

# Healthy Weight Management & Bariatric Surgery

## Patient Information Resource Guide



**Penn Medicine**  
**Lancaster General Health**

*Important*  
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*Welcome to*

## Lancaster General Health Physicians Healthy Weight Management & Bariatric Surgery

Our Healthy Weight Management Program is designed to meet the specific needs of any individual who has struggled with the physical and emotional issues associated with being overweight. Our mission is to assist these individuals with building healthy lifestyles for long-term weight loss success.

Being overweight is an illness which requires many different treatment approaches, depending on the severity of the problem. There are many factors which help us develop a personalized treatment plan for you. We address our treatment based on your:

- *Severity of the weight illness*
- *Level of personal well-being*
- *Associated medical problems*
- *Job-related eating patterns*
- *Nutritional knowledge and eating preferences*
- *Current activity level*

We realize that no single approach to weight loss has ever been proven successful for each and every person. It is our belief that people need a personalized weight management program that matches their own lifestyle. This, in turn, will increase the chance for permanent lifetime change.

At Healthy Weight Management & Bariatric Surgery, we have the resources to make permanent change possible. Our Healthy Weight Management Program staff consists of credentialed experts in the fields of nutrition, exercise and behavior modification. With our help, you will become successful at developing life-long healthy behaviors conducive for permanent weight maintenance and well-being.



## *The Healthy Weight*

# Management Team



### **James Ku, MD, FACS, FASMBS**

James Ku, MD, is a board certified surgeon and brings more than 10 years of experience in bariatric surgery. He has performed more than 2,000 bariatric surgeries, including 500 gastric banding procedures.

Dr. Ku earned his medical degree from Jefferson Medical College in Philadelphia and his undergraduate degree from The Johns Hopkins University in Baltimore. He completed his fellowship in Laparoscopic Bariatric Surgery at University of Pittsburgh Medical Center. He also completed fellowships in Surgical Critical Care and Trauma, both at University of North Carolina. Dr. Ku served his residency at the Graduate Hospital in Philadelphia.

Previously, Dr. Ku served as Medical Director of bariatric surgery programs at both Reading Hospital and Penn State Hershey Medical Center. He was also an assistant professor of Surgery at The Milton S. Hershey Medical Center and Penn State College of Medicine.

Dr. Ku. was Founding Vice President of the Pennsylvania Society for Bariatric Surgery. He is also a member of numerous professional organizations including the American Society of Gastrointestinal Endoscopic Surgeons and the American Society for Bariatric and Metabolic Surgery.

Dr. Ku has published numerous abstracts and articles in professional journals including, *Journal of Surgical Research* and the *Journal of Trauma and Obesity Surgery*. He has lectured extensively on the surgical treatment of obesity.



### **Joseph R. McPhee, MD, FACS**

Joseph R. McPhee, MD, is a board certified surgeon and a fellow of the American Society for Metabolic and Bariatric Surgery (ASMBS), he is also board certified in obesity medicine. Dr. McPhee joined Lancaster General Health's Bariatric Physician Specialists full time in May 2011. As Medical Director of Bariatric Surgery and the Healthy Weight Management Programs, he oversees all of LGHealth Penn Medicine's weight loss programs and is supported by an experienced staff of Registered dietitians, nurses, exercise physiologists and clinical psychologist.

Dr. McPhee is fellowship-trained in advanced laparoscopic techniques, including gastric bypass, band and sleeve gastrectomy. He served the past 15 years with the U.S. Navy as Commander in the Medical Corps, with tours in Bosnia, Sicily, Kuwait and, most recently, Iraq. He also served aboard the USS Comfort to provide Haiti earthquake relief.

Dr. McPhee loves to cook and has published a bariatric cookbook, as well as an online website to share recipes with his patients. He lives with his wife and three sons in Lancaster.

All weight loss surgery is done exclusively at Penn Medicine Lancaster General Hospital.





## **Zachary A. Ichter, DO**

Bariatric Surgeon

Zachary Ichter, DO, is a fellowship-trained surgeon with expertise in advanced laparoscopic surgery. A Lancaster native, he holds a bachelor's degree from Ursinus College and obtained his DO degree from Philadelphia College of Osteopathic Medicine.

He performed his residency in general surgery at the University of Medicine and Dentistry of New Jersey-School of Osteopathic Medicine (now known as Rowan University School of Osteopathic Medicine) and completed a fellowship in minimally invasive robotic bariatric surgery at Stanford University. He received numerous honors while in clinical rotation at Geisinger Medical Center. He is board-certified by the American Osteopathic Board of Surgery.



# *Are You a Candidate for* Weight Loss Surgery?

## **A candidate for weight loss surgery would need to fit into one of the groups below:**

- Have a body mass index (BMI) of 40 or more (calculate your BMI at [lancastergeneral.org/content/Bariatrics](http://lancastergeneral.org/content/Bariatrics))
- Have a BMI of 35 or greater with at least one major illness associated with obesity

## **A surgical candidate should also:**

- Be between the ages of 18 – 65 years old
- Have failed to permanently lose weight in at least one documented weight control program
- Fully understand the risks and benefits of weight loss surgery
- Have stopped smoking prior to first visit
- Not have an underlying endocrine cause for severe obesity
- Be agreeable and committed to long-term follow-up

# Health Effects of Obesity

Being overweight affects the entire body. Nearly every organ system is stressed or damaged by a weight illness.

Serious illnesses linked to being overweight, called “co-morbidities,” can prevent you from having a normal and productive life.

*Having a waist circumference of over 35 inches for women and 40 inches for men has also proven to be an excellent predictor of weight related illnesses.*

## *If you are obese, you are:*

- **Six times more likely to develop cancer**
- **Six times more likely to develop heart disease, and**
- **Forty times more likely to develop type 2 diabetes**



# Patterns of Weight Gain

Recognizing and understanding what caused your weight problem is a very important step in your recovery. Many people are unaware of how they gained weight. If you are unable to identify problems, you will have difficulty changing and improving your lifestyle.

Knowing more about how you gained weight will help you change your lifestyle and successfully maintain a healthy weight long-term.

## **Common Factors Adding to Weight Gain**

1. Weight gain occurs when people eat more of the wrong food and calories than they burn with activity.
2. Metabolism is the rate at which your body burns calories for energy. When a person is inactive, his or her metabolism slows down, causing the body to store more fat.
3. As we age, the amount of lean muscle in our body decreases and slows the body's metabolism.
4. Eating can become an addiction or a habit to which we no longer pay attention.
5. We can use food to cope with our emotions, deal with negative relationships, or reward ourselves.

## **Lifestyle Factors to Consider**

Many people find it very hard to accept the need to change the way they eat.

Selecting healthy foods thoughtfully and consistently is necessary to achieve a healthy weight and maintain it long-term. Weight loss surgery alone will not permanently correct your weight problem.

Having weight loss surgery will not stop you from gaining weight if you continue to overeat and make poor food choices.

Some people believe they eat healthy and still gain weight. Eating too much healthy food and exercising too little can also lead to weight gain.

The pleasure of eating, social situations, and family traditions can lead to overeating and poor food choices. Sometimes simply having food on hand can lead to overeating. You must prepare for, or avoid, situations that lead to overeating in order to achieve and maintain a healthy weight.

Eating outside the home is also a common cause of overeating and poor food choices. People who rely on prepared foods, fast foods and fast food delivery services often have weight problems. People who rely on fast or prepared foods may lack the skill to cook a healthy meal or dislike the time it takes to make a meal.

When we consistently overeat and make poor food choices, our body loses its ability to regulate appetite. Addictive eating behaviors emerge and strong urges for high calorie foods lead to weight gain.

*You must develop the skills to plan and prepare healthy meals and use those skills every day to overcome addictive food habits.*

Eating out of habit, without being aware of what and how much you eat, is one of the most serious eating problems to accept and overcome. This type of “compulsive” eating is difficult to defeat because it is highly addictive.

If you suffer from compulsive eating, you must re-learn how to pick, prepare and eat food in a mindful way. People often need to reorganize their lives to successfully restore their health. You may need to eliminate certain foods from your life to control this destructive eating pattern.

