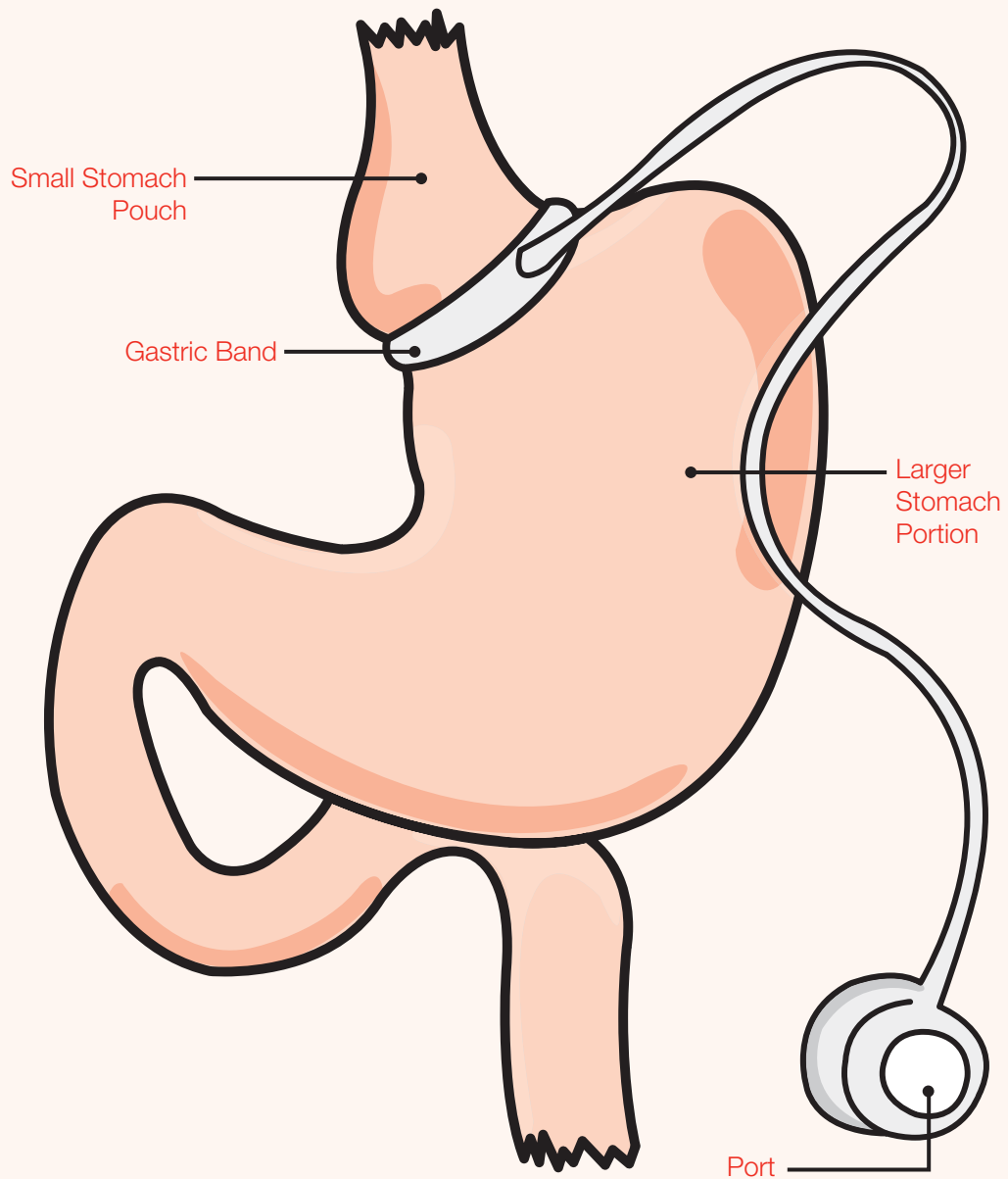


Bariatric Procedure

L A P A R O S C O P I C
A D J U S T A B L E G A S T R I C
B A N D S U R G E R Y

When combined with lifestyle changes, laparoscopic adjustable gastric band surgery is a very useful tool to help you lose weight and keep it off. On average, people who undergo this procedure lose 25-50 percent of their excess weight over a five-year period. In addition to losing weight, most people gain self-confidence and improve their quality of life after surgery. The Memorial Weight Loss & Wellness Center (MWLWC) is excited to support you as you move toward better health. Thank you for choosing us to be a part of your journey.



**LAPAROSCOPIC ADJUSTABLE GASTRIC BAND
RESTRICTIVE**

Laparoscopic adjustable gastric band is typically for patients with lower BMIs (between 30 and 40) who are extremely active.

- ▶ A silicone elastic ring is placed surgically around the upper part of the stomach. Then the ring is inflated with saline solution.
- ▶ Tubing connects to a port placed beneath the abdominal skin. The doctor injects or withdraws saline until the ideal tension is reached.
- ▶ Increasing or decreasing the amount of saline in the ring changes the tightness of the opening from the upper stomach to the lower stomach.
- ▶ Tightening the band effectively leads to a decreased sense of hunger and allows the patient to eat less and still feel full.
- ▶ The band is inserted laparoscopically, resulting in a shorter hospital stay and faster recovery compared to a procedure using an open incision.
- ▶ Laparoscopic adjustable gastric band is an outpatient procedure.
- ▶ Following surgery, patients require monthly clinic visits for the first year to monitor results and the possible need to adjust the band. The frequency of band adjustments decreases after the first year postsurgery.
- ▶ Adjustments must be completed by a qualified, appropriately trained healthcare provider.
- ▶ This is a reversible procedure; however, it is intended to be a permanently implanted device. Removal of the band would eliminate restriction and may lead to weight regain.

Laparoscopic Adjustable Gastric Band (LAGB)

It is important you understand the benefits and risks associated with this procedure. Please discuss questions and/or concerns with your bariatric surgeon.

EXPLORING THE BENEFITS

- ▶ This procedure is less invasive compared to other weight-loss procedures. Therefore, patients may have fewer operative complications, experience less postoperative pain and have a faster recovery.
- ▶ The band device is adjustable.
- ▶ The device can be removed if necessary.
- ▶ This procedure requires a shorter hospital stay, and recovery time may be quicker. Most surgeries are outpatient, although it may require an overnight stay. Most patients are back to work one to two weeks after surgery.
- ▶ Because the band is restrictive, there is less risk for vitamin/mineral deficiencies. However, it still can occur, and patients are required to take supplements postoperatively, have routine laboratory surveillance and lifelong follow-ups with the program.

