Memorial BARIATRIC SERVICES

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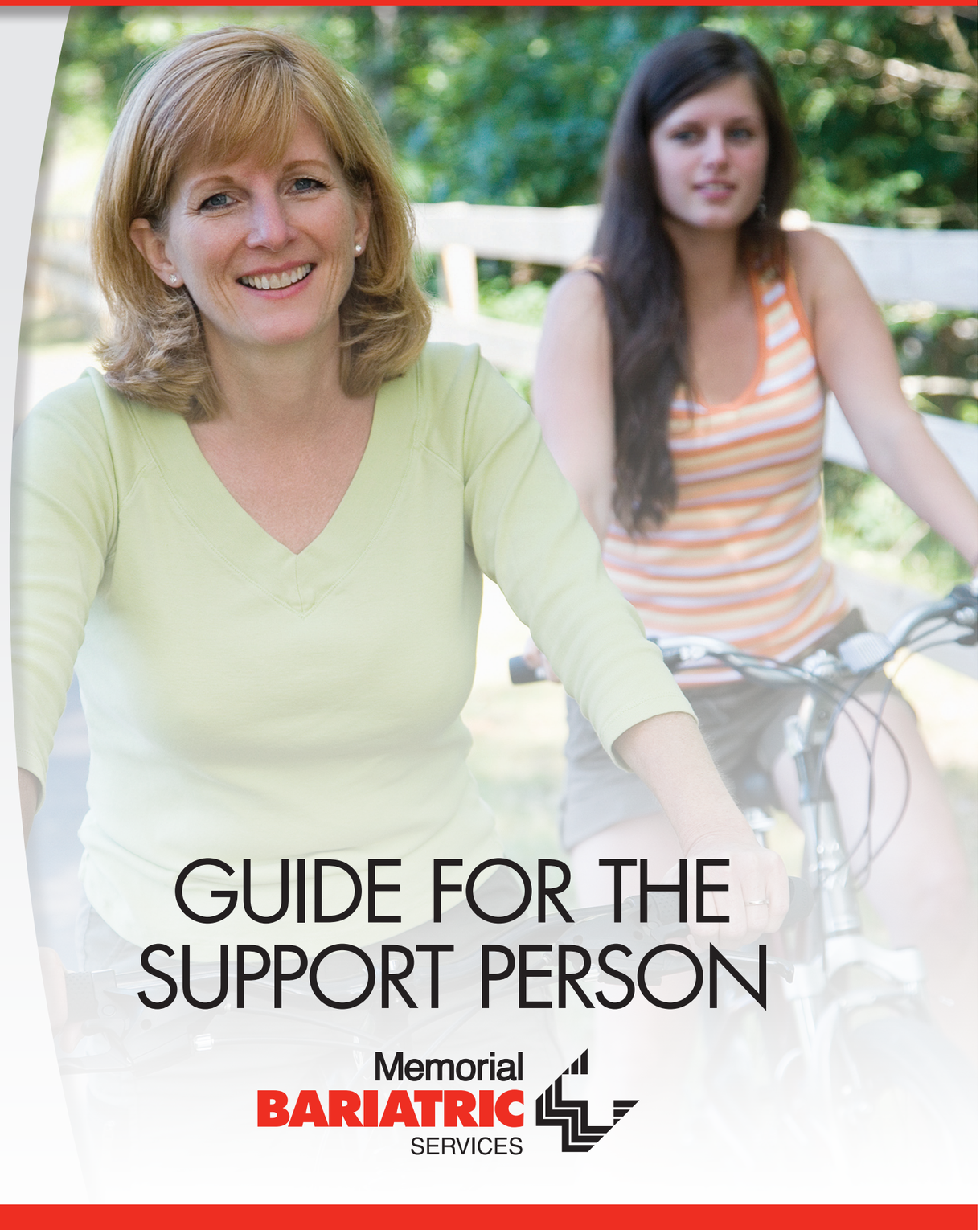

GUIDE FOR THE SUPPORT PERSON

Memorial BARIATRIC SERVICES

NOTES

NOTES

NUTRITION

- **Provide structure to food.** 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 those foods that will give more bang for the 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 the patient choose lower-calorie foods throughout the rest of the day.
- **Avoid carbonation/caffeine.**
- **Make fluid 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 in weight and body composition changes, but also by good nutrition. Supporting your partner by making their post-op vitamin and mineral supplementation a top priority. Post-op supplementation ensures their vitamin/mineral needs will be met after surgery and provide an efficient metabolism.

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INTRODUCTION

Bariatric surgery is a big change—for the patient and for the patient's loved ones. Whether you live with someone who is having bariatric surgery or the patient is a close friend or family member, your encouragement will help your loved one reach his or her weight-loss goals. The most successful bariatric surgery patients have a strong support network. In fact, the stronger the bariatric support network, the greater the success. Your support will be crucial in the months leading up to surgery as well as in the long term. It is important the patient knows you are there, and will help him or her with this commitment to a healthy lifestyle.

Weight-loss surgery is a great tool, but it is most effective when paired with lifestyle, diet and exercise changes. Surgery is not a fix-all. If patients correctly use the tool, they will have increased chances of weight-loss success. If they choose to misuse the tool, success isn't as likely. This surgery will only enable them to eat small portions and feel a sense of fullness. It is up to the patient—with the help of a support system—to make and maintain lifelong healthy lifestyle changes.

HOW YOU CAN ASSIST YOUR LOVED ONE

- Commit to playing a part in improving your loved one's health.
- Educate yourself on your loved one's surgery, possible complications and post-surgery lifestyle changes.
- Listen to your loved one without judging or dismissing his or her feelings.
- Discuss any questions or concerns you have.
- Encourage your loved one to follow recommendations from the bariatric team.
- Encourage honesty, responsibility and cooperation from your loved one.
- Support your loved one in his or her commitment to long-term follow-up compliance, including lifelong vitamin and mineral supplementation.

SUPPORT GROUPS

Studies show bariatric surgery patients who attend support groups maintain 20 to 30 percent greater weight loss than patients who do not attend support groups. The purpose of bariatric surgery support groups is to share knowledge and support as the patients work to regain and maintain good health. Support groups are offered monthly in Springfield, Bloomington and Quincy, and our patients—and you—are encouraged to attend. Groups are facilitated by licensed healthcare professionals, are structured in two parts and are

REMAINING SUCCESSFUL

Losing and maintaining weight can be challenging. Your partner might have made several weight-loss efforts in the past and gained it back over time. This is known as recidivism. Research has shown certain principles to be successful. Colleen Cook describes these in more detail in her book, *The Success Habits of Weight-Loss Surgery Patients*. The following principles have been found to help people maintain their long-term weight-loss and wellness goals.