## **Your Body’s Metabolism**

Everyone’s body burns calories at a different rate. Your metabolism determines the rate you burn calories. Any time you eat more calories than you burn, the extra calories will be stored as fat. For example: if your metabolism slows down and you continue eating the same number of calories, you will inevitably gain weight.

Injuries and pregnancy are common causes of weight gain because they affect activity level and metabolism. If an injury or pregnancy leads to long-term weight gain, bariatric surgery can stimulate weight loss, improve recovery from a physical injury and make it possible for an individual to return to an active lifestyle.

## **Emotional Eating**

Living in an unstable emotional environment is a common cause of weight gain. Many high calorie foods, rich in fat and sugar, provide instant comfort in stressful situations. In those moments, the body’s signal of satisfaction is ignored.

Food can stimulate pleasure centers in the brain overcoming discomfort or anguish. Repeatedly saturating the brain’s pleasure centers with the comfort of food quiets pain signals in the brain.

Sugar and fat can stimulate the brain in almost the same way as cocaine, heroin and “crack.” Fighting such a powerful, addictive behavior requires personal strength and support from a weight loss program with experts in medicine, nutrition, exercise and behavior.

## **Abusive Relationships**

Many overweight people have endured a verbally, physically or sexually abusive relationship at some point in their lives. These types of relationships are often a factor in unhealthy lifestyles and poor eating habits. Identifying abusive relationships may help pinpoint the reasons for unhealthy eating behaviors.

If you have been or currently are in an abusive relationship, counseling is available through our Wellness Program.

# What is Laparoscopic Surgery?

Laparoscopic surgery, also called minimally invasive surgery, is a modern surgical technique in which operations are performed in the abdomen through small incisions, usually less than 1/2 inch in length. This type of surgery avoids the larger incisions used for traditional surgical procedures.

## How is it done?

What makes laparoscopic surgery possible is the use of a telescopic video camera system connected to multiple digital monitors. On a monitor, members of the operative team are able to see a magnified view of the operative field which allows the performance of various complex surgical procedures.

To create space (operative field) to work in the abdomen, carbon dioxide is pumped into the abdominal cavity. The abdomen is essentially blown up like a balloon, elevating the abdominal wall above the internal organs like a dome.

Through small (keyhole) incisions, instruments are passed into the abdominal cavity to perform the intended surgical procedure, without the surgeon's hands ever touching the internal organs.

With the removal of the first gall bladder laparoscopically in 1987 in France, this field has expanded, due to many technological advances and innovative surgical approaches. The first laparoscopic Roux en Y gastric bypass was performed in 1993. The first laparoscopic sleeve gastrectomy was performed in 1999.

Laparoscopic surgery is intended to minimize post-operative pain, produce less scarring and speed up surgical recovery times, while maintaining an enhanced visual field for the operating surgeon. Wound infections and postoperative incisional hernias are reduced, compared to traditional open surgery for the same surgical procedure. Blood loss is also less, reducing the need for a blood transfusion, postoperatively.

Laparoscopic bariatric surgery is a safe alternative to traditional open weight loss surgery, provided the bariatric surgeon is an experienced advanced laparoscopic surgeon.

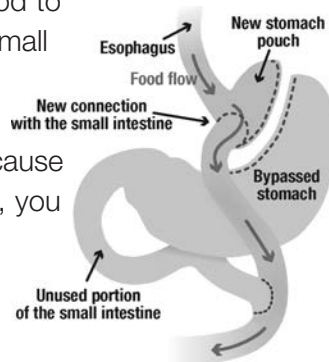
# Procedures Offered

## by Healthy Weight Management & Bariatric Surgery

### Roux en Y Gastric Bypass

The purpose of Roux en Y gastric bypass is to limit food intake and absorption of calories. Gastric bypass causes you to lose weight by restricting meal size and reducing the absorption of calories from the foods you eat.

Gastric bypass surgery makes your stomach smaller and allows food to bypass part of your small intestine. The new small stomach is called a “pouch.” Because the pouch is so small, you feel full sooner when eating and, therefore, eat less.



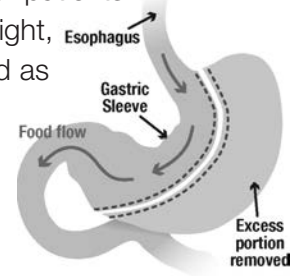
The small intestine is where most of the calories and nutrients are absorbed from the foods you eat. Bypassing part of the small intestine prevents your body from absorbing all of the calories. The operation is designed to allow adequate nutrient intake while limiting calorie intake.

Our surgeons are an advanced laparoscopic surgeon and is able to perform the Roux en Y gastric bypass using this minimally invasive approach.

### Sleeve Gastrectomy

The sleeve gastrectomy is the most popular type of weight loss surgery. It is an operation that limits the amount of food you can eat as well as feeling full with a smaller amount. The stomach is stapled into the shape of a sleeve, or better yet a tube, so when food enters it quickly fills up causing fullness.

The sleeve is performed laparoscopically and is a permanent, non-adjustable operation. The excess portion of your stomach is removed, as opposed to the gastric bypass where the stomach is left in place. For patients who are extremely overweight, the sleeve might be offered as the first operation of a two-staged procedure in order for you to lose weight prior to your gastric bypass.



## *How Do I Decide*

# Which Surgery Is Best For Me?

Healthy Weight Management & Bariatric Surgery offers two primary weight loss surgery options: laparoscopic Roux en Y gastric bypass and laparoscopic sleeve gastrectomy.

Choosing which operation is best for you is a personal decision. Weight loss surgery will change your life in a permanent way. You must make an informed decision before proceeding with surgery.

Take time to research the different surgical procedures available. Consider how each operation will positively impact your present eating habits and health conditions.

During your surgical consultation, your surgeon will answer any questions you have and help you decide which operation is best for you.

It is also important for you to have realistic expectations. When you have weight loss surgery, you are making a lifelong commitment to yourself and our program. Weight loss surgery alone will not cure your weight illness. Treatment for your weight disorder must continue for the rest of your life.

Once you feel comfortable with your choice of surgeon, weight loss procedure, and weight management team, you are ready to move forward.

During the preoperative process, it is normal to feel anxious and somewhat apprehensive about your decision. Please feel free to discuss any concerns you have about your surgical plans with your bariatric support team.

*At Healthy Weight Management & Bariatric Surgery, we provide guidance and support on how to lose weight successfully, adopt a healthier lifestyle and maintain personal success after surgery.*



# Surgical Complications

As with any surgical procedure, weight loss surgery carries the risk of complications. The following chart shows the known complications for gastric bypass and sleeve gastrectomy. The most common complications for each procedure are shown in bold print.

This table does not include all of the possible complications of weight loss surgery and is not a substitute for a personal consultation with your weight loss surgeon. Learn how you can reduce your risk of a complication from weight loss surgery.

<b>Complication</b>	<b>Roux en Y Gastric Bypass</b>	<b>Sleeve Gastrectomy</b>
Hole in the stomach	Yes	Yes
Leak along one of the internal suture lines	<b>Yes</b>	<b>Yes</b>
Bleeding	<b>Yes</b>	Yes
Narrowing of the passage out of the stomach	Yes	Yes
Infection	Yes	Yes
Internal hernia	<b>Yes</b>	No
Vitamin and iron deficiency	<b>Yes</b>	Yes
Ulcers	<b>Yes</b>	No
Blood clots in the legs	Yes	Yes
Blood clots in the lungs	Yes	Yes
Acid indigestion or reflux	Yes	<b>Yes</b>
Death	Yes	Yes

# Expected Results

## *After Weight Loss Surgery*

Weight loss surgery not only gives you a valuable tool in your battle against obesity, it can dramatically improve your health. People who have gastric bypass typically lose 70 percent of their excess body weight (EBW) over the course of one year. Sleeve gastrectomy patients are somewhere in the middle, typically 60 percent of their EBW. The amount of excess skin after weight loss surgery varies from person to person and is not affected by the length of time over which the weight was lost.

Weight loss surgery significantly improves the health problems linked to obesity such as type 2 diabetes, high cholesterol levels, high blood pressure, and sleep apnea. The following table shows the percentage of people who have improvement in these health problems 1 year after weight loss surgery.

