg Beaters. Add one wedge of flavored Laughing Cow cheese to add additional moisture. Note: try scrambling eggs in microwave for softer, more moist scrambled eggs.

*With whole egg: protein: 9 grams; calories: 135*

*With Egg Beaters: protein: 7 grams; calories: 65*

### Greek yogurt cream cheese

Line a colander with a dish towel and place it over a bowl. Spoon Greek yogurt into the towel and fold the towel over the top. Let drain overnight. In the morning, it will be cream cheese that can be flavored with Stevia, fruit, chives or spices.

### Eggtastic omelet

Make an omelet with one egg and 1 tablespoon of 2 percent reduced-fat cheese of your choice.

*With whole egg: protein: 11 grams; calories: 125*

*With Egg Beaters: protein: 9 grams; calories: 65*

### Cottage cheese and fruit

Mix 2 tablespoons of sugar-free applesauce with 3 tablespoons of cottage cheese.

*Protein: 6 grams; calories: 60*

## LUNCH AND DINNER IDEAS

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### Crackers and cheese

One slice of 2 percent cheese and four Wheat Thins. Note: try different flavors and varieties of cheese and Wheat Thins to add variety.

*Protein: 4 grams; calories: 95*

### High-protein tuna/chicken salad

Combine 2 or 3 tablespoons of low-fat Greek yogurt, one can of tuna or chicken and onion powder, garlic powder, salt and pepper to taste.

*Protein: 15 grams; calories: 115 per ¼ cup serving*

### High-protein egg salad

Combine four large hard-boiled eggs (cooled and shelled), 1/8 cup mayonnaise, a cup of fat-free plain yogurt and salt and pepper to taste. Note: you can add pickle juice or other spices to season. Remember to chop eggs into tiny pieces to avoid frothing.

*Protein: 8 grams; calories: 130 per ¼ cup serving*

### Tiny tuna melt

Toast one piece of Healthy Life bread. Trim crust off and cut bread into four pieces.

Make high-protein tuna salad. Place 1 to 2 tablespoons of tuna salad on piece of toast, top with slice of 2 percent cheese and top with another piece of toast.

salt and 1 teaspoon of black pepper. Pulse until smooth, scraping down the sides as needed. Refrigerate for at least one day after preparing. Let stand at room temperature for 30 minutes prior to serving.

*Protein: 1.5 grams; calories: 44 per 2 tablespoon serving*

### Hummus Among Us

Place two 15.5 ounce cans of garbanzo beans, rinsed and drained, and two crushed garlic cloves in a food processor. Pulse five times or until chopped. Add cup of water, ¼ tahiti, 3 tablespoons of fresh lemon juice, 2 tablespoons of extra virgin olive oil, ¾ teaspoons of

For an added protein punch, add 1 tablespoon of Greek yogurt to 2 tablespoons of hummus for an added creamy texture and 3 grams of protein. Or add 1 tablespoon of non-flavored or chicken-soup-flavored protein powder to add an additional 6 grams of protein.

			Calories	Protein
DAY 1	Breakfast	¼ cup high-protein oatmeal	70	10
	Snack	1 protein shake with 8 oz milk*	200	30
	Lunch	3 tbsp cottage cheese with 4 Wheat Thins	65	6
	Snack	1 protein shake with 12 oz milk*	245	34
	Dinner	¼ cup high-protein egg salad ¼ piece of whole-grain toast	140	8
	Snack	1 cup milk*	90	8
	TOTAL			810
DAY 2	Breakfast	1 egg omelet with 1 tbsp cheese	125	11
	Snack	1 protein shake with 8 oz milk*	200	30
	Lunch	Tiny tuna melt	110	11
	Snack	1 protein shake with 8 oz milk*	200	30
	Dinner	3 tbsp high-protein hummus/ 4 melba crackers	90	7
	Snack	1 sugar-free hot chocolate made with 6 oz milk*	90	8
	TOTAL			815
DAY 3	Breakfast	Light and Fit Greek yogurt	80	12
	Snack	1 protein shake with 12 oz milk*	245	34
	Lunch	1 2% cheese stick and 4 whole-grain crackers	105	6
	Snack	1 protein shake with 12 oz milk*	245	34
	Dinner	¼ cup bean soup with 1 tbsp unflavored protein added	100	9
	Snack	2 tbsp no-added-sugar applesauce	30	0
	TOTAL			805

*\*skim milk or fat-free/low-fat lactose-free milk*

## **FOUR WEEKS POST-OP: COOKED VEGETABLES AND FRUITS**

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- ▶ Reintroduce soft, well-cooked vegetables into your diet and soft and/or well-peeled fruits.
- ▶ Try one new vegetable/fruit per day to assist in identification of food intolerance.
- ▶ Begin with 1 tablespoon and gradually increase to 2 tablespoons at one or two meals per day.