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! There may be times when your partner asks you to hide the scale, and you should discuss this. If the number on the scale determines your partner's mood for the day, you should hide the scale. Focusing too much on the scale can be damaging to long-term success; however, monitoring weight can be helpful.
- **Keep a food diary.** The best way to know how much is being consumed is to log your food. If your partner is not able to do this every day, then encourage him or her to try 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 to feel full on a smaller amount of food. Yet, some people who have had weight-loss surgery still find ways to regain 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 and snacking. Steps must be taken to ensure the preservation of that built-in portion control mechanism.

- **Know how big (or small) your new stomach is and how much food it can hold.** Measure and weigh foods to ensure meeting the nutrition goals and not overstuffing the pouch.
- **Eat slowly enough to recognize the feeling of fullness; stop eating when full.** Try to make each meal last 20 minutes. Setting down the utensils between bites and chewing your food will help your partner ensure their food is chewed thoroughly.
- **Aim for satiety.** Satiety is the feeling of being full and satisfied after eating.

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As patients lose weight and begin to feel better, they may want to go for walks, socialize and spend more time out of the house. Sometimes the last thing they want is to sit around and watch TV all evening. As a support person, you may want to make changes to adapt to your partner's healthier habits.

FOOD

After surgery, your loved one has to adjust to eating smaller portions, chewing food to a pulp, not drinking while eating, avoiding high sugar and fatty foods and changing eating behaviors for good. Do your best to educate yourself about the required diet and dietary needs. While you don't need to follow the diet yourself, you can be instrumental in helping your loved one exchange old, unhealthy habits for new, healthy ones. Don't let food become a taboo topic; if food was a major component of your relationship, find new ways to relate that involve healthy eating or exercise.

DEPRESSION AND ANXIETY

Your loved one may go through phases of depression and/or anxiety during the first two years after surgery. The patient may experience a longing for certain types of restricted food. Some patients miss the comfort that food has provided in the past, and may have turned to food in times of celebration, sadness, for reward and for relief. When people can no longer turn to food to fill the void, they must find other ways to meet these emotional needs.

Some patients find the first two years after surgery full of different emotions. Most of these feelings are temporary. It is important to listen to your loved one without dismissing his or her feelings and to provide reassurance that the choice to have surgery was the right one and that you will be there every step of the way to help.

ALCOHOL USE

Research has shown an increased risk of becoming dependent on or abusing alcohol two years after having bariatric surgery. While the exact cause is undetermined, a faster rate of absorption increases the risk of becoming dependent. After surgery, individuals might use alcohol instead of food to socialize. Patients who have undergone bariatric surgery are strongly discouraged from drinking alcohol.

typically two hours long. The first hour involves breaking into small peer groups and coming back together in the second hour for a dedicated topic and speaker.

Check out our support group schedule and locations at MemorialBariatricServices.com.

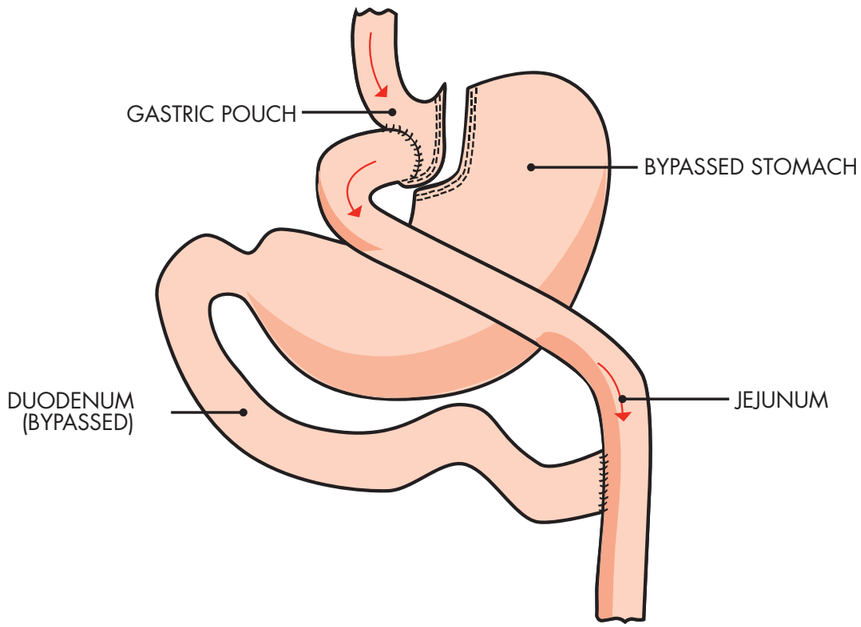
PROCEDURE OVERVIEW

Memorial Bariatric Services offers three types of surgical options:

- Laparoscopic Roux-en-Y gastric bypass
- Laparoscopic adjustable gastric banding (Lap-band)
- Laparoscopic vertical sleeve gastrectomy

The goal of these weight-loss procedures is to either reduce the amount of consumed calories (restrictive) per day and/or to alter the absorption of the fat (malabsorption) in food. Each bariatric procedure offers unique benefits and risks to the patient.

GASTRIC BYPASS (ROUX-EN-Y)



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This 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 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 re-route food directly from the newly created small stomach pouch into the remaining intestine for digestion. Gastric bypass is typically performed laparoscopically and requires a hospital stay of two to three days followed by two-to-four weeks of restricted activity. Follow-up care is an important component and several post-surgery appointments will be needed to monitor healing and progress. Gastric bypass is an irreversible procedure and leads to very rapid weight loss.

EXPLORING THE BENEFITS

- Provides rapid and continuous weight loss for 18 to 24 months postoperatively
- Aids in weight loss through restriction and malabsorption
- Improves or eliminates most obesity-related conditions such as Type 2 diabetes and hypertension (blood sugar levels for most patients with Type 2 diabetes can improve almost immediately after surgery and may normalize within a year after surgery)

REVIEWING THE POSSIBLE RISKS AND LONG-TERM EFFECTS

The most serious complications include leaks at the junction of the stomach and small intestine. This usually requires the patient return 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 (jejunostomy).

There are certain complications to which any obese patient having surgery is prone, including degrees of lung collapse (atelectasis) which occur because it is hard 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 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, walking after after surgery, use of PAS (compression) boots during the procedure and hospital stay, use of Lovenox (blood thinner) after surgery and anti-clot exercises.