	<b>Roux en Y Gastric Bypass</b>	<b>Sleeve Gastrectomy</b>
Type 2 Diabetes Mellitus		
Improved ( <i>including medication free</i> )	93%	89%
Medication Free	84%	60%
High Blood Pressure		
Improved ( <i>including medication free</i> )	87%	81%
Medication Free	68%	49%
Sleep Apnea		
Improved ( <i>including machine-free</i> )	87%	87%
Machine Free	68%	68%
High Cholesterol	95%	85%

# The Cost of Weight Loss Surgery

Surgery can be expensive and weight loss surgery is no exception. Fortunately, many insurance companies recognize the benefits of weight loss surgery and are willing to pay for it.

Healthy Weight Management & Bariatric Surgery offers the services of an insurance specialist to help you with the medical insurance pre-authorization, benefit verification and approval process. We can assist you in assessing insurance coverage for your procedure and process pre-certifications after all program requirements are met.

Many insurance companies have criteria to determine if you qualify for weight loss surgery benefits. Before you begin your weight loss surgery journey, there are steps you need to take in order to get insurance approval:

1. **Review your insurance policy.**

Having “great health insurance” doesn’t guarantee your plan covers weight loss surgery. Check the “Exclusion of Coverage” section for weight loss surgery. If you do not have a copy of your policy, call your insurance company or Human Resources department and speak with a customer service representative about your “Exclusion of Coverage” criteria.

In addition to finding out if weight loss surgery is a covered benefit, it is your responsibility to find out the specific requirements of your insurance plan. Find out which weight loss procedures are covered in your plan and if you are required to meet specific criteria to qualify for weight loss surgery.

2. **Fill out a release of medical information form.** If your insurance company requires pre-authorization for weight loss surgery, you will need to fill out a “Release of Medical Information” form. This allows any doctor’s office to release medical information about your weight illness to your insurance company.
3. **Complete the Health Analysis, Diet History and Exercise History forms from our office.** This information is necessary for us to determine if you are a candidate for weight loss surgery. Showing proof of medical necessity for bariatric surgery is a critical step in obtaining approval from your insurance company.
4. **Ask your primary care doctor for a letter of referral.** The referral letter should include a history of your height, weight and body mass index (BMI). Also, your physician should list any weight-related medical problems you have, including treatments and medications.
5. **Retrieve receipts/records that show your history of attempts to lose weight.** Many insurance companies require you to provide evidence you have been unable to permanently lose weight without surgery. Insurance companies usually want to see proof of your weight loss efforts over the past five years. This includes records from commercial weight loss programs and your personal doctor’s office. Medically supervised weight loss programs are necessary requirements for many insurance companies.

6. **Be patient.** It takes time, often weeks to months, to finalize insurance coverage and obtain approval. Starting the insurance process early will help prevent any delays before surgery.

## How does the insurance process work?

After you contact our office, you will receive a packet of information. The packet will contain a “Patient Information” form on which you enter your insurance information. The information packet must be completed and returned to our office before your first appointment can be scheduled.

Once we receive your forms, your insurance information will be forwarded to our Bariatric Insurance Specialist. The insurance specialist will then confirm whether weight loss surgery is a covered benefit under your specific plan.

After your initial visit with your surgeon, a letter explaining why surgery is needed to treat your weight illness will be sent to your insurance company. Your insurance company must receive this letter of medical necessity in order for you to obtain “preauthorization,” or initial approval, for surgery. Your insurance company may also require a letter of medical necessity from your primary care doctor.

Our bariatric team will work with you to provide any records your insurance company needs to meet the requirements for medical necessity.

If your insurance company denies your request for surgery, you have several options. The first option is to appeal the denial. If the appeal is denied, you may ask for an outside insurance claim specialist to examine your request for coverage. If the outside review is unsuccessful, there are law firms that specialize in obtaining approval for weight loss surgery for their clients. As a last resort, some patients chose to switch jobs or insurance companies.

Preauthorization does not guarantee the insurance company will pay for your surgery. Preauthorization lets us know your surgery is a covered benefit under your plan.

In addition to preauthorization, your insurance company may have other requirements for you to meet before surgery. These requirements may include:

- Testing, like a sleep study
- An appointment with a specialist to make sure your other health problems are stable
- Blood work
- A medically-supervised diet for 3 to 6 months.
- Psychological Evaluation

It is your responsibility to find out the specific requirements of your insurance plan when you review your policy. Your insurance requirements will be discussed during your first visit in our office.

Once we receive preauthorization from your insurance company, our insurance specialists begin the process of verifying your plan benefits and determining your out-of-pocket expenses, based on co-pays and deductibles.

**Please remember the insurance approval process takes time.** The approval process can take several weeks to many months. Our job is to coordinate this process and help you get insurance approval as soon as possible. However, the insurance approval process also depends on you. You must first meet all of your insurance company's requirements to qualify for coverage.

### **What if my insurance doesn't cover weight loss surgery?**

If your insurance plan does not cover weight loss surgery or you were unable to successfully appeal your insurance company's decision to deny coverage, we will contact you to discuss your options.

Lancaster General Health offers alternative payment options and even a self-pay option for patients wishing to proceed without insurance coverage. The self-pay option should only be considered for individuals who have tried and failed all other coverage options.



# The Preoperative Process

- Step 1.** Contact our office.
- Step 2.** Attend an information seminar or take our online seminar.
- Step 3.** Review your insurance policy and begin gathering records to show your previous weight loss attempts.
- Step 4.** Complete the information packet you received in the mail or at the information seminar and return it to our office.
- Step 5.** Our office will contact you to schedule an appointment with the surgeon and verify that weight loss surgery is a covered benefit under your insurance plan.
- Step 6.** Surgical consultation with your surgeon.
- Step 7.** Initial visits with the dietitian, exercise physiologist, and behavioral psychologist.
- Step 8.** Work on “To Do” list (the tests, medical clearances, blood work, diet/exercise and weight loss required by your surgeon and your insurance company) and attend support group, required group classes and psychological evaluation.
- Step 9.** Insurance approval.  
  
***(Remember – Steps 8 and 9 take time)***
- Step 10.** History and physical and pre-operative class.
- Step 11.** Surgery.

# Bariatric Support Team

You will be required to meet with our bariatric support team before moving forward with your surgery. Our support team includes the bariatric surgeon, coordinator/case manager, dietitian, exercise physiologist, behavioral psychologist and insurance specialist.

## **Bariatric Surgeon**

Your first appointment at Healthy Weight Management & Bariatric Surgery will be a consultation with our surgeon.

During the consult, your surgeon will focus entirely on you and your medical history. He will discuss your weight loss surgery options as well as your specific needs.

Based on your medical history and unique situation, your surgeon will outline an individualized plan of care to make your surgery as safe as possible. Please feel free to ask your surgeon any questions you may have about surgery or our Healthy Weight Management Program.

## **Bariatric Program Schedulers**

At Healthy Weight Management & Bariatric Surgery, our program schedulers serve as our patient advocates to coordinate your care and to prevent information about you from falling “through the cracks.”

It is the schedulers’ responsibility to make sure that you keep your appointments and that we receive your testing information and medical reports in a timely fashion. Also, they will personally monitor your insurance verification and approval process.

Our goal is to streamline your care to prevent any unnecessary surgery scheduling delays.

## **Bariatric Dietitian**

After your initial consultation with the surgeon, you will be asked to schedule appointments with the bariatric dietitian.

During your initial nutrition consultation, the dietitian will evaluate your current eating patterns and nutrition knowledge. Based on this information, the dietitian will develop a personalized weight loss plan, including goals, to help prepare you for surgery and your life after surgery.

Additional follow-up visits will be scheduled, as needed, to ensure you reach your preoperative goals and begin developing healthy lifestyle behaviors. The dietitian is also available by MyLGHealth or phone to answer any questions or assist with any concerns about nutrition and weight loss surgery.



## **Exercise Physiologist**

An exercise physiologist is a professional who is trained to develop safe and effective fitness and exercise programs to help the patient treat or prevent chronic disease and improve cardiovascular function, strength, flexibility, and overall health.