### Good choices to start:

- Steamed carrots
- Steamed green beans
- Cooked peas
- Soft, ripe bananas
- Low-sodium tomato sauce
- Canned peaches (packed in own juice; rinsed and drained)
- Canned pears (packed in own juice; rinsed and drained)
- Cooked sweet potato (without skin)
- Canned mandarin oranges (drained)
- Salsa

### Tips

- ▶ Start with above vegetables and fruits to establish tolerance. Once tolerance is established, try more cooked cruciferous vegetables (like broccoli and cauliflower).
- ▶ Always consume protein foods first.
- ▶ Avoid trying a new fruit and new vegetable at the same meal.
- ▶ Be creative. Add seasoning such as Mrs. Dash, ButterBuds, onion and garlic powder or fresh or dried herbs to add flavor.
- ▶ If gas occurs with cruciferous vegetables, you can try Beano to assist in tolerance.

## **FIVE WEEKS POST-OP: SOLID MEATS**

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- ▶ Reintroduce more solid meats and/or more textured proteins into your diet.
- ▶ Begin with 1 to 2 tablespoons.
- ▶ Avoid dry meats/protein sources.
- ▶ Try only one new type of meat/textured protein source per day.
- ▶ Do not introduce any new vegetables/fruits in the same meal you are trying a new meat/textured protein source.
- ▶ Use moist cooking methods such as baking, poaching, stewing, steaming or slow cooking. Avoid grilling, pan sautéing or other dry cooking methods.
- ▶ Small bites (approximately the size of a pencil eraser) are key.
- ▶ Chew food 20 to 30 times, to an applesauce consistency, before swallowing.

### Good choices to start:

- Ground turkey moistened with tomato sauce (90 percent or leaner; without skin)
- Ground chicken moistened with tomato sauce (without skin)
- Baked fish (such as salmon, tuna, tilapia or cod)
- Lean deli meats (such as deli turkey or chicken)
- Lean or extra-lean ground beef, venison or bison with tomato sauce (90 percent or leaner)
- Textured soy proteins (such as Boca crumbles or soy sausage)

### Meat preparation tips

- ▶ Pound thick cuts to 1/2 inch thick.
- ▶ Use meat tenderizer when preparing lean animal proteins to assist with tolerance.
- ▶ Cook meats/textured proteins in low-fat creamed soups, tomato sauces or broths.
- ▶ Do not overcook meat/textured protein sources.
- ▶ Tent baking pan with foil to maintain moisture.

### **SIX WEEKS POST-OP: MILK** (If not presently introduced or tolerated)

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- ▶ Some people may not tolerate milk; you may stop if it does not agree with you.
- ▶ Lactose intolerance is not uncommon after gastric bypass surgery.
- ▶ Symptoms: cramping, diarrhea and bloating

### Solutions:

- Lactose-free milk (i.e., fat-free Lactaid milk)
- Low-fat, low-sugar soy milk (i.e., Light Silk soy milk)
- Low-sugar almond milk (i.e., Unsweetened Almond Breeze)
- Take lactase enzyme (chewable tablet) before drinking skim cow's milk.