COMMON EMOTIONAL/BEHAVIORAL ISSUES AFTER BARIATRIC SURGERY

The changes from bariatric surgery aren't just physical. Surgery can also cause significant emotional and behavioral changes. The physical transformation following weight-loss surgery can lead to changes in self-image and self-esteem. Establishing self-care as a priority is essential for long-term success. This may require setting limits and defining new expectations and might include a reassignment of domestic chores and other family responsibilities. Your loved one may experience periods of depression, anxiety or self-consciousness, or it may seem as if your loved one has become a more confident and outgoing person.

SELF-IMAGE

After significant weight loss, patients may have a difficult time accepting a new body. For example, even though the patient may have reached his or her goal weight, he or she may look in the mirror and not recognize the person staring back. Losing a massive amount of weight can make a person feel vulnerable and afraid. Suddenly, people are paying more attention and asking questions; it can feel overwhelming.

Some people who are very quiet or shy may become much more outgoing once the weight comes off and they find the self-confidence they didn't have before. This improvement in self-confidence can also lead to an increase in assertiveness that may be shocking and even scary to friends and family. Some patients who have lived by a "go with the flow" attitude may find themselves taking more of a direct approach with others.

RELATIONSHIPS

People who have weight-loss surgery often experience both positive and negative effects in their marital and close relationships. Relationships often improve following bariatric surgery. Many expect that they will experience greater contentment and happiness in their relationships. However, statistics show a higher divorce rate among postoperative patients. Relationship difficulties often occur in marriages after bariatric surgery when one partner makes significant lifestyle changes and the other does not.

ENERGY

Energy levels within the first few months after bariatric surgery will be low because the patient is eating less. Muscle weakness in the months following surgery is also common and may result in balance problems, difficulty climbing stairs or lifting heavy objects, and increased fatigue following simple physical tasks. Many of these issues will pass over time as food intake gradually increases.

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nutritional problems can result. Diagnosis is usually done with endoscopy. Treatment may be done with an endoscopic procedure (gastric bypass) or with band adjustment in those patients with Lap-band.

VITAMIN AND MINERAL DEFICIENCY

Follow-up monitoring by the program 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 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 supplementation is critical. Nutritional problems are less common, but can occur in Lap-band patients.

EXCESS SKIN

After rapid, substantial weight loss, patients may experience problems with excess skin that can become infected or irritated. Patients often choose to have plastic surgery to remove excess skin.

Tell healthcare professionals

It's important for doctors, nurses and EMTs to know the patient has had bariatric surgery to ensure safe treatment. A medical alert bracelet or medical ID necklace will alert doctors, nurses and EMTs of their medical history so time is not wasted.

The patient's age and excess weight can increase risk from surgery, as can certain diseases. There are also risks that come with the medications and methods used in the surgical procedure.

Complications which could occur after the incision is healed include narrowing of the stoma (the junction between the stomach pouch and intestine) as a result of scar tissue development. This opening has been made smaller, and even a little scarring will squeeze the opening down to a degree that affects the patient's eating. Vomiting, which can occur between the fourth and 12th weeks, may be the cause. The problem can be dealt with by stretching the opening to the correct size by endoscopic balloon dilatation, which usually involves a single procedure to correct the problem.

This procedure can lead to a reduced absorption of calcium, iron and vitamins D and B. The stomach is involved in iron and vitamin B12 absorption and the duodenum is the primary site of calcium absorption. After bypass surgery, these nutrients may not be absorbed adequately. The patient may feel tired and listless and can develop anemia. These symptoms can be prevented and treated by taking extra iron, vitamin B12, calcium and vitamin D supplements. Daily vitamin and mineral supplementation is necessary because they will not be getting adequate amounts from the small quantity of foods they eat. B-complex and D vitamins, iron and calcium must be supplemented at higher than daily recommended levels. All patients should take supplemental vitamins and minerals as recommended by the program dietitians.

Dumping syndrome is a common side effect. About 85 percent of gastric bypass patients will experience dumping syndrome at some point after surgery. The symptoms can range from mild to severe. Symptoms include sweating, flushing, lightheadedness, tachycardia (fast hearbeat), palpitations, the desire to lie down, upper abdominal fullness, nausea, diarrhea, cramping and audible bowels sounds. Dumping usually occurs due to poor food choices. It is related to the ingestion of refined sugars (including high fructose corn syrup) or high glycemic carbohydrates. It can also occur with dairy products, some fats and fried foods. Repetitive patient education about what to eat and what not to eat can manage dumping syndrome. Patients also need to learn about and read basic nutrition labels.

After gastric bypass, patients should emphasize various sources of protein, such as fish, dairy products, meat, beans, legumes and soy. Fats and carbohydrates become secondary, but patients should still try to eat fresh vegetables and fruits.

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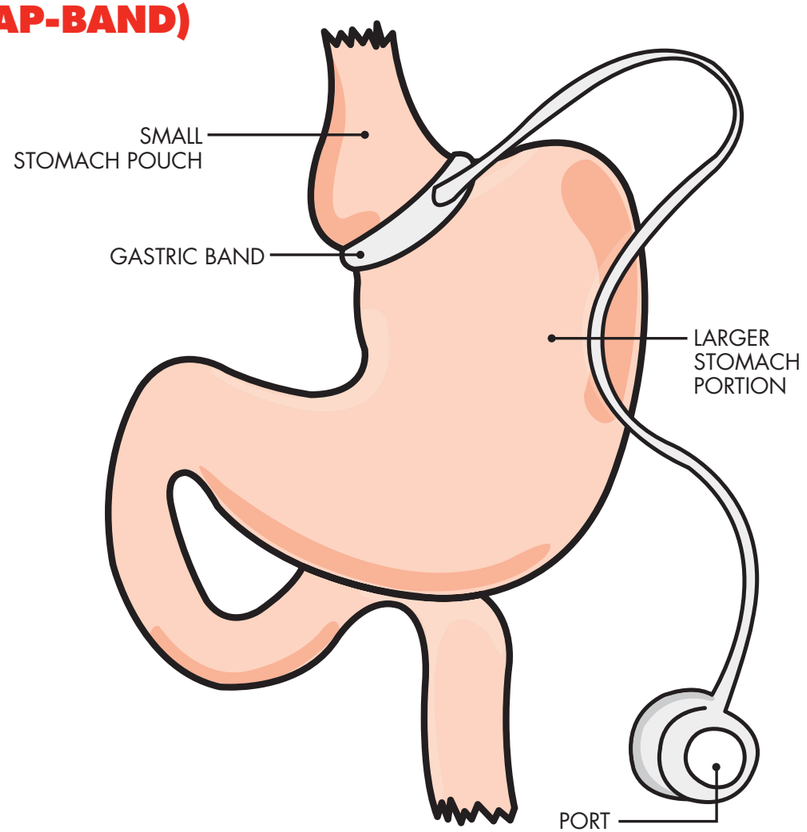
LOSE WEIGHT. GAIN HEALTH. LIVE LONGER.