During the preoperative period, you will meet with the exercise physiologist to develop an individualized fitness program relative your goals and current level of conditioning. Becoming more active and physically fit before weight loss surgery may improve healing and decrease the risk of complications. Additionally, we believe your commitment to fitness prior to surgery will help to prepare you for long term success.

## **Clinical Psychologist**

You will be required to see a clinical psychologist before surgery. The psychologist's role is not just to determine your current mental well-being, but to help you fully understand some of the personal behavioral/attitude changes that are necessary for success with weight loss surgery.

As part of the psychological evaluation, we review your knowledge of the operation you plan to have, your weight and dieting history, your eating and activity habits, your psychological/social well-being and inquire about stressors or major life events anticipated in the months following surgery.

Meeting with the psychologist will also help you define realistic expectations, understand possible risks, and develop long-term health goals after surgery.

Identifying any undesirable eating tendencies and their causes can help to maximize your chances for long-term success.

Weight loss surgery changes your internal anatomy, not your brain. Only you have the ability to change your lifestyle. Keeping your current unhealthy habits after surgery will only limit your success.

# Preoperative Clearances and Testing

As part of your initial surgical consultation, your surgeon will review your Health Analysis form. Based on this information and his evaluation, he will determine if more medical information is needed from you.

Learning about your current level of health is an important component of your elective weight loss surgery experience to be as safe as possible.

Test results or doctor's notes from previous surgeries may be requested. If you have seen or currently are seeing a medical specialist, his or her approval for surgery may also be required. You may need to undergo new testing in order to get approval for weight loss surgery.

Please remember, your surgery is an elective procedure and the date and time can be variable. Therefore, it is sensible to plan for your surgery in a thoughtful, professional manner.

## **Sample of preoperative testing and clearances that may be required.**

- *Psychology clearance required*
- *Cardiology clearance*
- *Stress test*
- *Pulmonary clearance*
- *Pulmonary Function tests*
- *Sleep study*
- *Endocrinology Clearance*
- *HbA1c level (within 6 months)*
- *Upper Endoscopy*
- *Complete blood count*
- *Iron level*
- *Thyroid Function tests*

# Preoperative Medical Clearance

When your insurance approval, benefit verification, and preoperative program are completed, you will be scheduled for a physical exam.

Your surgeon will conduct a full medical evaluation and review all of your studies and clearances. This visit is done to make sure you are as healthy as you possibly can be for your elective surgical procedure.

Additional blood work and testing may be done 2-4 weeks before surgery and reviewed by your surgeon.

Your physical exam will be completed within 30 days of your scheduled surgery.

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## Sleep Study Information

Approximately 70 percent of patients considering weight loss surgery suffer from some form of sleep apnea. When sleep apnea is suspected, patients require a sleep study as part of their preoperative evaluation.

### **What is sleep apnea?**

Sleep apnea is a condition where a person stops breathing while asleep. This can be life-threatening and must be recognized and treated before undergoing general anesthesia and weight loss surgery.

Although some people may not realize they are waking up during sleep, their sleep cycles are still disturbed. As a result, patients with sleep apnea often suffer from excessive daytime sleepiness and fatigue. If untreated, sleep apnea can also cause high blood pressure and, possibly, sudden death due to heart problems.

### **How do I know if I have sleep apnea?**

We evaluate all of our patients for sleep apnea. At your first office visit, you will be asked to complete a questionnaire designed to help us recognize if you have undiagnosed sleep apnea.

Your body shape and neck size will also help us to screen for this condition.

If sleep apnea is suspected, it must be treated before undergoing weight loss surgery. A sleep study will be required for anyone suspected of having sleep apnea.

## **What is a sleep study?**

A sleep study is an overnight observation done at a sleep center by highly trained professionals. At the sleep center, your sleep is analyzed and measured using special sensors placed on your body.

## **What is measured during sleep?**

Many things are measured during a sleep study. An EEG (electroencephalogram) measures your brain's electrical activity. This test will determine if you are asleep and in what stage of sleep you are.

Your breathing will be measured with temperature sensors near your nose and mouth.

Blood oxygen levels are measured with a probe fitted onto one of your fingers. Body position and sleep will also be measured by a sensor placed on the chest.

## **What happens if I have sleep apnea?**

The treatment of sleep apnea depends on how severe it is. Patients with moderate or severe sleep apnea need therapy to improve and treat this medical condition.

Breathing devices called CPAP or BiPAP machines are often used to treat this condition. A light mask or nasal prongs are worn during sleep. Air is forced into the airway through the mask to increase oxygen levels in the body and remove carbon dioxide from the lungs. Sleeping becomes more comfortable and a deeper level of sleep can be achieved.

## **Will I always need treatment for sleep apnea?**

Losing weight is one of the single best treatments for sleep apnea. As you lose weight after surgery, your sleep apnea will be reevaluated and you may be weaned off your CPAP or BiPAP machine.

# Cardiac Stress Tests

You may be asked to have a stress test done to evaluate heart function and determine if heart disease is present. There are several types of stress tests available:

- 1) Treadmill
- 2) Echocardiogram
- 3) Chemical

The specific type of stress test done will be determined based on your level of mobility and body size.

## **How does a treadmill stress test work?**

A treadmill stress test is done to detect heart disease or coronary artery blockages. Signs and symptoms of heart disease may be revealed by exercising your heart and monitoring your heart's response to exercise.

A stress test monitors your heart with an ECG (electrocardiogram) while you exercise on a motorized treadmill. In general, this is a good test for individuals with a low risk for coronary artery disease.

## **What is a chemical stress test?**

Chemical stress testing is ordered for patients who have difficulty moving around or have difficulty with exercise.

A chemical stress test combines an intravenous medication with a heart imaging technique, either isotope or echocardiography. The medication given to you for this test mimics your heart's response to physical exercise. The two medications typically used are dipyrnidole and dobutamine.

## **What is a stress echocardiogram?**

A stress echocardiogram is a study that detects heart muscle problems. An echocardiogram is done by painlessly sending sound waves into your chest using a probe placed on the outside of your chest. Images of your heart are taken while you are lying down.

Combining a chemical stress test with echocardiography allows us to gain information about heart function for an individual of almost any size.

## **Why should I have a stress test done?**

Getting images of your heart and challenging your heart with exercise allows us to estimate how your heart will respond to the stress of surgery. With this information, we can more accurately plan for safe care both during and after the operation.

# Upper Endoscopy

An upper endoscopy is a test done to look at the upper part of your digestive tract. An upper endoscopy allows us to detect and treat any problems of the upper digestive tract before surgery.

In addition to looking for any abnormalities, a biopsy of the stomach can be done for H. Pylori. H. Pylori is a bacterium known to cause ulcers. If you have H. Pylori, you will be

prescribed medications to treat the infection before surgery.

Patients with a history of severe acid reflux, ulcers, prior stomach surgery, or a family history of stomach or esophageal cancer, may need a preoperative upper endoscopy.

# Nicotine and Bariatric Surgery

All patients must be nicotine-free before surgery. Nicotine causes gastric ulcers after Bariatric surgery and must be avoided.

We require that everyone entering the program must quit all forms of nicotine prior to starting. This includes cigarettes, cigars, and/or smokeless tobacco.

Once you have quit nicotine, it takes approximately 4 weeks to get out of your system. You will be required to take a urine test before being scheduled with the surgeon.

To ensure compliance, you will be tested again before your surgery. Surgery will be postponed if the test is positive.

Information on smoking cessation programs are available in our office.



# Preoperative Weight Loss Preparation

Losing weight before surgery can reduce some of the risks and complications associated with weight loss surgery.

Weight loss surgery studies show a patient with any one of the following characteristics has a greater chance for complications after surgery:

- 1) age greater than 55
- 2) BMI greater than 50
- 3) male
- 4) primary abdominal obesity
- 5) severe obstructive sleep apnea

Studies on weight loss surgery have also found:

- A patient's target weight was reached sooner if they had lost greater than 10 percent of their excess weight before surgery.
- Even modest weight loss before surgery will lower blood pressure, improve postoperative blood sugars and reduce the risk of blood clots.

*Gaining weight before surgery may lead to a postponement of your surgery date.*

Patients with a BMI of 65 or greater will be required to lose a specific amount of weight before surgery as directed by the bariatric support team.