UNDERSTANDING POSSIBLE RISKS

All surgical procedures have risks. Talk with your surgeon in detail about all the possible risks and complications.

- ▶ Age, excessive weight and certain diseases can increase your risk from surgery. There are also risks associated with the medications and methods used in the surgical procedure.
- ▶ Obese patients are prone to surgical complications including degrees of lung collapse (atelectasis). Therefore, much attention is devoted in the postoperative period to encourage deep breathing, using an incentive spirometer and patient activity to try to minimize risk.
- ▶ Obstruction of the opening to the stomach can occur and may be caused by food, swelling, improper placement of the band, an over-inflated band, band slippage, stomach pouch twisting or stomach pouch enlargement.
- ▶ Esophageal dilation or stretching could occur and may be caused by improper placement of the band, too much tension in the banding, stoma obstruction, binge eating or excessive vomiting.
- ▶ Inadequate weight loss after laparoscopic adjustable gastric band may be caused by frequent snacking and eating large amounts of soft foods or high-calorie liquids. On average, patients lose less weight after laparoscopic adjustable gastric band compared to sleeve gastrectomy or gastric bypass.

POSSIBLE COMPLICATIONS FOLLOWING LAPAROSCOPIC ADJUSTABLE GASTRIC BAND

Early:

- ▶ Nausea and vomiting (with improper band positioning or maladaptive eating techniques)
- ▶ Dehydration
- ▶ Blood clot (pulmonary embolism [PE] or deep vein thrombosis [DVT])
- ▶ Perforation of the stomach or esophagus during surgery (1 percent of patients)

Late:

- ▶ Ulceration
- ▶ Gastroesophageal reflux (regurgitation)
- ▶ Heartburn
- ▶ Band slippage/pouch dilation
- ▶ Access port site leakage
- ▶ Wound/port site infection
- ▶ Band erosion
- ▶ Esophagitis
- ▶ Inadequate weight loss or weight regain

BLOOD CLOT (PE/DVT) PREVENTION

- ▶ 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)
- ▶ Movement shortly after surgery
- ▶ Blood thinner during hospital stay
- ▶ Exercises to prevent blood clots
- ▶ Keeping operation within 60–90 minutes

POPULAR MYTHS ABOUT BARIATRIC SURGERY INCLUDE:

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

Truth: Most patients after laparoscopic adjustable gastric band procedure lose weight very gradually over the first three to five years post-op. This is related to the adjustments that occur after surgery. The first band adjustment is typically six weeks post-op and then monthly until patients reach the optimal level of fullness with food intake. Furthermore, it is essential to sustain lifestyle changes in nutrition, activity, stress management and healthy coping skills.

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

Truth: Most laparoscopic adjustable gastric band patients are very hungry after one-two weeks post-op until the first few adjustments. This is because there is little restriction from the band during this period. Over time, the adjustments to the laparoscopic band will provide restriction and your hunger should decrease.

Myth #3: Weight-loss surgery is an easy way out.

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

Myth #4: 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 #5: 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 #6: You can't eat “normal” food for the rest of your life.

Truth: There will be a diet progression after laparoscopic adjustable gastric band procedure from liquids to soft solids until you have incorporated most foods back into your diet. Portion sizes will also progress, from just a few tablespoons to 0.5–1 cup. There are no “special” foods. You can still enjoy the same foods as your family, at home and even out at a restaurant.

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

Truth: If there are any issues in a relationship prior to surgery, these issues may become more apparent after surgery. 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 weight loss and long-term success after a laparoscopic adjustable gastric band procedure. Exercise is important for maintaining muscle mass, and muscle mass is essential for weight maintenance.

UNDERSTANDING THE WHY BEHIND RECOMMENDATIONS FOR BARIATRIC SURGERY

During this process, there are a lot of 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: Structure and planning is important after laparoscopic adjustable gastric band procedure to ensure you do not graze or "work your way around" the band device. To utilize the adjustable band appropriately, eating regular meals and scheduled snacks is important.

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

A#2: Research indicates vitamin and mineral deficiencies in obese individuals. Following a laparoscopic adjustable gastric band procedure, calorie and nutrient intake are often reduced. There are also increased demands for select nutrients during weight loss, such as calcium, B12 and folic acid. For this reason, we recommend a multivitamin both prior to and after laparoscopic adjustable gastric band.

Q#3: Why can't I smoke or use nicotine products?

A#3: Memorial Bariatric Services requires patients to eliminate the use of nicotine (cigarettes, cigars, chew, hookah, e-cigarettes, patches and other nicotine-replacement therapies) three months prior to bariatric surgery and to abstain from nicotine after surgery. This reduces the incidence of postoperative risks.

- ▶ 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 individuals who have assistance being nicotine-free are more successful. If you are interested in support and assistance to become nicotine-free, please call 217-788-3948 to discuss the tobacco cessation tools available to you through our program.

Q#4: Why is support important after bariatric surgery?

A#4: 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.
- ▶ Tell your key supporters 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 several opportunities for support outside of our clinic to help you along your journey:

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

SUPPORT GROUPS

Studies show 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. The purpose is to share knowledge and support as we work to regain and maintain good health. Please attend and help one another while we help ourselves. Groups are led by licensed healthcare professionals and include small group discussion and presentations on health-related topics. There are also “surgeon sessions,” one of which is required for all surgical pre-op patients.

Several support groups are hosted in Springfield and at satellite/affiliate locations. Check out the schedule and locations at MemorialWeightLossandWellnessCenter.com.

Small groups

- ▶ Pre-op patients
- ▶ Post-op patients (up to one year)

Long-term post-op group: This group is offered monthly in Springfield and designed for patients who are 2+ years post-op. This group is led by a healthcare professional and designed to address topics, issues and/or barriers that may occur in the longer-term post-op period.

Diabetes support group: These monthly groups meet in a variety of locations including in Springfield and at our satellite locations. Anyone living with diabetes or supporting someone with diabetes is welcome to join us for positive discussion and fun activities to support a healthy lifestyle.

Q#5: Why do I have to journal my food intake after bariatric surgery?