LAPAROSCOPIC ADJUSTABLE GASTRIC BAND (LAP-BAND)



This procedure involves the surgical placement of a silicone-elastic ring around the upper part of the stomach. The ring is then filled or inflated with saline solution. The ring is accessed by tubing connected to a port placed beneath the skin of the abdomen into which the doctor injects or withdraws saline until the ideal amount of tightening is reached. By increasing or decreasing the amount of saline in the ring, the opening from the upper stomach to the lower stomach can be tightened to a desired degree. The tightening of 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 shorter hospital stays and faster recovery times compared to a procedure using an open incision. The Lap-band is often performed as an outpatient procedure. Following surgery, Lap-band patients

can be particularly troublesome, especially beans, whole grains, cow's milk products, vegetables and some fruits. The patient should consult the program dietitian before taking any probiotics.

TRANSIENT HAIR LOSS AND SKIN CHANGES

Hair loss after surgery is usually temporary. The patient's body is going through tremendous change and loss or thinning of hair is a frequent effect of the stress occurring in the body. For some, skin texture and appearance may change. It is not uncommon for patients to develop acne or dry skin after surgery. Patients can minimize these changes by taking daily multivitamins and making sure they consume the recommended amount of protein per day.

GALLSTONES

The development of gallstones is related to the rapid and significant amount of weight loss, rather than the surgery itself, and is most likely to occur in the first six months after surgery. Those who are obese have a very high rate of gallstone formation. By age 50, nearly 50 percent of morbidly obese women have developed gallstones.

BOWEL OBSTRUCTION

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

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) increase the risk of a peptic ulcer. All bariatric patients are instructed to avoid aspirin and NSAIDS (ibuprofen, Advil, Motrin, naproxen sodium, Aleve) after surgery and for life. Former smokers must not resume smoking after surgery, as risk increases dramatically.

STENOSIS/OUTLET OBSTRUCTION

Postoperative swelling or chunks of food can lead to a blockage involving the banded opening in Lap-band patients or blockage of the opening between stomach and intestine in gastric bypass patients. Symptoms may include pain and vomiting. If untreated,

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Charting this weight loss may give the appearance of a stairway. It is not uncommon for patients to question why they've stalled at times and wonder if they are doing something wrong or if the operation didn't work properly. It is normal to have periods of plateaus through all phases of weight loss after surgery. Expecting these fluctuations in weight loss can avert patient depression or exasperation with the surgery. Adhering to the basic rules of eating correctly and exercising regularly may shorten the duration of a plateau and ultimately lead to greater long-term weight loss.

What is most important to remember is that weight-loss surgery does not guarantee easy and consistent weight loss. The operation is a tool that, if used appropriately by the patient, can help achieve successful weight loss. However, if used inappropriately, overall weight loss may fall below expectations.

ABSENCE OF MENSTRUAL PERIODS

Irregular periods are very common in women experiencing rapid weight loss. Less frequent and lighter periods are common, but some may experience a heavier period.

PREGNANCY

Women of childbearing years should have a birth control plan in place before surgery. We recommend the patient avoid pregnancy for at least two years after any bariatric surgery. Their focus needs to be on healthy weight loss, and pregnancy will certainly complicate these results. The patient will also be at greater risk of nutritional problems during pregnancy. Oral contraceptives are not recommended for women who have had the gastric bypass procedure due to decreased intestinal absorption.

DUMPING SYNDROME

Symptoms include weakness, abdominal cramps, nausea, diarrhea, sweating, fatigue, weakness and feeling faint. Dumping syndrome 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. The patient should avoid foods and drinks that contain sugar and high amounts of fat.

FLATULENCE (GASTRIC BYPASS PATIENTS ONLY)

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

require monthly clinic visits during the first year to monitor results and the possible need for adjustment to the Lap-band device. The frequency of band adjustments decreases after the first year post-surgery. Adjustments must be completed by a qualified, appropriately trained healthcare provider. This is a completely reversible procedure; however, it is intended to be a permanent implanted device. Removal of the Lap-band would eliminate restriction and may lead to weight regain.

EXPLORING THE BENEFITS OF LAP-BAND

- This procedure is considered less invasive compared to other weight loss procedures. Because of this, patients may have fewer operative complications, experience less postoperative pain and have a faster recovery.
- The Lap-band device can be adjusted.
- The process can be reversed, if needed.
- This procedure requires a shorter hospital stay and recovery time may be quicker. Most Lap-band surgeries are done on an outpatient basis, although it requires an overnight stay. Most patients are back to work in one to two weeks after surgery. Because the Lap-band is restrictive only, there is less risk for vitamin/mineral deficiencies. However, they can still occur and patients are required to take supplements postoperatively, have routine laboratory surveillance and receive lifelong follow-up care.

UNDERSTANDING THE RISKS

There is a risk of gastric perforation, or a tear in the stomach wall, during or after the procedure that might lead to the need for another surgery.

The patient's age and excess weight can increase risk from surgery, as can certain diseases. There are also risks that come with the medications and methods used in the surgical procedure.

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 the reason 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, walk soon after surgery, use PAS (compression) boots during the procedure and hospital stay, use Lovenox (blood thinner) after surgery, and perform anti-embolic exercises.

There are certain complications to which any obese patient having surgery is prone, including degrees of lung collapse (atelectasis) which occur because it is hard for the patient to breathe deeply when in pain. A great deal of attention is paid in the