**If a patient gains weight during the preoperative program they must lose the weight before being cleared for surgery.**



Before your surgery, you must:

- 1) Complete our health analysis assessment.
- 2) Demonstrate to our staff an understanding of our Healthy Weight Management Program.
- 3) Decide which surgical procedure is best for you. Your surgeon will help you choose which weight loss surgery is right for you at your consultation.
- 4) Undergo pre-op evaluations with our team members:
  - a. Bariatric dietitian
  - b. Exercise physiologist
  - c. Clinical psychologist
- 5) Complete the procedures and consultations recommended by your surgeon at your surgical consultation.
- 6) Complete our pre-op teaching classes.
- 7) Attend a monthly support group meeting.
- 8) Talk to your insurance company to find out what is out-of-pocket before your scheduled surgery.

- 9) Lose weight pre-operatively and if you have gained any weight during the program it must be lost before being given a surgery date.
- 10) Complete a pre-op physical examination with your surgeon.
- 11) Schedule a date for your surgery.

In addition, you may be asked to do one of the following:

- 1) Provide a letter from your primary care physician recommending a consultation for weight loss surgery. This is a standard requirement for most health insurance carriers to approve coverage for your weight loss surgery.
- 2) Provide medical documentation of your weight history for the past five years. This documentation could come from your primary care physician, a commercial diet program, a personal trainer, etc.
- 3) Sign a medical disclosure release for all of your relevant past medical records.
- 4) Provide a detailed diet attempt history with start and finish dates as well as program locations. Commercial program records are a plus if you can locate them.

# Pre-surgery Preparation

There are many things you can start TODAY to prepare for your surgery and new healthy lifestyle. Lifestyle adjustments are going to be one of the hardest things for you to accomplish after surgery. In an effort to make these changes easier and improve your long-term success, we've put together a list of things you can start doing now:

- Start taking daily multivitamins and calcium** – you will need to take these for the rest of your life after surgery. Your dietitian will help you pick the best supplements.
- Begin exercising** – do anything, even something as simple as walking. Discuss with your exercise physiologist any ideas for at-home activities you can do.
- Attend support group meetings** – getting involved early on will help you prepare for what's to come as well as stay on track after surgery.
- Keep a food log** – write down everything you eat and drink or consider Apps such as Myfitnesspal. Stay accountable.
- Eat at least three meals a day** – never skip a meal. Use small plates and spoons.
- Control your portion size** – begin weighing/measuring your foods and take only one serving of food (avoid seconds).
- Find alternatives to fried food and junk food** – aim for balanced meals and fresh fruit and/or vegetables as snacks each day.
- Practice leaving food on your plate** – your brain doesn't change after surgery so listening to your hunger cues will be something you need to do after surgery, especially if you want to maximize your weight loss. This is extremely important.
- Practice taking 20-30 minutes to complete a meal** – eat very slowly, chew well (about 10-20 times before swallowing) and put utensils down between bites.
- Limit the number of meals that are purchased away from home** – you will most likely be required to prepare many meals at home, especially immediately post-op.
- Start drinking 64 ounces of fluid a day** – practice sipping.
- Wean off caffeine, alcohol, carbonated beverages and sugar-sweetened fluids.**
- Schedule your mealtimes, fluids and supplements** – plan everything.
- Stop smoking prior to first visit.**

# 7 Day Pre-Surgery Full Liquid Diet Guidelines

- Prior to surgery, you will be doing one week of a full liquid diet which is medically necessary to help reduce the adipose (fatty material in the abdomen and around the liver). The “liver shrink” diet results in a simpler, safer procedure in the operating room.
- Carry a water bottle with you everywhere you go and be sure to sip clear liquids between your full liquid meals to meet your fluid goal. No restrictions apply to the amount of clears you consume between meals, as long as they are sugar free.
- You will be instructed on details for your pre-surgery liquid diet at your pre-op class and by your dietitians.

# Preoperative Surgery Class

A few weeks before surgery, you will attend a preoperative surgery class given by the registered dietitians

**This is mandatory for all patients to attend.**

The dietitian will explain:

- Pre-operative blood work/testing needed
- Medications to take or hold before surgery
- Preoperative shower with Hibiclens
- What to expect while in the hospital
- Restrictions after surgery
- Preoperative 7-day liquid diet
- Postoperative diet phases
- Protein, including your individual daily protein goal and how to meet it
- Vitamin/mineral supplements
- Potential nutritional complications

# Hospital Stay

***If you do not follow these instructions, your surgery may be canceled.***

- You may not eat or drink anything after midnight the day of your surgery. You may brush and rinse your teeth. Chewing gum, hard candy and breath mints are not allowed.
- During your preoperative visit, the surgeon will tell you if any of your medications should be taken the morning of surgery. You may take these medications with a small sip of water.
- If you are being treated for sleep apnea, please remember to bring your CPAP or BiPAP machine with you the day of surgery.
- Be on time.
- Wear comfortable clothes. Please bring comfortable shoes for walking after surgery.
- **Your surgery will be cancelled if you have gained weight since your History & Physical exam.**

***If you do not follow these instructions, your surgery may be delayed.***

- If you wear contact lenses, glasses, hearing aides, dentures or other prostheses, you will be asked to remove them prior to surgery. These items will be labeled and kept in a secure place until after your surgery.

- You may wear your wedding ring. Remove all other jewelry and leave valuables at home.

## **Hospital Arrival**

On the day of your surgery, please enter the parking garage through the James Street entrance. After parking, enter the hospital from the garage on the ground floor. Walk down the hallway to the left of the Information Desk to Admitting. Admitting will be on the left hand side of the hallway.

Someone from Admitting will then escort you to the elevator that will take you to the Surgical area.

The Skylight Waiting Area is a large waiting area for your family and friends close to the operating room. Your friends and family should wait there to receive updates on your progress.

## **Pre-Surgical Care Unit**

In the Pre-Surgical Care Unit, you will be given a gown to wear into the operating room.

The Pre-Surgical Care staff will check your blood pressure, heart rate and weight. A nurse will perform an assessment, including questions about your past medical history and current health.

An intravenous (IV) line will be inserted into a vein in your hand or arm and IV fluids started.

Compression stockings will be wrapped around your legs. A machine inflates and deflates the stockings in cycles to gently squeeze your legs and improve the blood flow. Using compression stockings helps prevent blood clots from forming in your legs during and after surgery.

A bariatric anesthesiologist will meet with you before surgery. The anesthesiologist will ask you about your health history and explain the type of anesthesia you will receive during surgery. The anesthesiologist will also explain the risks of anesthesia. After you speak with the anesthesiologist, you will be asked to sign a consent indicating you understand the risks of anesthesia.

Your physician will see you briefly before surgery to confirm with you and the surgical team what procedure is being performed. The risks and benefits of surgery were discussed during your office visit and in the patient seminar. It is best for you to have all of your questions about surgery answered before the day of surgery.

A nurse from the bariatric surgical team will review your health history and double check all of the signed paperwork.

You will probably be asked some of the same questions more than once by different members of the team. Each person asking you questions is helping to make sure your surgery and hospital stay are as safe as possible.

Once the information gathering and preparation for surgery are complete, you will be transported by stretcher into the operating room for your surgery.

## **Operating Room**

The operating room is designed for laparoscopic surgery and is outfitted with state-of-the-art digital equipment. The temperature in the operating room will be cool. The operating room staff will make every effort to keep you bundled in warm blankets.

You will be asked to move yourself onto the operating room table. The operating room table is padded, but not as comfortable as a bed. The staff will help position you and place pads around you to prevent discomfort.

The bariatric anesthesia team will use your IV to give you medications to help you relax and fall asleep. As you drift off to sleep, a mask will be placed over your face to give you oxygen. Once you are asleep, a breathing tube will be inserted through your mouth into your windpipe, or trachea. The breathing tube is attached to a machine that helps you breathe while you are under anesthesia.

## **Post-Anesthesia Care Unit**

You may begin to wake up in the operating room after surgery. The surgical team will transport you to the Post-Anesthesia Care Unit (PACU). You will remain in the PACU for at least an hour. The PACU staff will closely monitor how alert you are, the rate and depth of your breathing, your comfort level, your body temperature, your heart rate and your blood pressure. The anesthesia team will decide when you are ready to be moved to your room on 5 Frederick.