A#5: Keeping a food journal is the best way to record what and how much you are taking in. This ensures you are getting enough calories and nutrients, such as protein to fuel your daily activities and exercise. It is common for patients to overestimate how much they are eating. It can also help you monitor tolerance for certain foods. Long-term studies on weight maintenance show those who food journal maintain their weight loss better compared to those who do not log.

Q#6: Why is fluid so important?

A#6: Dehydration is one of the most common complications after bariatric surgery. You can avoid this complication by ensuring intake of the recommended 64-80 ounces of fluid daily. After surgery, you may need to sip small amounts. You should also avoid drinking prior to, during or directly after your meals. This limits time to drink hydrating (caffeine-free) fluids. After surgery, you are not able to consume large amounts of water at one time, so you have to drink fluids throughout the day.

Q#7: Why can't I drink caffeine or carbonated drinks after bariatric surgery?

A#7: Both caffeine and carbonation can irritate the stomach. Caffeine is a diuretic, which means it increases urine production, which counteracts efforts to keep you hydrated. Carbonation introduces air into the stomach and causes bloating and discomfort.

Q#8: Why can't I drink alcohol after bariatric surgery?

A#8: 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 get the required 64-80 ounces of fluid. Consuming alcohol will decrease your hydration and require more time to rehydrate.
- ▶ You have an increased risk of developing ulcers.
- ▶ Heartburn increases if the alcoholic drink is carbonated.
- ▶ Alcoholic beverages contain 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.

Q#9: Why do I have to eat slowly, take small bites and chew food thoroughly?

A#9: These strategies are fundamental to eating mindfully and will help develop awareness of eating habits. It is important to chew food thoroughly to help with tolerance. Taking small bites helps ensure you are chewing thoroughly. Eating too fast can lead to frothing, foamy, mucus-like vomiting.

Q#10: Why do I have to go on a two-week presurgical diet?

A#10: The pre-surgical diet, low-calorie and high protein, helps reduce the size of the liver prior to surgery. This helps decrease surgical risk.

Q#11: Why can't I just drink protein shakes after surgery?

A#11: 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#12: Why do I continue to see my bariatric team after surgery?

A#12: It is important to follow up with your team so they can help you get optimal results and support. Remember, weight loss and maintenance is a journey, and we are here to help if you are struggling. Frequent adjustments to your gastric band will be necessary during the first year after surgery. This will assist in your weight loss. We can also help assess structural reasons for weight regain. Surveillance of long-term complications is also very important, such as complications with the laparoscopic adjustable gastric band and vitamin or mineral deficiencies.

Q#13: Why do I have to make all of these changes before surgery?

A#13: Demonstrating the recommended changes prior to surgery helps the team identify you as a safe candidate. It also helps you begin to practice habits that will help you to be successful both pre- and postoperatively.

Q#14: Why is protein so important? Why do I have to take protein supplements after surgery?

A#14: 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.

Q#15: Why does it matter what kind of protein my shake contains? Protein is protein, right?

A#15: The kind of protein in your protein shake matters a lot! After bariatric surgery, you will need to get a significant amount of protein, and only a small portion of this will come from your solid foods—especially in the early weeks. Your chosen protein shake will give you the majority of the protein you take in each day, so it needs to be quality protein.

MWLWC recommends protein supplements that contain whey protein isolate or whey protein hydrolysate. 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 contain protein, but 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.

Q#16: What kind of protein powder should I buy? How should I shop for a protein powder?

A#16: There are many suitable protein products. In fact, shopping for a protein powder can be overwhelming, but once you know what to look for, it's quite simple. The most important things to look for are a product that fits in your budget, you tolerate well and that tastes OK.

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 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.

Q#17: What are common vitamin and mineral deficiencies after having a laparoscopic adjustable gastric band procedure?

A#17:

- ▶ Vitamin D
- ▶ Iron
- ▶ Calcium
- ▶ Thiamine (especially with vomiting)
- ▶ Folate

Vitamin and mineral deficiencies are serious and should be treated promptly. Untreated deficiencies can lead to many complications. Complications can be irreversible if left untreated.

These include:

- ▶ Weakness
- ▶ Fatigue
- ▶ Faintness
- ▶ Poor wound healing
- ▶ Infections
- ▶ Rapid heart rate
- ▶ Arrhythmia
- ▶ Difficulty talking/swallowing
- ▶ Numbness in extremities
- ▶ Neuropathies
- ▶ Paralysis
- ▶ Loss of balance
- ▶ Bone disease
- ▶ Fractures
- ▶ Memory loss
- ▶ Dementia
- ▶ Vision loss or impairment

Q#18: What kind of vitamins should I buy? How do I know I have the right vitamin for me?

A#18: There are many brands of vitamin and mineral supplements, but not all meet our specific recommendations. Our recommendations are based on peer-reviewed research, consultation with other bariatric nutrition experts from across the country and more than 10 years of experience in our own clinic. Vitamin and mineral deficiencies do occur in some people who have had a laparoscopic adjustable gastric band procedure, but taking vitamins that meet the guidelines should help to prevent them. Your dietitian or medical provider can answer your questions about bariatric post-op vitamins and help you choose ones to meet your nutrition needs.

MICRO-NUTRIENT SUPPLEMENT	CONSIDERATIONS	HOW MUCH TO TAKE	SUGGESTED BRANDS
Multivitamin	<p>Supplements may be a capsule, tablet or chewy.</p> <p>A chewable lozenge form, may be helpful after placement and adjustment of your gastric band.</p>	<p>Look at the label to determine the full daily serving size.</p>	<p>You can use an over-the-counter multivitamin.</p>
Calcium	<p>Doses of 400-500 mg. Calcium Citrate form recommended.</p> <p>The total daily amount of vitamin D provided by your calcium and multivitamin should not exceed 2000 IU.</p>	<p>This will depend on your calcium intake from foods. You and your dietitian will review your needs for calcium to determine an appropriate dose.</p>	<p>Bariatric Advantage Calcium Citrate Chewable</p> <p>Celebrate Calcium Citrate Chewable</p> <p>Choose an over-the-counter tablet and/or soft-chew form of calcium citrate. Read the labels!</p>

Always remember:

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

What to expect early post-op

Be positive

- ▶ You will be given pain medication prior to discharge.
- ▶ Contact your surgeon's office if your pain is not managed post-discharge.
- ▶ Watch the Memorial Pain Management video at MemorialMedical.com/MHS/Pain-Management.