### **SIX WEEKS POST-OP SAMPLE MEALS**

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#### Breakfast

- ▶ 2 tablespoons scrambled Egg Beaters or egg
- ▶ 1 tablespoon grated reduced-fat cheese
- ▶ 1 tablespoon mild salsa

#### Lunch

- ▶ 3 tablespoons low-fat cottage cheese
- ▶ 1 tablespoon canned green beans

#### Dinner

- ▶ 2 ounces of chicken cooked with salsa and low-sodium taco seasoning
- ▶ 1 tablespoon cooked carrots with Splenda and cinnamon
- ▶ 1 tablespoon canned peaches

#### Between meals

- ▶ 80 ounces of fluids (spaced 15 minutes before and 30 minutes after eating)
- ▶ Clear liquids
- ▶ Protein shakes to meet your protein goal, as advised by the dietitian

## **EIGHTH WEEK POST-OP: HEALTHY FATS**

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- ▶ Fat is slower to empty from the stomach, and high-fat foods can sometimes cause nausea in the early postoperative period.
- ▶ May better tolerate if servings are spaced throughout the day.
- ▶ At this point, you may begin to reintroduce healthy fats into your diet.
- ▶ Aim for a total of less than 35 grams of fat/day.
- ▶ Choose mono- and poly-unsaturated fats and avoid saturated and/or trans fats.
- ▶ Start with 1 to 2 teaspoons per day.

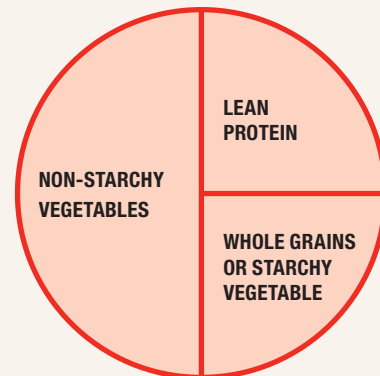
### Good choices:

- Peanut butter and/or nut butters (smooth)
- Avocado
- Olive oil
- Canola oil
- Peanut oil
- Flax seed oil
- Olive oil based salad dressings

## **NINTH WEEK AND BEYOND: INTRODUCE HIGHER-FIBER FOODS AND “BARIATRIC GENERAL DIET” (STAGE 5)**

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- ▶ Fiber also slows digestion and is more work for the gut. High-fiber foods can be more difficult to tolerate in the early postoperative period.
- ▶ Fiber is an essential part of a healthful diet and weight maintenance.
- ▶ At this point, you can begin incorporating more high-fiber foods back into your diet. Use the “Plate Model” as your guide for balance, just as you did pre-operatively. Only now, the plate is on a smaller scale.



### Good choices:

#### **Whole grains:**

- Low-sugar cold cereals, whole-wheat pasta (such as Smart Taste), whole-grain flat bread (such as Flatouts), whole-grain crackers

#### **Beans**

#### **Legumes**

#### **Nuts, seeds**

#### **Lentils**

#### **Raw fruits:**

- Peels and/or seeds removed if needed

#### **Chia seeds, flax seeds**

#### **Raw vegetables:**

- Peels removed if needed; introduce cruciferous vegetables (such as cabbage, cauliflower, broccoli) last



### Be aware of common problem foods/textures:

- Dry meats
- Greasy foods
- Hard-boiled eggs
- Rice
- Fibrous vegetables
- Celery
- Asparagus
- Nuts
- Coconut
- Seeds and skins of fruits or vegetables
- Membranes from citrus fruits
- Corn
- Dried fruit
- Untoasted bread or doughy bread

### Don't forget

- ▶ Maintain your meal structure. Don't skip meals.
- ▶ Eat protein foods first.
- ▶ Eat slowly and take small bites.
- ▶ Use a teaspoon, toothpick or baby fork to assist in small bites.
- ▶ Chew food (approximately 20 to 30 times) until it is of pureed consistency.
- ▶ Stop eating or drinking with the first sensation of satiety.
- ▶ Protein supplements will be used initially as your scheduled snacks.
- ▶ Take your vitamin or mineral supplements as directed by your surgeon or dietitian.
- ▶ Do not drink fluids with meals. Wait 15 minutes before and 30 minutes after eating to drink.
- ▶ Drink acceptable/hydrating fluids between meals. Aim for one to two cups per hour.
- ▶ Make each bite count. Fill your pouch with quality foods high in nutrients (such as turkey bacon instead of high-fat pork bacon) or lower-fat protein food sources.
- ▶ Log your intake, now and always!

### Troubleshooting

If nausea or vomiting occurs, particularly after a food is reintroduced, go back one step on your diet for the next 24 hours.