# Laparoscopic Gastric Bypass/ Sleeve Gastrectomy

All the bariatric rooms on 5 Frederick are private. The nursing staff is trained to provide you with all the care and support needed after bariatric surgery. The typical hospital stay is 24 hours.

Your vital signs will be monitored very closely for the first several hours and then every four hours during your stay.

## **Walking after surgery**

Four hours after surgery, the nurses will help you out of bed to take your first walk. You are expected to walk every four hours. Walking is the single most effective way to prevent blood clots from forming in your legs.

Wearing the compression stockings also helps prevent blood clots from forming in your legs. You will be asked to wear your compression stockings when you are in bed.

Starting the morning after surgery, you will receive injections of blood thinning medication to prevent blood clots in the legs.

## **Breathing exercises**

Before surgery, you will learn how to do deep breathing exercises using an incentive spirometer, or Voldyne. Using the incentive spirometer lowers your risk of developing pneumonia and other breathing problems after surgery. You need to do your breathing exercises 10 times an hour while you are awake. You are strongly encouraged to keep the incentive spirometer within reach at all times and to use it on your own.

While you are asleep for your operation, mucus collects in your lungs and can lead to pneumonia. Your goal is to cough and bring up as much of this mucus as you can.

If you have sleep apnea and use a CPAP or BiPAP machine, it is important for you to bring in your machine on the day of surgery. The hospital staff will make sure your CPAP or BiPAP machine is in your room when you arrive from PACU.

Early after surgery, the nurses will monitor your oxygen levels and level of alertness closely. If necessary, a respiratory therapist will place you on your CPAP or BiPAP until you are more alert and your oxygen levels improve.

You will continue on CPAP or BiPAP therapy for several months after your surgery.

## **Nausea**

Nausea is very common after weight loss surgery. You may experience nausea from the anesthesia or IV medications. Your nurse can give you medication to help relieve the nausea. This type of nausea usually goes away within 24 hours.

## Medications

While you are in the hospital, your physician will follow your progress and manage your medications. Your physician will also determine what medications you should continue to take at home after discharge. Your primary care doctor will be provided with a summary of your hospital stay and a list of your medications at discharge.

## Personal hygiene

You will be allowed to shower the day after your surgery. At home, showers are recommended on a daily basis.

## Visiting hours

Visiting hours are from 8 a.m. to 8 p.m. daily. During your hospital stay, you may have one family member/support person stay overnight with you. There are area hotels which offer discounted room rates for patient's family members.

## Post-Op Weight Gain

Most people actually gain weight while in the hospital recovering from surgery. Due to IV fluids, you may experience sudden weight gain the first night after surgery. Do not worry. This is only your body holding onto excess water, which your body will get rid of over the next five to seven days after surgery.

If you were on diuretics (medication that forces your body to get rid of excess water) prior to surgery, your body may actually hold onto the excess water longer. Do not restart any diuretic medicine on your own without first checking with our staff.

## Home medications

Please leave all of your medications at home. Your medications will be provided to you by your care team. Following this policy will help to ensure your safety and allow us to provide you with the best possible care.

At your discharge, we will provide a list of medications that you are to use at home.

## Hospital discharge

When you are discharged from the hospital by your physician, someone will need to drive you home and stay with you for at least 24 hours. Please make the necessary arrangements before your hospital stay. If your drive home is greater than two hours, stop every two hours and walk around for 15 – 20 minutes to prevent blood clot formation.

At home, you will be able to completely care for yourself. We urge you to become active immediately after surgery. Treadmills, bicycles and outside walking are OK to begin right away.

***At home, you will have a lifting restriction of 30 pounds for 2 weeks.***

We will provide you with your follow-up appointments with your physician at the time of your discharge.

***You will not be discharged without a ride home.***

# After Surgery

## Medications

When you are discharged from the hospital, you are given a medication reconciliation sheet. This paper will list the medications you are to take until you are seen again by us or your primary caregiver.

As you lose weight, your need for medications will change and hopefully diminish. You will need to work with your primary care physician after surgery to adjust your medications.

You may take capsules after surgery. Some patients find it difficult to swallow capsules after surgery. If you do, check with your primary care

physician or pharmacist to see if another form of the medication is available or if the contents of a capsule can be mixed with food.

Patients having the Roux en Y gastric bypass may **NOT** take any NSAIDs (non-steroidal anti-inflammatory drugs) or steroids. NSAIDs and steroids can cause stomach ulcerations.

Please avoid the temptation to self-regulate or self-medicate yourself during your recovery. It is always best to stay in contact with your primary care provider during this time period.



# Signs and Symptoms of Complications after Bariatric Surgery

1. Leak at staple site (Sleeve Gastrectomy) or anastomosis site (Roux en Y Gastric Bypass)

**Call your surgeon if you experience:**

- Increased Heart Rate greater than 110 sustained without activity
- Fever
- Severe abdominal pain

2. Dehydration

**Call the office if you experience these symptoms over several days:**

- Decreased oral intake
- Increased nausea
- Decreased urination and dark colored urine
- Lightheadedness and/or dizziness

3. Wound infection

**Call your surgeon if you experience:**

- Fever greater than 101°F
- Redness or increased tenderness/warmth at incision site
- Discharge from incision sites
- Excessive swelling at incision sites

# Lifestyle Adjustments

## *After Weight Loss Surgery*

As you get used to your new eating style, you may experience occasional gastrointestinal discomfort. The most common complaints are nausea, vomiting, acid reflux, diarrhea, constipation and gas. Most of these are typically caused by food choices or unchanged eating habits.

*Most gastrointestinal problems are due to poor food choices and/or unchanged eating styles.*

If you persistently struggle with food choices or eating habits, these issues should be addressed with a member of our support team. Solving these types of problems early on will make you more successful in the future.

### **Nausea**

Nausea can be very common after weight loss surgery, but can be easily avoided by correctly following your postoperative diet plan. Taking in too much air while eating or drinking, or eating or drinking too fast, can cause nausea. Nausea can also occur if you eat and drink at the same time.

Nausea, by itself, is not typically due to any problem with your recent weight loss surgery. It is more a behavioral symptom telling you that your eating habits or food choices need to be changed.

Early morning nausea is best treated by eating a small meal or protein shake.

Taking vitamin supplements or certain medications on an empty stomach may also cause nausea. Adjust your medication/supplement schedule and see if the nausea improves.

If you avoid eating or drinking because of the fear of nausea, contact our support staff as soon as possible.

### **Vomiting**

Occasional vomiting after weight loss surgery is possible and should not alarm you. However, if vomiting becomes consistent, our support staff needs to be notified.

As your diet advances in consistency and texture in the first six weeks after surgery, many patients experience at least one episode of vomiting. This is most commonly due to the introduction of new foods. Also, vomiting can occur if you eat too much or too quickly.

*Eating too much or too fast often results in vomiting, which can be sudden and forceful.*

Vomiting can also be due to poorly chewed food in the stomach or at the bottom of the esophagus. This can be avoided by simply chewing all foods well, until applesauce consistency.

If you experience episodes of vomiting, it is best treated by waiting several hours before eating again. Generally, after an episode of vomiting, it is better to first start with liquids and slowly progress back to the stage of food that you were on.

To avoid vomiting, some patients develop certain food avoidance behaviors and choose only soft foods because they can be more easily tolerated. The avoidance of some foods, especially healthy foods, can negatively affect your long-term weight loss success.

If vomiting becomes progressive and is accompanied by sharp or crampy abdominal pain, it must be reported to our support staff immediately.

### **Acid Reflux (Heartburn)**

After gastric bypass or sleeve surgery, your new stomach produces very little, if any, stomach acid. Reflux-like symptoms are usually a sign of improper eating habits. For example, eating beyond fullness can cause reflux-like symptoms.

Otherwise, heartburn after bariatric surgery can be a sign of a stomal or stomach ulceration. If this is the case, it would require medical treatment to treat the ulceration.

*If heartburn-like symptoms develop and do not respond to a change in eating habits (meal size or meal speed), please contact our support team immediately.*

Acid reflux after adjustable gastric band surgery is often a sign that the band is too tight or that the band has slipped. If reflux continues, both of these problems can be fixed by contacting our support staff.