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 a 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 your procedure.
- ▶ Stock up on things to do at home, 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

In case of an emergency, a medical alert bracelet or medical ID necklace will alert doctors, nurses and EMTs of your medical history so time is not wasted. Knowledge of your condition will help ensure safe treatment. Include your name, bariatric procedure, physician's or surgeon's name and a contact number.

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 (laparoscopic adjustable gastric band procedure)

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 laparoscopic adjustable gastric band procedure booklet
- ▶ 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.

Laparoscopic Adjustable Gastric Band 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 to ensure you 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.

Please use your bariatric manual as a reference.

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

1. Which of the following materials is used to adjust the laparoscopic adjustable gastric band system?
 - a) Contrast medium
 - b) Barium
 - c) Water
 - d) Saline
 - e) Gas

2. It is appropriate to remove fluid from the laparoscopic adjustable gastric band in the following circumstances: (circle all that apply)
 - a) During pregnancy
 - b) For medical reasons
 - c) After a patient reaches his/her goal weight
 - d) For a party or before a large meal

3. Laparoscopic adjustable gastric band is a major surgery and requires anesthesia and post-op recovery.
 - a) True
 - b) False

4. Risks with laparoscopic adjustable gastric band include: (circle all that apply)
 - a) Risks that apply to all major surgeries
 - b) Staple leaks
 - c) Severe nutritional deficiencies
 - d) Possible band erosion of stomach

5. Laparoscopic adjustable gastric band is ALWAYS performed laparoscopically.
 - a) True
 - b) False

6. Weight loss soon after surgery varies considerably patient to patient. Which of the following will help you get started?
 - a) Following your friends' nutrition advice
 - b) Following the "10 Important Rules"
 - c) Routine follow-up visits with your surgeon
 - d) All of the above

7. How is the laparoscopic adjustable gastric band system adjusted?
(circle all that apply)
 - a) During surgery, an initial fill of 1–2 cc fluid is instilled in the band.
 - b) An incision is made over the port to access it for fills.
 - c) A fine needle is used to add or remove fluid via an access port under the skin.

8. When is the first adjustment usually done?
 - a) During surgery
 - b) One week after surgery
 - c) Four to six weeks after surgery
 - d) Three months after surgery
 - e) Six months after surgery

9. The amount of fluid inserted or removed during a band adjustment depends on:
 - a) Your weight loss
 - b) How much fluid is already in your band
 - c) The amount of food you can eat
 - d) Whether you are experiencing vomiting
 - e) The amount of fluid you can comfortably consume
 - f) All of the above

10. How much fluid should be in the band for optimal results?
 - a) 2 cc
 - b) 4 cc
 - c) 10 cc
 - d) It differs for each patient

11. How many band adjustments are needed?
 - a) One every month
 - b) It differs for each patient
 - c) Four per year
 - d) Five within the first five years

12. Who can perform a band adjustment?
 - a) A certified clinician (surgeon, nurse practitioner or physician assistant)
 - b) Any medical doctor
 - c) A patient

13. Is it always necessary to use an X-ray for an adjustment?
- a) Yes
 - b) No
14. When might it be necessary to use an X-ray to adjust the band size?
- a) The first few days after surgery
 - b) Before a patient has lost a lot of weight
 - c) To assist the person doing the adjustment in locating the access port
 - d) All of the above
15. Under what conditions after leaving the hospital should a patient immediately call his/her surgeon?
- a) Severe pain
 - b) Elevated pulse (more than 120 beats/minute)
 - c) Inability to swallow
 - d) Any significant wound bleeding or vomiting of blood
 - e) All of the above
16. What are realistic weight-loss expectations following placement of the band?
(circle all that apply)
- a) Rapid and dramatic weight loss right away
 - b) Gradual and steady weight loss
 - c) Five pounds per week during the first year post-op
 - d) One to two pounds per week during the first year post-op
 - e) Losing 100 percent of your excess weight

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.

Patient signature date

Reviewer date



What to expect at the hospital

Pain management

- ▶ Remember to let staff know if you are in pain.
- ▶ How will it feel?
- ▶ How long will it last?
- ▶ Visit MemorialMedical.com/MHS/Pain-Management for more information.

Daily Checklist

- ▶ Tracks fluid consumption to prevent dehydration
- ▶ Decreases post-op complications
- ▶ Gives you more control over your healing process and recovery

Support people

Your family members or friends can help with:

- ▶ Recording intake or fluids
- ▶ Putting on and taking off leg compression boots
- ▶ Walking a minimum of five minutes every four hours or longer and more often if possible
- ▶ Requesting needed medication
- ▶ Keeping you company
- ▶ Following recommendations with walks, sips and work with the incentive spirometer

Speeding up recovery

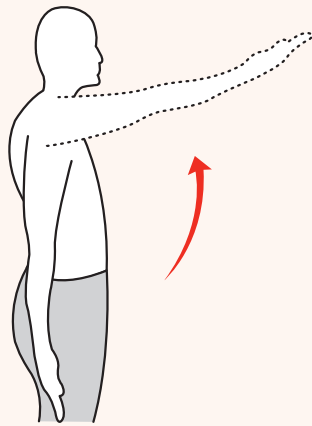
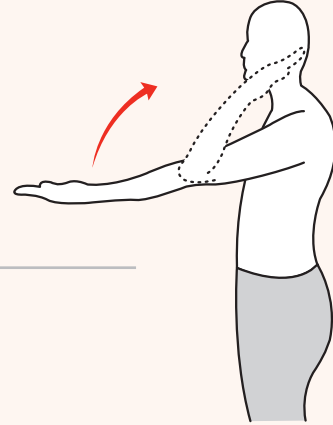
- ▶ Walk, walk, walk
- ▶ Use incentive spirometer
- ▶ Sip, sip, sip
- ▶ Keep track

EXERCISES TO HELP PREVENT BLOOD CLOTS

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

ELBOW—Elbow Up

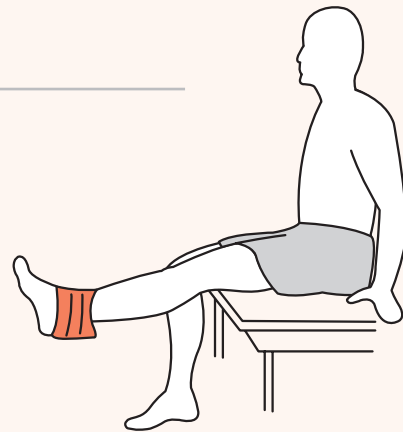
Stand or sit with one arm out in front, palm up. Slowly bend elbow and raise forearm toward shoulder. Relax arm. Repeat with other arm. Repeat 10 times each arm.