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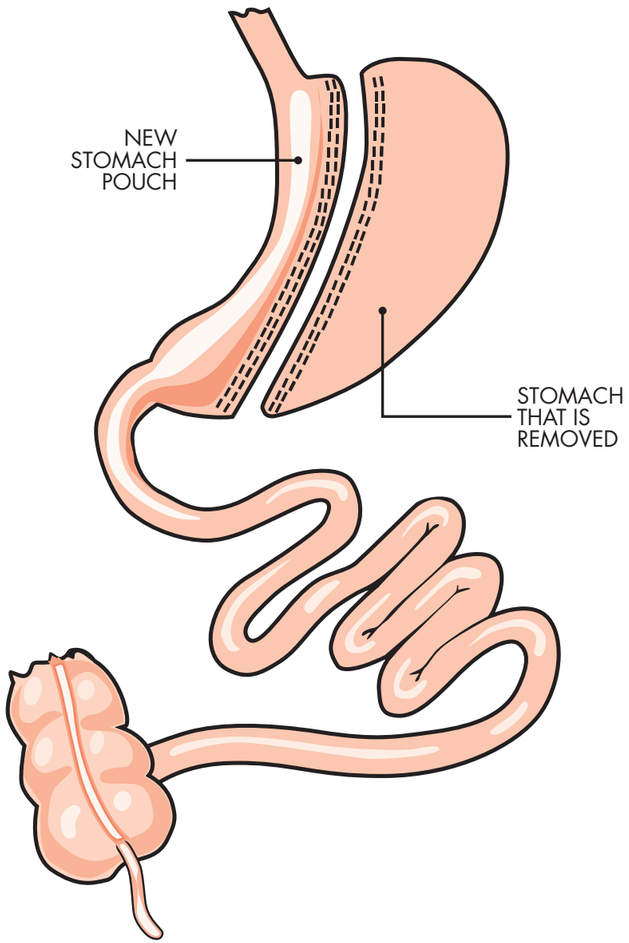
postoperative period to encourage deep breathing, use of an incentive spirometer and activity to try to minimize the problem.

Obstruction of the stoma 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 tight of a band, stoma obstruction, binge eating or excessive vomiting.

LAPAROSCOPIC VERTICAL SLEEVE GASTRECTOMY



CONSTIPATION

Constipation is usually due to insufficient intake of water. Also, it is helpful to avoid diuretics such as caffeine. Some nutritional supplements, including calcium and iron, may contribute to constipation. Narcotic (pain medication) ingestion can slow bowel function resulting in constipation as well. In addition to increasing water intake, supplementing the diet with healthy fiber can assist in overcoming the difficulties of constipation after surgery. Be sure to consult with the patient's physician regarding changes in diet, vitamins and medications.

DYSPHAGIA

Dysphagia, is a medical term for "difficulty with swallowing." This may be a side effect of any operation where the stomach has been made smaller, and is caused by eating too fast, too much or not chewing well enough before swallowing. The food backs up into the esophagus and causes chest pressure or tightness in the throat. It is important for the patient to stop eating and drinking if this occurs; otherwise, regurgitation or vomiting may ensue. Dysphagia can be avoided by chewing very well (approximately 15 times), eating slowly (putting the fork down for one minute between swallowed bites) and avoiding tough foods such as doughy bread, overcooked steak or dry chicken breasts.

CHANGES IN APPETITE/TASTES

Prior to beginning their weight-loss programs, eating may have been a large part of the lives of bariatric surgery patients. In the initial surgery recovery period, the patient may not feel hungry, but it is vital to maintain proper nourishment. You may also notice that their tastes change after surgery. Prior to surgery, maybe they loved eggs, and after surgery, they can't stand even the smell of them. In contrast, they may now love food they would have turned their noses up at before. One of the best things to do is provide healthy, flavorful foods packed with protein. Protein is the main need in their lives now, and they've got to find ways to pack as much in to their 2–4 ounce meals and 2–4 ounce snacks as they can. One of the best ways to get in the protein they need is through protein shakes.

REACHING A PLATEAU

Following weight-loss surgery, patients may lose weight at a fairly rapid pace, then, as time passes, the weight loss becomes more gradual. Commonly, weight will stabilize about 18 months after surgery. During these 18 months, weight loss does not follow a predictable trend and can be erratic with alternating periods of significant weight loss followed by none at all.

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VOMITING

Postoperative vomiting is usually due to poor eating technique and/or eating too much. It can take several weeks for patients to adjust to their new pouches and eating habits. In the beginning, it can be hard to know how much food will fill the pouch. Chew food to the consistency of baby food and use a baby fork or toothpick to slow down eating.

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 continues for more than 24 hours, contact the surgeon's office.

DEHYDRATION

Dehydration will occur if the patient does not drink enough. This is particularly important in the first and second weeks after surgery. Symptoms of dehydration 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 the surgeon if you believe the patient is dehydrated. The patient may need to be admitted to the hospital so fluids can be administered.

FREQUENT/LOOSE STOOLS

A liquid, soft protein diet will lead to looser, more frequent stools. At first, it will be normal for the patient to have one to three bowel movements of soft stool per day. It may be foul smelling and associated with flatulence. Most of these changes resolve as their body heals and adapts to changes. Please call the surgeon if the patient has persistent diarrhea. After a few weeks, the frequency of bowel movements will diminish, but constipation could become a problem.

Like the Lap-band, the sleeve gastrectomy is a restrictive procedure. The stomach is restricted by stapling and dividing it vertically. The portion of the stomach that receives food is shaped like a very slim banana (or sleeve). The nerves to the stomach and the valve leading from the stomach to the small intestine (pylorus) remain intact, thereby preserving the functions of the stomach while drastically reducing the volume. The small intestine remains intact, which can reduce the chances for dumping or malabsorption.

Typical hospital stay after the vertical sleeve gastrectomy is two to three days. As with any bariatric procedure, follow-up care is critical to long-term, safe weight loss. Post-surgery appointments with the bariatric team will be needed to monitor healing and progress.

EXPLORING THE BENEFITS

- It does not require the implantation of a device such as a gastric banding.
- The procedure mechanically decreases the size of the stomach as well as the secretion of the hormone ghrelin, which results in feeling fuller sooner.
- It can offer significant and sustained weight loss, similar to the gastric bypass.
- Vertical sleeve does not cause internal hernias like gastric bypass may.
- It carries a reduced chance of dumping syndrome or malabsorption.
- There is no anastomosis (sewing/connecting of two parts).

UNDERSTANDING THE RISKS

Because there is a large staple line, there is a risk of developing a leak or bleeding at this site.

Current data does not show durability beyond five years.

The patient's age and excess weight can increase risk from surgery, as can certain diseases. There are also risks that come with the medications and methods used in the surgical procedure.

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PRE-OP EVALUATION PHASE

The evaluation process can last several months and not all patients will be approved for surgery. The preoperative patient evaluation pathway includes the following:

- Medical evaluation with an advanced practice nurse or physician assistant and follow-up care as needed
- Psychosocial professional evaluation with a social worker or counselor and follow-up care as needed
- Physical therapist (PT) evaluation and follow-up care as needed
- Registered dietitian (RD) evaluation and follow-up care as needed
- Bariatric 101 and 200 classes
- Support group
- Specialty evaluations (as recommended from medical evaluation)
- Multidisciplinary team meeting for surgical approval/denial
- Nutrition 400 class
- Preoperative education class
- Preoperative visit at Memorial
- Preoperative surgeon visit

Symptoms associated with tricyclic anti-depressants include flu-like symptoms, headache, tiredness, abdominal cramping or pain, appetite disturbance, diarrhea, nausea or vomiting, insomnia, nightmares, ataxia (lack of muscle coordination), dizziness, lightheadedness, vertigo (feeling that you are moving or spinning when standing still), akathisia (inner restlessness), Parkinsonism (tremors similar to Parkinson's disease), tremor, agitation, anxiety and low mood.