### **Diarrhea**

Loose bowel movements are common during rapid weight loss, especially during the first several weeks after gastric bypass surgery.

A sudden loose bowel movement sometimes occurs within 60 minutes after drinking a high-protein beverage. You can often avoid this by decreasing the amount of protein per serving in that drink (i.e. use less protein powder or prepare mixed supplements with water instead of milk).

Diarrhea is uncommon after adjustable gastric band surgery. Sometimes, a meal high in fat, sugar or protein will cause a sudden loose bowel movement, but this is not typical.

Please notify our support staff if the frequency of bowel movements is more than six per day.

### **Constipation**

Due to the change in your diet after surgery, the frequency of your bowel movements can change. In the first six weeks after surgery, there is very little fiber in your diet. This, combined with a smaller amount of food eaten each day, can cause bowel movements to be less frequent and/or hard to pass.

It is common, especially soon after surgery, to go four or five days without a bowel movement. After five days, an over-the-counter stool softener such as milk of magnesia, Colace® or Pericolace® can be used to gently stimulate bowel activity.

When you have advanced to the pureed diet phase of your recovery, you can slowly introduce fiber into your diet. Drinking at least 64 ounces of fluid each day and doing some form of exercise will also help regulate your bowel movements.

## Gas

After gastric bypass surgery, the amount of gas, or flatulence, you experience might increase.

Gas can occur when food is not broken down in the stomach and intestines. As a result of gastric bypass, foods are not completely broken down, making you gassier.

Certain foods can influence the amount of gas you experience. Unfortunately, the healthy foods that we urge you to eat are sometimes the worst offenders.

Many healthy foods are high in a type of fiber called “soluble fiber.” Soluble fiber often produces excess gas in the intestines.

Soluble fiber is found in oats, wheat, bran, and other grain products that do not dissolve in water. This does not mean you should avoid these foods, just limit their amount at any one meal and be sure to chew well.

Another type of fiber, “insoluble fiber,” has little effect on gas production. Foods that contain insoluble fiber include vegetables, fruit, and grain products.

It is important to have both soluble and insoluble fiber in your diet because it helps to keep your bowels healthy and regular. Your dietitian can help you come up with a meal plan that has a balance of fiber which will help you have regular bowel movements and control gas.

## Common Foods That May Cause Gas

Beans	dried beans and peas baked beans, soy beans, lima beans
Vegetables	cabbage, radishes, onions, broccoli, brussel sprouts, potatoes, cauliflower, cucumbers, sauerkraut,
Fruits	prunes, apricots, apples, raisins, bananas
Beverages	anything carbonated milk products
Packaged foods	anything with lactose some salad dressings
Sugar alcohol products	sugar-free candies sugar-free gum

## Lactose Intolerance

A small percentage of patients after surgery become lactose intolerant. Patients that were lactose intolerant before surgery remain so after surgery.

Some lactose intolerant patients are able to tolerate a small amount of lactose, such as cheese or yogurt products. If you find that certain dairy foods cause discomfort, you should avoid these foods.



# Planning a Pregnancy

## *After Weight Loss Surgery*

The timing of weight loss surgery and pregnancy are very important decisions in a person's life. Pregnancy after weight loss surgery is often better and safer than obese pregnancies due to the substantial weight loss.

Being severely overweight and pregnant can severely affect the health of both mother and baby. Undergoing weight loss surgery before becoming pregnant can lessen the chances for weight-related complications like pre-eclampsia, hypertension, and gestational diabetes.

We recommend waiting one year after weight loss surgery before attempting pregnancy. Becoming pregnant too soon after weight loss surgery can be harmful to you and your baby.

### **You must be on long-term birth control.**

Please discuss your birth control options with your gynecologist.

After Roux en Y gastric bypass you cannot take birth control pills. Please discuss alternative forms with your gynecologist.

### **Weight Loss Surgery and Unplanned Pregnancy**

It is estimated that up to 50 percent of pregnancies in the United States are unplanned.

For a severely overweight female, ovulation is often irregular and becoming pregnant can be difficult. Also, miscarriages can be common. However, after weight loss, ovulation becomes more regular, resulting in a greater chance of becoming pregnant.

Regular ovulation can happen quickly, and with minimal weight loss, after weight loss surgery. For a sexually active individual not using an effective form of birth control, pregnancy can be quite a surprise.

Pregnancies that occur too soon after surgery (less than a year) are considered high risk for the mother and baby. This is because calorie and nutritional intake may not be enough for both mother and baby. Not enough nutrition could lead to frequent hospitalizations, IV nutrition therapy and fetal abnormalities.

### **Expected Weight Gain with Pregnancy**

The expected weight gain with pregnancy depends on the woman's BMI when she became pregnant. Here are some general guidelines:

<b>BMI</b>	<b>Recommended Weight Gain</b>
19-26	25-35 pounds
26.1-29.9	15-25 pounds
≥ 30	15 pounds

Women who become pregnant with a BMI at or above 35 can actually lose weight and remain healthy. Working with your gynecologist, surgeon and dietitian will help you be as healthy as possible during pregnancy.

*Please contact your gynecologist as well as our support team if you are planning on becoming pregnant.*



# Weight Gain

## *After Weight Loss Surgery*

Weight gain can and does happen to many patients after weight loss surgery. In fact, there is often a 5–10 percent rebound weight gain after surgery.

A number of studies have shown that many weight loss surgery patients continue to suffer from some type of disordered eating. All of these contribute to unsuccessful outcomes after surgery: binge eating, eating abnormally large amounts of food, results in decreased weight loss, weight gain and stretching of the pouch.

Other harmful eating patterns that patients often suffer from are compulsive eating and “food grazing.” These types of eating behaviors can also be harmful.

It is important to learn problem-solving skills early and to keep a realistic perspective about the disease of obesity. Your dietitian will help you identify harmful eating behaviors and help you develop ways to deal with these behaviors without impacting your overall health.

### **Stress**

Life stressors do not disappear after weight loss surgery. If you turned to “comfort foods” to relieve stress before you had your surgery, you can be at risk for developing alternative coping methods that can be harmful to your health. These coping methods develop to replace the loss of food after surgery.

### **Stay Connected**

It is important to have a support system in place after surgery. Keeping in touch with key people can help you stay on track and avoid weight gain after surgery. This includes coming to all scheduled post-op appointments to track progress and to aid in continued success and weight loss maintenance.

Relapse prevention strategies are good to discuss with a behavioral specialist. We encourage all patients to meet with local outpatient therapists to discuss any personal challenges post operatively.

Also, making a commitment to participate in support groups can prove to be a tremendous help and resource for anyone. Learning from the experiences of others who have faced similar issues can be inspirational and a source of motivation.

# Follow-up Schedule

After your surgery, there will be regular follow-up visits required.

Once you are discharged, the surgeons will see you approximately two weeks after surgery in the office to ensure your incisions are healing well and that your health is progressing properly after surgery. The Dietitians will also be in touch with you by telephone during the first several weeks after surgery to assess how things are going. The Exercise staff will also see you after surgery. Please make sure that you ask any and all questions during these follow-up appointments.

The surgeons and dietitians will see you regularly throughout the first 12 months after surgery. You will be asked to return bi-annually thereafter. Please remember that your surgery presents a lifetime opportunity for change and better health, therefore, you must commit to annual follow-up for the rest of your life following bariatric surgery.

Because vitamin deficiencies can and do occur, lab work will be ordered on a regular basis for you. The results will be carefully reviewed by our staff and physicians. For good health, your attendance over these long-term follow-up appointments is very important.

Finally, the Surgeons, Dietitians and Exercise staff are very open to questions at any time to assist you. There is no such thing as a “stupid question” when it comes to bariatric surgery and your health! Please feel free to call the office at any time, no matter how insignificant your question may seem.

# Phase 1 Recovery

## *Full Liquid Diet (days 0–14 after surgery)*

Over the next two weeks, you may experience rapid weight loss, depending on your starting weight, the procedure you chose to have and the adjustment of your body to the surgery.