SHOULDER—Range of Motion:

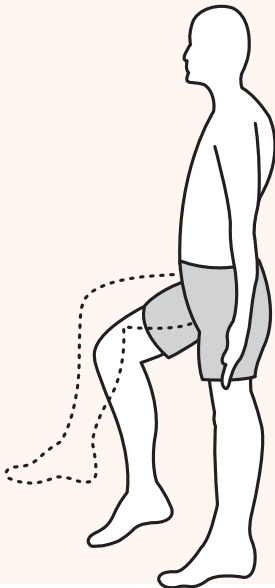
Flexion

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.

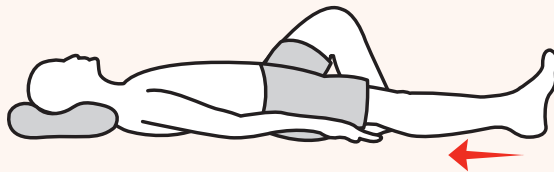
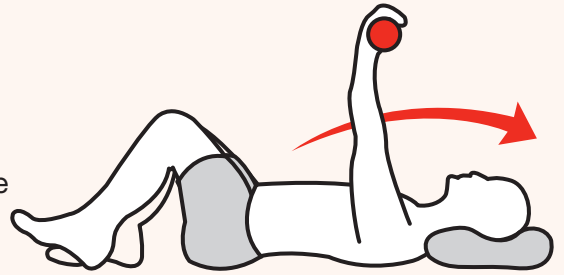


HIP—Knee Lift

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

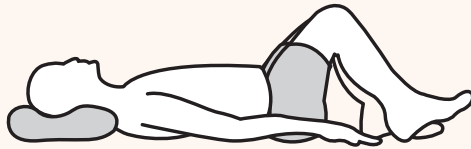
SHOULDER—Arm Raises

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



HIP/KNEE—Self Mobilization:
Heel Slide (Supine)

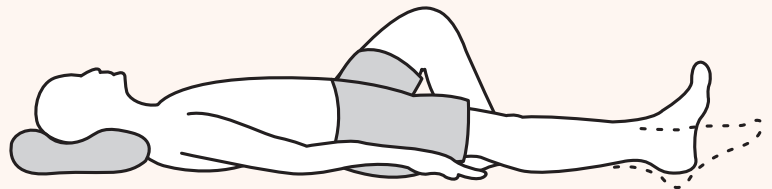
Slide right heel toward buttocks until a gentle stretch is felt, then straighten leg again. Repeat with other leg. Repeat 10 times each leg.



ANKLE /FOOT—Range of Motion:

Plantar/Dorsiflexion

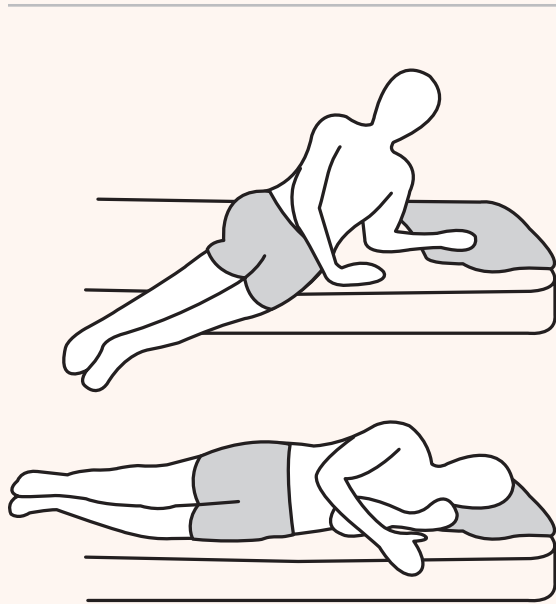
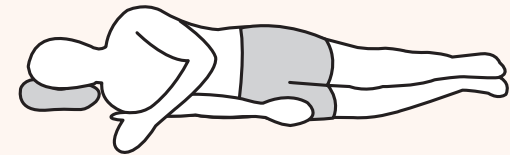
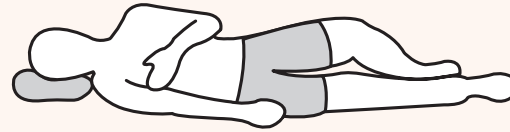
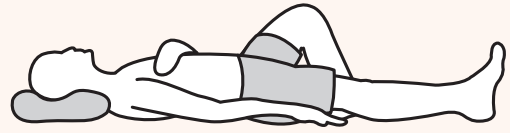
With leg straight, gently flex and extend ankle. Move through full range of motion. Repeat 15 times per set.



GETTING OUT OF BED POST-OPERATION

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 and 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

- ▶ Shower with antibacterial soap.
- ▶ Arrive at the time given by your bariatric surgeon's office. Report to and check in at the Memorial Medical Center Surgery Admitting (1E).
- ▶ Bring your laparoscopic adjustable gastric band booklet with you.
- ▶ A 1E nurse will review your past medical history, medications and allergy list.
- ▶ Change into a hospital gown and store your personal belongings.
- ▶ When instructed, your nurse will take you to the presurgery waiting area.
- ▶ You will meet the anesthesiologist and/or the nurse anesthetist.
- ▶ When ready, you will be taken to the operating room.
- ▶ As part of the patient safety process at MMC, you may be repeatedly asked about your planned procedure.
- ▶ After surgery, you will recover in the post-anesthesia care unit (PACU) until you are awake and alert enough for transfer to the 1E outpatient unit.

DOS AND DON'TS

To ease breathing:

- ▶ Keep the head of your bed elevated at **30 degrees**.
- ▶ Use your incentive spirometer **10 times every hour**.

Do not drink any fluids until the nurse has given the OK.

- ▶ After surgery, you will be considered NPO (nothing by mouth).
- ▶ A swallow study will be conducted after your procedure.

Diet:

- ▶ After the results of the test are confirmed, a full liquid laparoscopic adjustable gastric band diet will be approved.
- ▶ You will be monitored for tolerance before discharge.
- ▶ Take very small, frequent sips of liquid.

Let us know:

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

Wear your CPAP/ BiPAP when you sleep (if applicable).