COMMON MEDICAL ISSUES AFTER BARIATRIC SURGERY

It is important for the patient to always include bariatric surgery whenever providing medical history information to any healthcare professional. It is also important to remind the patient's primary care physician and other healthcare professionals of his or her bariatric surgery often, especially when implementing new medical treatments, medications or having any type of procedure. Lap-band patients should always contact the bariatric surgeon and have all saline removed from the band prior to any surgical procedure.

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. In rare cases, nausea can lead to repeated vomiting, resulting in dehydration. 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. Avoid using perfumes and scented lotions around the patient. If food odors bother the patient, he or she may need someone else to prepare meals consisting of bland foods. If nausea is interfering with the patient drinking fluids, it is possible for ginger, peppermint tea, fennel tea, decaffeinated green tea or water with lemon (hot or cold) to help. Some 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 they are bothered by odors after surgery. If nausea develops shortly after taking a dose of pain medication, call the surgeon's office to discuss if there is a need for a change in pain medication.

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ANTI-DEPRESSANT DISCONTINUATION SYNDROME

Anti-depressant discontinuation syndrome (ADS) is a condition that affects approximately 20 percent of patients who abruptly stop taking anti-depressant medications after six or more weeks of consistent use. Following bariatric surgery, it is possible patients may be at risk of medication malabsorption, which could place the patient at risk of developing ADS. Symptoms of ADS vary based on the type of anti-depressants taken by the patient.

SELECTIVE SEROTONIN REUPTAKE INHIBITORS

Selective Serotonin Reuptake Inhibitors (SSRI) are the most commonly prescribed antidepressant medications. Name brands include Prozac, Zoloft, Paxil, Celexa, Lexapro and Luvox. Generic versions include Fluoxetine, Sertraline, Paroxetine, Citalopram, Escitalopram and Fluvoxamine.

Symptoms associated with ADS from SSRI's include flu-like symptoms, headache, tiredness, abdominal cramping or pain, appetite disturbance, diarrhea, nausea or vomiting, insomnia, nightmares, ataxia (lack of muscle coordination), dizziness, lightheadedness, vertigo (feeling that you are moving or spinning when standing still), blurred vision, "electric shock" sensations, numbness, paresthesia (sensations of burning or tingling), akathisia (inner restlessness), Parkinsonism (tremors similar to Parkinson's disease), tremor, aggression/irritability, agitation, anxiety and low mood.

ATYPICAL ANTI-DEPRESSANTS

Atypical anti-depressants are the second most commonly prescribed anti-depressant medications. Name brands include Effexor, Pristiq, Cymbalta and Wellbutrin. Generic versions include Venlafaxine, Desvenlafaxine, Duloxetine and Buproprion.

ADS symptoms associated with atypical anti-depressants include flu-like symptoms, headache, tiredness, abdominal cramping or pain, appetite disturbance, diarrhea, nausea or vomiting, insomnia, nightmares, dizziness, vertigo (feeling that you are moving or spinning when standing still), "electric shock" sensations, paresthesia (sensations of burning or tingling), akathisia (inner restlessness), anxiety and low mood.

TRICYCLIC ANTI-DEPRESSANTS

Tricyclic anti-depressants are the oldest and least commonly prescribed anti-depressant medications. Name brands include Elavil, Pamelor, Tofranil, Norpramin, Anafranil, Sinequan, Asendin. Generic versions include Amitriptyline, Nortriptyline, Imipramine, Desipramine, Cloipramine, Doxepin and Amoxaprine.

POST-OP FOLLOW-UP APPOINTMENTS

1–2 WEEKS	Surgeon Primary Care Physician Dietitian	**6 MONTHS**	Medical Follow-up Laboratory Tests Physical Therapist Dietitian Psychosocial Visit Support Group
4–6 WEEKS	Medical Follow-up Laboratory Tests Physical Therapist Dietitian Psychosocial Visit Support Group	**7-11 MONTHS**	Support Group
2 MONTHS	Support Group	**12 MONTHS**	Medical Follow-up Laboratory Tests Physical Therapist Dietitian Psychosocial Visit Support Group
3 MONTHS	Medical Follow-up Laboratory Tests Physical Therapist Dietitian Psychosocial Visit Support Group	**18 MONTHS**	Psychosocial Visit Support Group
4–5 MONTHS	Support Group	**ANNUALLY**	Medical Follow-up Laboratory Tests Dietitian Psychosocial Visit Physical Therapist Support Group

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LOSE WEIGHT. GAIN HEALTH. LIVE LONGER.

HOSPITAL STAY

ON THE DAY OF SURGERY:

- The patient should shower with an antibacterial soap.
- The patient and a support person should arrive three hours before surgery time and report to the Admission and Testing area to be checked in for surgery.
- A nurse will call the patient from the Admission and Testing waiting area to a holding room where the patient will change into a hospital gown and go over health information. One support person may accompany the patient at this time. Others will be asked to wait in the surgery waiting area.
- At the appropriate time, a nurse will take the patient to the pre-surgery holding area. You may accompany the patient to the pre-surgery holding area.
- The anesthesiologist and/or the nurse anesthetist will meet the patient and support person in the pre-surgery holding area.
- When ready, the patient will be taken to the operating room. The support person will go to the surgery waiting area.
- The patient may be repeatedly asked about the planned procedure. This is to ensure safety.
- After surgery, the patient will recover in the PACU (post-anesthesia care unit) until they are awake and alert enough to be transferred to the bariatric unit.