#### **Pay attention to:**

- ▶ Fluid needs – “Am I meeting my fluid goal?”
- ▶ Eating slowly – “Did I eat too quickly?”
- ▶ Chewing foods thoroughly – “Was my food chewed down to applesauce consistency before I swallowed?”
- ▶ If nausea or vomiting persists, call your surgeon.

## SUCCESS AFTER SURGERY

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Losing and maintaining weight can be challenging. Research has shown us certain principles can help you be successful. Colleen Cook describes these in more detail in her book, “The Success Habits of Weight-loss Surgery Patients”. Here are some of those principles so you can continue to monitor your progress.

### Personal accountability

- ▶ Weigh yourself. Weighing yourself once a week is ideal: more often becomes a little obsessive; less often makes it too easy to slip!
- ▶ Keep a food diary. The best way to know how much you are consuming is to log your food. If you are not able to do this every day, then try to at least three to four times a week.

### Portion control

One of the main goals of bariatric surgery is to drastically reduce the size of the stomach so that you can feel full on a smaller amount of food. Yet some people who have had weight-loss surgery still find ways to regain their lost weight. This is done in three main ways: eating until totally stuffed, thereby stretching and enlarging the small stomach; eating nothing but high-calorie, high-fat foods; and grazing/snacking. Steps must be taken to ensure the preservation of that built-in portion control mechanism bariatric surgery patients have.

- ▶ Know how big (or small) your new stomach is and how much food it can hold. Measure and weigh your foods to ensure you meet your nutrition goals and don't overstuff your pouch.
- ▶ Eat slowly enough to recognize the feeling of fullness, and stop eating when full. Try to make each meal last 20 minutes. Put your fork down between bites, and chew your foods thoroughly.
- ▶ Aim for satiety. Satiety is the feeling of being full and satisfied after eating.

### Nutrition

- ▶ Schedule meals and snacks
- ▶ Eat nutrient-dense foods. Make every bite count! Foods that are nutrient-dense include lean meats, poultry and fish; low-fat dairy products; fruits and vegetables; and high-fiber breads and cereals. Read Nutrition Facts panels to find foods that will give you more bang for your buck nutritionally.
- ▶ Ensure adequate protein intake. Adequate protein intake is critical for weight-loss surgery patients. There should be at least 2 ounces of a high-protein food at all three meals every day, and the high-protein portion of the meal should be eaten first before moving on to any other kinds of food.
- ▶ Eat breakfast. This will help you to choose lower-calorie foods throughout the rest of the day.
- ▶ Avoid carbonation/caffeine/alcohol/high-sugar beverages.
- ▶ Adequate fluids—make them a priority! Water helps maintain proper muscle tone, prevents dehydration, improves skin and hair and removes excess toxins from the body. It increases our energy level, suppresses our appetite and helps to maintain our body weight.

## Physical activity

Physical activity is a critical component in the ability to maintain significant Weight-loss. Research demonstrates consistent correlations between physical activity, self-monitoring behaviors and maintenance of Weight-loss. People who exercise, weigh themselves regularly and keep track of what they eat tend to maintain their Weight-loss.

## Vitamin and mineral supplements

Weight-loss surgery success is not only measured by weight and body composition changes but by good nutritional health. Commit to making your post-op vitamin and mineral supplementation a top priority. Post-op supplementation ensures all of your vitamin/mineral needs will be met after surgery, as well as aid with an efficient metabolism.

## **CHALLENGES AFTER SURGERY**

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In this section, we are going to address some challenges that you might have faced or are currently facing and how to address them so you can be healthy—both mentally and physically. While most patients report positive changes in their lives after having bariatric surgery, there are also some negative experiences that may happen with dramatic Weight-loss. Some of the most commonly reported challenges are:

- ▶ Loose skin. With weight gain, the skin stretches to accommodate underlying excess muscle and fat. After Weight-loss, skin tries to recoil or bounce back. The amount of skin bounce-back essentially determines how much loose skin you will have. There are multiple factors that determine if your skin will be able to tighten up, including the age and elasticity of the skin. The age of the skin is complicated by increased risk factors such as smoking, sun damage, malnutrition, poor vitamin intake and genetics. Some patients choose to have reconstructive surgery while others do not.
- ▶ Still feeling “big.” Even after losing a significant amount of weight, some patients feel the same size as before. This can be for several reasons, including losing weight so rapidly that your mind hasn’t been able to catch up with your body. If you struggled with weight your entire life, it might take a little longer for you to accept the thinner you. Give yourself some time. If you notice these thoughts are impacting your decisions to eat, exercise or socialize with others, please contact us immediately.
- ▶ Change in relationships. Dramatic Weight-loss is not only going to affect you, it will also impact the relationships you have with others. Spouses, children, parents, friends, siblings and co-workers—even the relationship you have with yourself. This change does not have to be negative; however, preparing for it is important. Make sure you are communicating your needs and feelings with others if you start to notice changes.
- ▶ Switch addiction. For some, food was calming. It was used to celebrate and commiserate. After bariatric surgery, you may still want to do these things, so how are you going to handle it? Make sure you have healthy ways to cope with your emotions. If you feel there is a behavior that has started taking control over you, please contact our office immediately.

## POSSIBLE LONG-TERM COMPLICATIONS

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### Absence of menstrual periods

Irregular periods are very common in women experiencing rapid Weight-loss. Less frequent and lighter periods are most common, but in some it is also common to have a heavy period. You may need extra iron supplementation to accommodate for the blood lost.

### Pregnancy

Women of childbearing years should have a birth control plan in place before surgery. We recommend you avoid pregnancy for at least 12 months after any bariatric surgery. Your focus needs to be on healthy Weight-loss, and pregnancy will certainly complicate your weight-loss results. You will also be at greater risk of nutritional problems during pregnancy. Oral contraceptives are NOT recommended in women who have had gastric bypass (due to decreased absorption by the intestine). Women will want to have a thorough discussion with their physician about which birth control method is best for them. If you become concerned that you are pregnant, it is imperative you receive a urine pregnancy test as soon as you are suspicious. If you do become pregnant, you must call your surgeon's office right away. We will refer you to the program dietitian and also collaborate with your family practice physician or OB/GYN to ensure proper prenatal care.

### Transient hair loss/skin changes

Hair loss is expected after rapid Weight-loss and is temporary. Your body is going through tremendous change and hair loss or hair thinning is a frequent effect of the stress that occurs with the body. For some, skin texture and appearance may change. It is not uncommon for patients to develop acne or dry skin after surgery. Minimize changes to your hair and skin by taking your multivitamins daily and making sure you consume the recommended amount of protein per day.

### Gallstones

The development of gallstones is related to the rapid and significant amount of Weight-loss and therefore is highest in the first six months after surgery. Gallstones are not a complication of surgery, but rather a complication of rapid Weight-loss. Obese persons have a very high rate of gallstone formation compared to normal weight persons. By age 50, nearly 50 percent of morbidly obese women have developed gallstones.

### Bowel obstruction

This complication involves a blockage caused by postoperative swelling, adhesions (scar tissue) or twisting affecting the intestine. This can occur after any abdominal surgery. This condition requires emergency surgery. Signs of a bowel obstruction may include dehydration, vomiting, abdominal pain, fever and absence of bowel movement; however, in the case of a partial bowel obstruction diarrhea may result.

### Peptic ulcer

Any type of stomach surgery leaves one more susceptible to the development of an acid-peptic ulcer. Tobacco smoking, aspirin and non-steroidal anti-inflammatory drugs (NSAIDS) and alcohol increases the risk of a peptic ulcer. All bariatric patients are instructed to avoid aspirin, NSAIDS (ibuprophen, Advil, Motrin, naproxen sodium, Aleve) for life after surgery. Former smokers must not resume smoking after surgery as their risks increase dramatically.

### Stenosis/outlet obstruction

Postoperative swelling or chunks of food can lead to a blockage of the opening between stomach and intestine. Symptoms may include pain and vomiting of undigested food. If untreated, nutritional problems can result. Diagnosis is usually done with endoscopy. Treatment may be done with an endoscopic procedure.