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

DISCHARGE CRITERIA

- ▶ Tolerating a full liquid laparoscopic adjustable gastric band diet
- ▶ Walking
- ▶ Urinating
- ▶ Well-controlled pain
- ▶ Well-controlled or resolved nausea

TIPS FOR HEADING HOME

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

DISCHARGE DIET: LAPAROSCOPIC ADJUSTABLE GASTRIC BAND FULL LIQUID DIET

Discharge through first post-op visit with surgeon

1. Sugar-free, caffeine-free, carbonation-free, alcohol-free beverages
 - ▶ Water
 - ▶ Decaf tea or coffee
 - ▶ Broth
 - ▶ Sugar-free gelatin
 - ▶ Sugar-free drink mix
 - ▶ Sugar-free popsicles
2. Liquid protein supplements
 - ▶ Protein supplements
 - ▶ Skim/1-percent milk
 - ▶ Light soy milk
3. Other items
 - ▶ Light yogurt (without chunks) or Greek yogurt
 - ▶ Whey protein isolate protein
 - ▶ Drinks with skim milk, light soy milk or Lactaid milk
 - ▶ Sugar-free/fat-free pudding
 - ▶ Thinned Cream of Wheat
 - ▶ Tomato soup

Fluids

- ▶ Avoid dehydration.
- ▶ Goal: Drink at least 64-80 ounces (8-10 cups) of fluid per day for the first week after surgery (first priority).
- ▶ Aim for 1 cup per hour.
- ▶ Sip. Do not gulp.
- ▶ Do not use straws.
- ▶ All fluids should be sugar-free, alcohol-free, caffeine-free and carbonation-free.
- ▶ High concentrations of sugar and alcohol can inhibit weight loss, cause dehydration and deplete vitamin/mineral status.
- ▶ Caffeine acts as a diuretic and counteracts hydration.
- ▶ Carbonation creates gas in the stomach causing swelling and pressure in the stomach.

Patient Discharge Instructions

PROCEDURE: WEIGHT-LOSS SURGERY

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 1 to 2 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.
- ▶ Laparoscopic surgery patients will not have sutures or staples.
- ▶ 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 one-two 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 if it is 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 the 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 the 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 one-month follow-up visit with the dietitian, behavioral health and physical therapist.

Important telephone numbers:

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

Emergency contact:

- ▶ Springfield Clinic TeleNurse
217-528-7541
Toll-free: 800-444-7541
- ▶ Memorial Medical Center
217-788-3000

NORMAL POSTSURGICAL SYMPTOMS

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 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

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 intake 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 a result of poor eating techniques and/or eating too much. It can take several weeks to adjust to your band and to new eating habits. 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 to avoid overeating. If you experience persistent vomiting after an adjustment, your band is likely too tight and fluid should be taken out.

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, so a stool softener may be recommended. Dehydration also contributes to constipation.

AFTER DISCHARGE	TASK	DATE	TIME	INSTRUCTIONS
24 Hours	Phone call from bariatric clinic nurses			
1 Week	<ul style="list-style-type: none"> • Surgeon Visit: Scheduled at discharge from the hospital. • Physical Therapy • Nutrition Visit 			
4 Weeks	<ul style="list-style-type: none"> • Surgeon Visit • Nutrition Visit • Physical Therapy Visit 			<ul style="list-style-type: none"> • Call surgeon's office if you need lab orders. • Bring food logs to nutrition visit.
6 Weeks	Medical Visit: Adjustment			
2 Months	Medical Visit: Adjustment			
3 Months	<ul style="list-style-type: none"> • Mid-Level Visit (91 days post-op): Adjustment • Nutrition Visit • Physical Therapy • Psychosocial Visit 			<ul style="list-style-type: none"> • Bring food logs to nutrition visit.
4-5 Months	Mid-Level Visit: Adjustment			
6 Months	<ul style="list-style-type: none"> • Mid-Level Visit: Adjustment • Nutrition Visit • Physical Therapy • Psychosocial Visit • Labs 			<ul style="list-style-type: none"> • Complete labs at least two weeks prior to your visits to ensure they will be resulted by the time of your visits. • Call MWLWC if you need lab orders. • Bring food logs to nutrition visit.
7-11 Months	Mid-Level Visit: Adjustment			
12 Months	<ul style="list-style-type: none"> • Mid-Level Visit • Nutrition Visit • Physical Therapy • Psychosocial Visit • Labs 			<ul style="list-style-type: none"> • Complete labs at least two weeks prior to your visits to ensure results are ready by the time of your visits. • Call MWLWC if you need lab orders. • Bring food logs to nutrition visit.
18 Months	Psychosocial Visit			
Annual Visits	<ul style="list-style-type: none"> • Mid-Level Visit • Nutrition Visit • Psychosocial and Physical Therapy as needed • Labs 			<ul style="list-style-type: none"> • Complete labs at least two weeks prior to your visits to ensure results are ready by the time of your visits. • Call MWLWC if you need lab orders. • Bring food logs to nutrition visit.

MANAGING EXPECTATIONS AFTER WEIGHT-LOSS SURGERY:

- ▶ Expect your weight loss to be slower compared to other bariatric surgery procedures.
- ▶ Many patients continue to feel hunger postoperatively until receiving several adjustments. Your first adjustment is typically six weeks post-op.
- ▶ **Reminder:** Introduce one new food at a time.

One week post-op

- ▶ Soft, high-protein foods

Four weeks post-op and beyond

- ▶ Soft, well-cooked fruits and vegetables
- ▶ Solid meats
- ▶ Healthy fats
- ▶ High-fiber foods
- ▶ Protein bars can be introduced

Soft high-protein foods

First post-op visit with the surgeon (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
 - ▶ Maintains muscle during weight loss
 - ▶ Promotes satiety
 - ▶ Maintains hair and nails and builds and repairs tissue
- ▶ 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).
- ▶ Meals should take 20-30 minutes.
- ▶ Take small bites, about the size of a pencil eraser.
- ▶ Initially, you may only tolerate a few tablespoons at each meal.
- ▶ Do not drink fluids with your meals.
 - ▶ Stop drinking 15 minutes before a meal.
 - ▶ Wait 30 minutes after a meal before drinking again.

Choose your proteins wisely

Make protein your priority for meals and snacks after weight-loss surgery.

The type of protein you eat may play a role in successful weight loss and in your overall health. Consumption of large quantities of processed meats such as hot dogs, sausages and deli meats has been linked to increased risk of diabetes, cancer and heart disease. Preparation methods can also affect calories and fat content. For example, choose grilling, baking and broiling versus frying or sautéing.