ITEMS TO BRING TO THE HOSPITAL:

- ❍ CPAP machine (if applicable)
- ❍ Incentive spirometer
- ❍ Bariatric manual
- ❍ List of all medications, herbal supplements, vitamin/mineral supplements
- ❍ Copy of patient's living will and/or Durable Power of Attorney for Healthcare

PREVIOUS PATIENTS RECOMMEND:

- ❍ Underwear
- ❍ House slippers (with non-slip soles)
- ❍ Pen and paper or notebook
- ❍ Personal hygiene toiletries
- ❍ Lip balm, such as ChapStick
- ❍ Protein supplements (if desired)

GENERIC	BRAND NAME	FORMULATION	USUAL DOSE	ISSUES
Desvenlafaxine	Pristiq	Tablet	50mg daily	Tablets must be swallowed whole with fluid and not divided, crushed, chewed or dissolved.
Duloxetine	Cymbalta	Capsule, delayed release capsule, oral solution		Capsules contain enteric-coated pellets; avoid use if possible.
Buproprion	Wellbutrin XL/ ER Zyban	Tablet	50–700mg	Sustained-release tablets may be divided but not crushed. May aid in weight loss.
Amitriptyline	Elavil	Tablet, sterile solution	10–300mg	May cause blue-green urine, Moderate weight gain.
Nortriptyline	Pamelor	Capsule, oral solution	30–150mg	Oral solution available.
Imipramine	Tofranil	Tablet	10–300mg	Moderate weight gain.
Desipramine	Norpramin	Tablet, capsule	10–300mg	Tablets and capsules.
Clomipramine	Anafranil	Capsule	25–50mg	
Doxepin	Sinequan	Capsule, oral solution	50–300mg	Oral solution available; do not mix oral solution with carbonated beverages.
Amoxaprine	Asendin	Tablet	50–600mg	May be taken with food to decrease GI distress.

These are suggestions of specific formulations of anti-depressants and how each may be affected by bariatric surgery. It is important to discuss with your prescribing doctor and not to make any changes to medications without the consent and knowledge of a medical professional.

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SPECIFIC ANTI-DEPRESSANT MEDICATIONS AND POSSIBLE ISSUES FOR BARIATRIC SURGERY PATIENTS:

GENERIC	BRAND NAME	FORMULATION	USUAL DOSE	ISSUES
Fluoxetine	Prozac, Prozac Weekly, Sarafem	Capsule, delayed release capsule, oral solution	20–80mg	20mg IR capsule may be mixed with 4 oz of water to provide a solution stable up to 14 days in the refrigerator. Avoid weekly because of sustained release pellets.
Sertraline	Zoloft	Tablets	50–200mg	
Paroxeline	Paxil, Paxil CR	Tablet, controlled release tablet	20–60mg	Controlled release tablets cannot be crushed, chewed or broken. May also cause weight gain.
Citalopram	Celexa	Tablet, oral solution	20–60mg	Oral commercial solution is available.
Escitalopram	Lexapro	Tablets, oral solution	10–20mg	Oral solution is available.
Fluvoxamine	Luvox, Luvox CR	Tablet	50–300mg >100mg give in divided doses	**DO NOT USE CR FORMULATION.**
Venlafaxine	Effexor	Capsule	75–150mg	Extended-release capsule contents may be sprinkled on a spoonful of applesauce and swallowed immediately without chewing. Follow with water to ensure complete swallowing of pellets.

- ❍ Books or magazines
- ❍ Walking shoes
- ❍ Sugar-free drink mix sticks, such as Crystal Light
- ❍ Small change for newspaper
- ❍ Knee-length robe

Label all personal possessions with the patient's name.
Do not bring large sums of money.

2G Nursing Unit 217–788–3295 • 2G Nurse Manager 217–788–3617

ONCE THE PATIENT HAS MOVED TO THE INPATIENT UNIT:

- To ease breathing, the patient is encouraged to keep the head of the bed elevated at 30 degrees.
- Remind the patient to use the incentive spirometry device every hour.
- The patient cannot drink any fluids or eat anything except 1 ounce (30 cc) of ice chips every hour until cleared by the surgeon. The surgeon will progress the diet as appropriate. Stage 2 is clear liquids and Stage 3 is liquid protein.
- The patient cannot have straws, caffeine, added sugar, soda or fruit juice.
- The patient needs to record all fluid and food intake during their hospital stay. Patients may require assistance as they may still be groggy from anesthesia. Daily log sheets are located in the patient's bariatric binder.
- The patient also needs to record all exercise and urine output and may need help with this.
- Encourage the patient to wear the heart and oxygen monitors at all times—the heart monitor allows staff to detect complications more quickly and the oxygen makes breathing easier and improves healing for the patient.
- In order to prevent blood clots, the patient must:
  - Do ankle and arm exercises every two hours (see Physical Therapy section of patient's manual for illustrations)
  - Wear PAS boots when in bed
  - Walk every four hours

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HOSPITAL STAFF WILL ASSIST WITH AND/OR PROVIDE:

- The four Ps:
  - **Potty:** Help the patient to the restroom
  - **Position:** Repositioning in bed and walking
  - **Possessions:** Ensure ice, call bell and belongings are all within patient's reach
  - **Pain:** Pain assessments to help keep the patient comfortable
- Regular checks (rounding) to meet the patient's needs and answer questions
- Monitor heart rate, breathing, oxygen levels, blood pressure, blood sugar levels, surgical site and urine output while the patient has a catheter
- Provide Lovenox (blood thinner) to help prevent blood clots
- Apply abdominal binder or reinforce dressings
- Give antibiotics through the IV to prevent infection
- Keep the patient hydrated with IV fluids consistently over the first 24 hours after surgery
- Early morning bariatric team rounds, typically at 7 a.m.

Let the nursing staff know:

- If the patient's pain is more than he or she is comfortable with or can tolerate
- If the patient feels nauseated, is vomiting or extremely anxious

If the patient notices an increase in depressive symptoms after surgery, it is important for him or her to consult with a doctor. The most frequent symptoms of depression include:

- Difficulty concentrating, remembering details, making decisions
- Fatigue and decreased energy
- Feelings of guilt, worthlessness and/or helplessness
- Feelings of hopelessness and/or pessimism
- Insomnia, excessive sleeping, early morning waking
- Irritability, restlessness
- Loss of interest in activities and/or hobbies that were once fun
- Persistent aches and pains (not from surgery), headaches
- Persistent sad, anxious, "empty" feelings
- Thoughts of suicide

GENERAL SUGGESTIONS FOR PATIENTS CURRENTLY TAKING AN ANTI-DEPRESSANT:

- Ask if medication is available in liquid form. Medications should be crushed or in liquid form for at least 3-8 weeks after bariatric surgery.
- The patient should not use sustained release or enteric-coated medications. Medications that are identified as 'extended release' or 'time release' may no longer be effective because they may process through the patient's smaller stomach too quickly, before the outer coating is dissolved, and not be absorbed completely.
- Ask if it is OK to crush the pills. Pills need to dissolve before they can be absorbed. Often they are formulated to dissolve in an acid environment (pH as low as 1.2), but the pH of a stomach after bariatric surgery may be up to 6.8. Pills may need to be crushed to get them ready for the intestine.
- Pills should be no larger than the diameter of a pencil tip eraser. If a pill is larger, it needs to be split, crushed, ground up or opened (if a capsule). **Do not crush any slow release, sustained release or enteric-coated products.**
- See if it is possible to take smaller doses of the medication more frequently.