### Vitamin and mineral deficiency

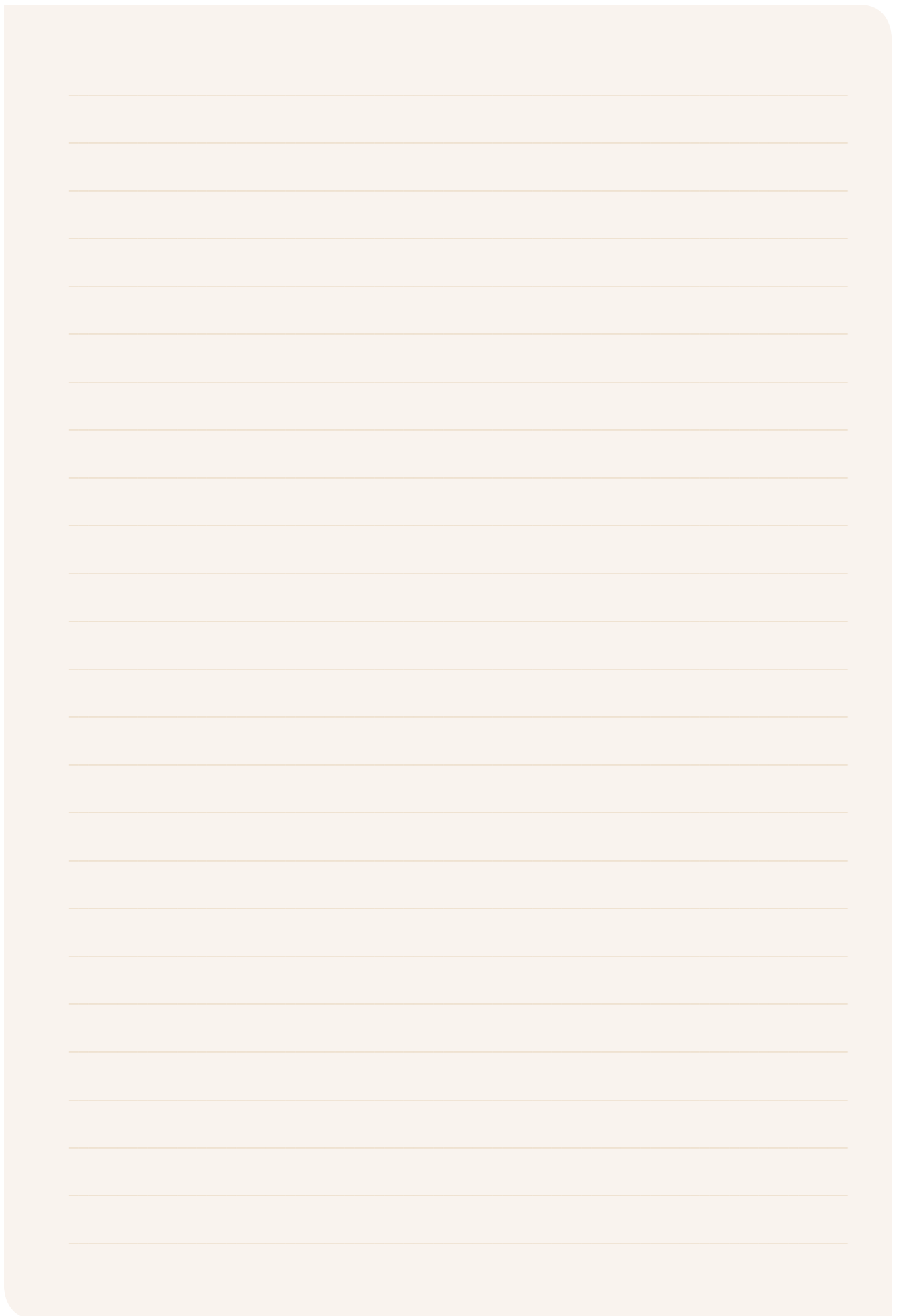
Follow-up monitoring by your surgeon, physician and dietitian is critical to prevent and treat vitamin and mineral deficiencies. These can be very subtle at first.

Approximately 11 percent of bypass patients experience some form of vitamin deficiency, with close to 50 percent experiencing a mineral deficiency. These sorts of deficiencies may not emerge or may not become symptomatic until months, even years after surgery. For that reason, lifelong nutrition monitoring and lifelong vitamin and mineral supplementing is critical.

### Excess skin

After rapid, substantial Weight-loss, patients may experience problems with excess skin. Skin irritation, even infection can result. Removal of excess skin (plastic surgery) is often desired by patients.







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