- ▶ **Fish:** Offers heart-healthy omega-3 fatty acids and, in general, less fat than meat.
- ▶ **Poultry:** Eliminate most of the saturated fat by removing the skin.
- ▶ **Beans:** Contain more protein than any other vegetable protein. Plus, they're loaded with fiber that helps you feel full for hours.
- ▶ **Nuts:** One ounce of almonds gives you six grams of protein, nearly as much protein as one ounce of broiled rib-eye steak.
- ▶ **Lean beef or pork:** Lean options offer complete proteins without excess saturated fat.
- ▶ **Low-fat dairy:** Offers protein as well as calcium.

AMOUNT OF PROTEIN IN FOODS

Food	Grams of Protein
1 ounce chicken, fish, turkey, beef, pork	7g
1 ounce low-fat/reduced-fat cheese	8g
6 ounces light/fat-free yogurt	8g
1/2 cup low-fat cottage cheese	13g
1 ounce nuts	4-6g
1/2 cup beans	6-7g
1 string cheese	8g
1/4 cup reduced-fat shredded cheese	8g
1/2 cup soy crumbles	13g
1/2 cup tofu	10g

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)

What to expect

- ▶ Most patients do not feel a significant sense of restriction once the swelling has decreased after surgery and before adjustments are made to the band.
- ▶ Your first adjustment is usually six weeks post-op.
- ▶ The optimal sense of hunger control and eating restriction should come after two to three adjustments (typically two-three months).

4-5 WEEKS POST-OP & BEYOND

- ▶ Continue eating three meals per day.
- ▶ Reintroduce healthy, solid foods
 - ▶ Lean, solid meats (lean ground beef, lean ground turkey, chicken, fish, lean pork)
 - ▶ Vegetables (Cooked may be more easily tolerated at first.)
 - ▶ Fruits (Soft and/or peeled fruit may be more easily tolerated initially.)
 - ▶ Whole grains (cold cereals, pasta)

Helpful tips

- ▶ Pack your stomach with solid versus soft/slippery foods. It provides maximum satiety after meals.
- ▶ Avoid dry meats.
- ▶ Use moist cooking methods such as baking, poaching, stewing, steaming or slow cooking. Avoid grilling, pan sautéing or other dry cooking methods.

Good choices

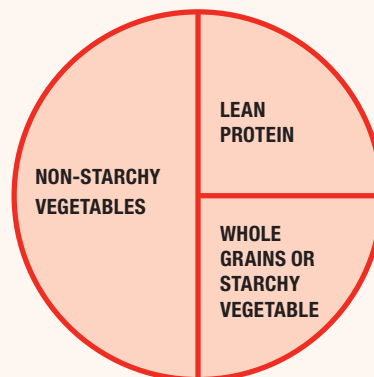
- Ground turkey moistened with tomato sauce
- Ground chicken moistened with tomato sauce
- Baked fish (such as tilapia or cod)
- Lean deli meats (such as deli turkey or chicken)
- Lean or extra-lean ground beef with tomato sauce

Healthy fats

- ▶ Fat is slower to empty from the stomach, and high-fat foods can sometimes cause nausea in the early postoperative period.
- ▶ Aim for a total of fewer than 35 grams of fat per day.
- ▶ Choose mono- and polyunsaturated fats and avoid saturated and/or trans fats.
- ▶ Start with 1–2 teaspoons per day.

Good choices

- Peanut butter and/or nut butters
- Olive oil
- Canola oil
- Peanut oil
- Flaxseed oil
- Olive oil-based salad dressings



1/2 plate non-starchy vegetables
(1/2 cup)

1/4 plate protein (2-3 ounces)

1/4 plate starch/fruit/starchy
vegetables (1/4 cup)

LOW-FAT COOKING TIPS: SEMI-SOLID DIET AND BEYOND

Meat and poultry

- ▶ Use the leanest meat possible.
- ▶ Beef: top round
- ▶ Chicken and turkey breast: no skin (white meat is lower in fat than dark meat)
- ▶ Trim fat off meat.
- ▶ Use low-fat cooking methods such as baking, broiling, grilling, roasting, sautéing and stir-frying. Use vegetable spray, broth, water or small amounts of oil.
- ▶ Drain off excess fat after cooking.

Vegetables

- ▶ Avoid high-fat sauces made with cream, cheese, oil or butter.
- ▶ Use cooking methods that require little or no added fat such as steaming, microwaving and baking.
- ▶ Carefully choose and use salad dressings.
- ▶ Try a baked potato with fat-free sour cream or low-fat cottage cheese. Then, add chives or dill.
- ▶ Add balsamic vinegar, fat-free salad dressing or lemon juice and herbs.
- ▶ Add vegetables such as green pepper, grated carrots and fresh tomatoes to spaghetti sauces.

Soups

- ▶ Let cool, then skim fat off the top.

Slowly introduce higher-fiber foods

- ▶ Fiber slows digestion and is more work for the gut.
- ▶ Fiber is an essential part of a healthful diet and weight maintenance.
- ▶ At this point, you can begin incorporating more high-fiber foods into your diet.

Good choices

- Whole-grains
- Cold cereals, whole-wheat pasta, whole-grain flat bread, whole-grain crackers
- Beans
- Legumes
- Lentils
- Raw fruits (peels and/or seeds removed if needed)
- Raw vegetables (peels removed if needed; introduce cruciferous vegetables such as cabbage, cauliflower and broccoli last.)

COMMON PROBLEM FOODS

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

LAPAROSCOPIC ADJUSTABLE GASTRIC BAND RULES

- ▶ Eat protein first.
- ▶ Eat three meals per day.
- ▶ Don't skip meals.
- ▶ Eat slowly, and take small bites.
- ▶ Chew food until it is pureed.
- ▶ Stop eating or drinking with the first sensation of fullness.
- ▶ Take 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 water or sugar-free liquids between meals. Aim for 1–2 cups per hour.
- ▶ Avoid high-fat meats like sausage or bacon and fried items; they are NOT good protein sources.

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
 - ▶ Eating slowly
 - ▶ Chewing foods thoroughly
- ▶ If nausea or vomiting persists, call your surgeon.

STRUCTURE A BALANCED PLATE

- ▶ Structured meals and snacks are key to weight maintenance and long-term success.
- ▶ Use the Balanced Plate as your guide.