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NORMAL POST-SURGICAL SYMPTOMS

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

Mild to moderate discomfort or pain is also normal. If the pain becomes severe and is not relieved by pain medication, contact the surgeon.

Itching and occasional small shooting electrical sensations within the skin frequently occur as the nerve endings heal. Small sensory nerves to the skin surface are occasionally cut when the incisions are made or interrupted during surgery. The sensation in those areas gradually returns, usually within two to three months, as the nerve endings heal. These symptoms are common during the recovery period. Ice, skin moisturizers, vitamin E oil and massage often help. Because of some postoperative numbness, it is best to avoid heating pads until the patient heals.

Red, dark pink or purple scars are normal and take about a year to fade. Protect scars from the sun for a year after surgery. Even through a bathing suit, a good deal of sunlight can reach the skin and cause damage. The patient should wear at least an SPF 15 sunscreen when in the sun.

BARIATRIC SURGERY AND ANTIDEPRESSANT MEDICATION

Bariatric surgery changes the way the body processes medications. The same biological changes that increase risk for nutritional malabsorption can also affect medication digestion. After the surgery, pills have less time to dissolve in the stomach, the acid/pH level of the stomach changes and the absorption process in the small intestine is changed.

Patients may hope they will not need as much medicine after weight-loss surgery. Medications for diabetes, hypertension, and asthma are often significantly decreased or eliminated. However, the need for antidepressant and other psychological medications is less likely to be reduced. So it is important to think about how the body will absorb these medications after surgery.

After bariatric surgery, smaller doses of medication, given more often, may be needed. In bypass patients with less intestinal length, the surface area is drastically reduced, limiting the ability to absorb medication. The doctor will discuss potential changes in medication with the patient.

STAGE 2 AND STAGE 3 DIET PROGRESSIONS

You or the patient may call Memorial Room Service (8–3463) to order. Remind the patient to sip small amounts slowly. No straws! The patient should allow 15 minutes to sip 1-2 ounces (one to two 30 ml medicine cups). This will help prevent distress to the new pouch, intestinal discomfort, excess gas and bloating.

BARIATRIC CLEAR LIQUID STAGE 2 DIET

The patient may choose two fluid choices per order. Clear liquids are essential to keep patients hydrated during this phase of their diet progression.

Clear Liquid Choices

- Coffee (decaffeinated)
- Sugar-free gelatin (cherry or orange)
- Iced tea (decaffeinated)
- Crystal Light lemonade
- Broth (beef, chicken or vegetable)
- Hot tea (decaffeinated)
- Hot water
- Popsicle (sugar-free)

Also available upon request:

- Sweetener (Equal, Splenda or Sweet n' Low)

BARIATRIC LIQUID PROTEIN STAGE 3 DIET

This stage consists of liquid proteins in addition to clear liquids. Liquid protein choices allow patients to add more nutrients to their diet.

The patient may choose two fluid choices per order, and should aim for at least one protein choice per day.

Protein Choices

- Optisource protein supplement (pre-mixed protein supplement)
- Four packets Beneprotein (tasteless powdered protein that dissolves in any liquid)

Clear Liquid Choices

- Coffee (decaffeinated)
- Sugar-free gelatin (cherry or orange)
- Iced tea (decaffeinated)
- Crystal Light lemonade
- Broth (beef, chicken or vegetable)
- Hot tea (decaffeinated)
- Hot water
- Popsicle (sugar-free)

Also available upon request:

- Sweetener (Equal, Splenda or Sweet n' Low)

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EARLY POST-OP GUIDELINES

Morbid obesity is a lifelong disease. This surgery is a tool that helps the patient put this disease into lifelong remission.

EXERCISE

The patient should follow the individualized exercise plan that has been provided by the program physical therapist. For the first week at home, the patient should walk four times a day for at least five minutes. Daily walking will help reduce any incision pain and help the patient to establish exercise in daily routine. They should gradually increase walking up to 30 minutes per day over the next month. Avoid activities such as biking, swimming, weight lifting, resistance training and aerobic exercise until cleared by the program physical therapist.

NUTRITION

The patient should not change his or her diet or add new foods until told by the program dietitian or surgeon. Once at home, the patient should continue with a liquid, high-protein diet. Each patient will have an individualized daily protein consumption goal. Patients are to drink clear, sugar-free fluids, in addition to the protein product, to meet minimum liquid intake of 80 ounces (8 cups) per day. **Remember—dehydration is the main reason patients are readmitted to the hospital.** Do not drink carbonated beverages, fruit juices or use straws.

MILD TO MODERATE DEHYDRATION IS LIKELY TO CAUSE:

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

SEVERE DEHYDRATION, A MEDICAL EMERGENCY, CAN CAUSE:

- Very dry mouth, skin and mucous membranes
- Shriveled and dry skin that lacks elasticity
- Little or no urination—any urine that is produced will be dark yellow or amber
- In the most serious cases, delirium or unconsciousness
- Lack of sweating
- Extreme thirst
- Irritability and confusion
- Low blood pressure
- Fever
- Rapid heartbeat
- Sunken eyes

MEDICATIONS

Prior to discharge from the hospital, the hospital staff will review the patient's list of medications and advise whether or not to resume medications and at what dosage. The patient should begin taking multivitamins and/or mineral supplements as directed by the program dietitian. The patient will receive a prescription for pain medications from the surgeon prior to discharge. The patient may also use adult-strength liquid Tylenol for mild to moderate pain. **Do not give the patient liquid ibuprofen or aspirin products.**

EATING

If the patient feels full during meals, he or she should stop eating. The patient should drink and eat slowly to reduce the risk of vomiting and chew food to a pureed consistency (think baby food). If vomiting occurs, the patient should return to a diet of clear liquids for 24 hours. Remember, the patient's new stomach pouch can only hold between ½ and 1 ounce of liquid at a given time. The patient should avoid grazing or unscheduled eating between meals, unless this is an attempt in the first few months to increase calories. Food should still be consumed on a regular basis, such as a meal or snack every three to four hours.

CALL THE SURGEON'S OFFICE IF THE PATIENT EXPERIENCES:

- Fever over 100.6° F
- Wound drainage
- Redness, swelling or increased pain at the site of wounds
- Sudden episodes of shortness of breath
- Chest pain or rapid heartbeat (more than 100 beats per minute)
- Leg pain or swelling
- Repeated vomiting
- Increased abdominal pain
- Any pain that is not relieved by pain medication
- Urine output of fewer than four times in 24 hours
- Any emergency room visit during the first 12 months after surgery

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