Recipe Makeover

▶ **Chicken Nuggets** (6 pieces)
285 calories (163 from fat) | 18 grams fat
(4 grams saturated fat) | 1 gram dietary fiber

▶ **Chicken Broccoli Pie**
260 calories | 15 grams fat (8 grams
saturated fat)

▶ **Crispy Baked Chicken Nuggets**
(6 pieces—serves 4)
160 calories (20 from fat) | 2 grams fat | 2–3
grams fiber

▶ **Impossibly Easy Chicken Broccoli Pie**
160 calories | 5 grams total fat (1½ grams
saturated fat)

Impossibly Easy Chicken Broccoli Pie

Ingredients:

- ▶ 1 ½ cups frozen broccoli florets, thawed,
drained (from 12-ounce bag)
- ▶ 1 cup (4 ounces) shredded reduced-fat sharp
cheddar cheese
- ▶ 1 cup diced, cooked chicken breast
- ▶ 1 medium onion (1/2 cup), chopped
- ▶ ½ cup Bisquick Heart Smart® mix
- ▶ 1 cup fat-free milk
- ▶ ¼ teaspoon salt
- ▶ ¼ teaspoon pepper
- ▶ 2 eggs or 1/3 cup fat-free egg product

Directions:

1. Heat oven to 400°F. Spray 9-inch glass pie
plate with cooking spray. Layer broccoli, ½
cup of cheese, chicken and onion in
pie plate.
2. In medium bowl, stir Bisquick, milk, salt,
pepper and eggs with wire whisk or fork
until blended. Pour into pie plate.
3. Bake 20 to 25 minutes or until knife
inserted in center comes out clean.
Sprinkle with remaining ½ cup cheese.
Bake 3 to 4 minutes longer or just until
cheese is melted. Cool 5 minutes.

Crispy Baked Chicken Nuggets

Ingredients:

- ▶ 1 cup crushed high-fiber cereal
(e.g., Fiber One®)
- ▶ 1 teaspoon paprika
- ▶ ½ teaspoon garlic powder
- ▶ ½ teaspoon dried oregano, crushed
- ▶ 1/8 teaspoon cayenne pepper (optional)
- ▶ 1 egg white
- ▶ 1 pound skinless chicken breast, cut into
1-inch pieces

Directions:

1. Preheat oven to 450°F. In a resealable
plastic bag, combine crushed cereal,
paprika, garlic powder, oregano, and if
desired, cayenne pepper. In a small bowl,
beat egg white with a fork.
2. Dip chicken pieces into egg white, allowing
excess to drip off. Add chicken pieces
a few at a time to cereal mixture in bag;
shake to coat well.
3. Place chicken pieces in a single layer in an
ungreased shallow baking pan. Bake 7-9
minutes or until chicken is no longer
pink (170°F).

SUCCESS AFTER SURGERY

Losing and maintaining weight can be challenging. Research shows certain principles can help you be successful. Collen Cook describes these in more detail in her book, *The Success Habits of Weight-Loss Surgery Patients*.

Personal accountability

- ▶ Weigh yourself once a week. 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 target 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 you feel full on a smaller amount of food. Yet, some people who have had weight-loss surgery still struggle with regaining lost weight.

There are 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 the built-in portion control mechanism.

- ▶ Know how big (or small) your new stomach is and how much food it can hold. Measure and weigh your foods to ensure you are meeting your nutrition goals and not overfilling your pouch.
- ▶ Eat slowly 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 food 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. It's critical for weight-loss surgery patients. There should be at least two ounces of a high-protein food at all three meals, and the high-protein portion of the meal should be eaten first, before any other food.
- ▶ Eat breakfast. This will help you 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 maintain body weight.

Physical activity

Physical activity is a critical component to maintaining significant weight loss. Research demonstrates consistent correlations between physical activity, self-monitoring behaviors and maintenance of weight loss. It has been proven time and again 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 are met after surgery, as well as aids with an efficient metabolism.

CHALLENGES AFTER SURGERY

In this section, we are going to address some challenges you might face 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 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

Persistent gastroesophageal reflux (Regurgitation)

This occurs in approximately 7 percent of patients following laparoscopic adjustable gastric band. Symptoms include reflux, nausea/vomiting, abdominal pain, difficulty swallowing and chronic coughing. Treatment usually includes modification of diet, proton pump inhibitor (PPI), band deflation and/or surgical removal. If prolonged, this can lead to esophagitis.

Band slippage, pouch dilatation

The laparoscopic adjustable gastric band could become ill-positioned, or slip. Symptoms include abdominal pain, food intolerance, difficulty swallowing, reflux, nausea/vomiting and early satiety. Management of a slipped band may include band deflation, repositioning of the band and, often, surgical revision or removal of the device.

Band erosion

There is a risk that the laparoscopic adjustable gastric band can erode into the stomach. If this happens, the band must be removed. Symptoms of an eroded laparoscopic adjustable gastric band include abdominal pain, nausea/vomiting of blood, difficulty swallowing, early satiety, fever and sepsis.

Port site malfunction

Problems can arise with the port connected to the gastric band. The port used to access the adjustable band can malfunction. If this occurs, the port may need to be surgically repaired or replaced.

Stoma obstruction

This occurs when there is an obstruction from the gastric pouch to the rest of the stomach. Symptoms include nausea, vomiting after eating, difficulty swallowing, abdominal pain, decreased oral intake and reflux. Treatment of a stomal obstruction may include band deflation, endoscopy to remove the obstruction or surgical repair.

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 heavier period. You may need extra iron supplementation.

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. The fluid in your laparoscopic adjustable gastric band will need to be removed during the first and third trimesters. 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 take a urine pregnancy

test as soon as possible. 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

Temporary hair loss is expected after rapid weight loss. Your body is going through tremendous change and hair loss or thinning is a frequent effect of that stress. For some, skin texture and appearance may change. It is not uncommon for patients to develop acne or dry skin after surgery. You can minimize changes to your hair and skin by taking your daily multivitamins and consuming 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, risk 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.

Peptic ulcer

Stomach surgery leaves one more susceptible to the development of an acid-peptic ulcer. Tobacco, aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) increase 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.

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. For that reason, lifelong nutrition monitoring and lifelong vitamin and mineral supplementing is critical.

Excess skin

Patients may experience problems with excess skin such as irritation or even infection. Some patients choose removal of excess skin through plastic surgery. Please ask us about our BariPlastics program at Memorial for more information.



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