### **Your New Stomach**

There are three things to remember about your newly formed stomach:

- 1) It is 1 ounce in size (size of an egg for a RNY and a banana for a sleeve.)
- 2) It empties like a funnel with a 1/8"-1/4" (12 millimeters) diameter opening.
- 3) It needs to be treated like you would a newborn baby's stomach.

If you have ever fed a newborn baby, you know that a baby can tell when it's full. If a baby is overfed, the baby vomits. If a baby takes in too much air when feeding, the baby will burp. You should take care of your pouch as if it was a newborn's stomach. This includes slowly introducing new textures and foods, as well as adapting your eating style to avoid unpleasant side effects.

### **Full Liquids**

After you are discharged from the hospital and you tolerated clear liquids, you will be on a full liquid diet for two weeks. Full liquids are fluids you cannot see through, protein shakes, milk and yogurt.

*Think of the full liquid diet as a "healing diet" that allows your new stomach to rest after surgery.*

You should purchase full liquid items before surgery. This helps prevent being "stuck" without the right protein options so early on in your recovery. Your dietitian will help you create a preoperative shopping list that is customized for your personal tastes and preferences.

### **Protein**

Your dietitian has met with you and has determined your daily protein needs.

Without enough protein you will:

- 1) Not heal properly
- 2) Lose muscle
- 3) Feel tired and run down
- 4) Have hair loss
- 5) Not lose the weight that you hoped to lose.

After surgery, your body requires a certain amount of protein, fluid and vitamins every day to heal properly and remain healthy. Tiredness, weakness or malaise may be signs of muscle loss, especially if you are not reaching your protein goal.

Gradually working towards your protein goal after surgery is necessary to prevent muscle loss. If you lose too much muscle, your metabolism slows down and so does your weight loss. .

High-protein full liquids will not only be the main entrée for your meals, they will also be your between meal “snacks.” There are many protein supplements (drinks, shakes, powders, etc.) on the market (see section on “protein.”) Your dietitian will go over these products with you and help you determine which would be best to meet your protein needs while also accommodating your taste and lifestyle.

## **Fluids**

It is extremely important to keep your body hydrated in the early phases of your recovery. Since our body is made of 98 percent water, it only makes sense that you must keep yourself well-hydrated in order to stay healthy and heal properly.

As a rule, you should drink 64 ounces of fluid a day, but only between meals and snacks. It may take some time to adjust your schedule to fit in 64 ounces, but it is necessary to ensure you are hydrated.

*You need a minimum of  
64 ounces of fluid a day.*

Fortunately, full liquids, such as drinks, shakes, plain broth with protein powder added, and yogurts all count toward your 64 ounce fluid goal. In other words, what full liquid fluids you do not consume as your meals and snacks, you must drink between meals and snacks to have a total fluid intake of 64 ounces a day or more. Again, acceptable fluids are clear liquids, such as water, sugar-free clear beverages, decaf coffee or tea, and low fat broth.

*Remember, full liquid protein drinks  
count toward your daily fluid goal.*

It is important to track your fluid intake in order to make sure you reach your daily fluid goal.

After surgery, you may experience an increased amount of burping or gas. This is generally due to swallowing too much air when you eat or drink. You can avoid this by sipping all fluid, not gulping and avoiding straws.

Over time, burping will become one of your body’s ways of telling you when you have eaten or drank too quickly. With this feedback, you will learn the pace that is right for you.

# Full Liquid Diet

<b>Food Group</b>	<b>Foods Allowed</b>	<b>Foods to Avoid</b>
BEVERAGES	All clear liquid calorie-free beverages Low-sugar protein drinks	Soda (diet or regular) Carbonated beverages Caffeinated beverage Sugar-containing sports drinks
SOUPS ¼ – ½ cup serving	Low fat cream or broth-based soup, strained (prepare with skim milk or soy milk instead of water for added protein)	Stews or chunky soups
DAIRY ¼ – ½ cup serving	Milk or Lactaid® milk (skim or 1%) Plain soy milk, or Fairlife milk Nonfat Greek yogurt (Activia® Light, Dannon® All Natural Nonfat, Dannon® Light & Fit, etc.) <i>Please Note: Fruit-flavored yogurts need to be blended until smooth</i> Protein drinks and shakes.	Milk or Lactaid milk (2% or whole) Flavored soy milk Ice cream Chocolate milk Sweetened condensed milk Frozen yogurt
GRAINS ¼ – ½ cup serving	Cooked cereal in Fairlife milk, diluted (cream of wheat, cream of rice)	Anything else
FRUITS	No-sugar-added applesauce, diluted Fresh fruit (for mixing in protein drinks)	Fruit juice
VEGETABLES ¼ – ½ cup serving	V8® Juice Tomato juice	Anything else V8 Splash® (any)
MEAT-MEAT SUBSTITUTES	PB2 or Powdered Peanut butter only	All
SWEETS/ DESSERTS ¼ – ½ cup serving	Sugar-free pudding Sugar-free gelatin	Anything else

*Your dietitian will work with you to develop a full liquid eating plan that will ensure you get the fluid and protein you need.*

# Full Liquid “Rules”

- You must be on full liquids for two weeks following surgery
- Each meal is only about **1/2 cup** (4 ounces) in size
- Drink at least six full liquid meals a day (every two to three hours) in order to meet your nutritional needs
- **Avoid straws** as this can cause you to take in too much air
- Always **sip slowly**, no gulping.
- Always take **10-20 minutes** to finish a full liquid meal
- Always **consume your highest protein fluids first** (milk, yogurt, protein supplement, etc.)
- **If you feel full, stop drinking** (you do not have to finish everything)
- Carry a water bottle with you everywhere you go and be sure to sip clear liquids

**\*Avoid advancing your diet on your own. Advancing your diet too soon could result in complications, such as vomiting, and/or discomfort or a blockage in your stomach.**

**If you are having difficulty with the diet, please contact your surgeon and dietitian for assistance. We are here to support you and make your diet transitions as easy as possible.**

## *Sample Menu For Full Liquid Diet*

<b>Breakfast</b>	1/4 cup cream of wheat with 2 Tbsp. protein powder 1/4 cup nonfat Greek yogurt
<b>Morning Snack</b>	1/4-1/2 cup chicken broth with unflavored protein powder
<b>Lunch</b>	1/4-1/2 cup nonfat Greek yogurt
<b>Afternoon Snack</b>	1/2 cup protein shake
<b>Dinner</b>	1/2 cup protein shake
<b>Evening Snack</b>	1/2 cup sugar free pudding with 1-2 Tbsp protein powder

# Full Liquid Tips

It is very important that you meet your daily fluid and protein goals. Depending on your lifestyle, you may need to consume at least half of your fluids in the form of protein supplements, such as three to four high protein drinks/shakes per day.

Here are some tips to help you meet your fluid and protein goals:

- Choose protein supplements that have at least 15-20 grams protein, less than 10g carbohydrate
- You may want to mix your own protein shakes, purchase pre-made supplements (that meet the above guidelines) or make your own high protein recipes. Many of the protein powders and shakes that you purchase can be “dressed up” by adding other ingredients to make them taste better or higher in protein
- Alternate sugar-free clear liquids or water with high protein drinks between your full liquid meals

Many supplement recipes make a larger portion size than needed on a full liquid diet. So, separate portions into individual containers (or ice cube trays) and freeze or chill until ready to drink.

Here is a basic Protein drink recipe:

- 1 scoop protein powder of choice (20-25 grams protein, less than 5 grams sugar)
- 8 oz unsweetened almond/cashew/coconut milk or skim/1% milk
- Ice as desired
- Optional: add instant decaf coffee or DaVinci sugar free syrups, or 1 Tbsp PB2 or other peanut butter powder

# Phase 2 Recovery

## *Pureed Diet*

*(Week 3 after surgery with gradual transition to soft diet)*

Two weeks after surgery, if you have successfully tolerated full liquids, you will start the pureed food phase with gradual addition of soft foods as tolerated.

By now, you should be very close to your fluid and protein goals every day. If there are any problems, they should be discussed with our support staff before beginning pureed foods.

Avoid the temptation of “progressing” or “advancing” your diet because of food boredom or any other reason. Starting pureed foods too soon after surgery can seriously impact your health and recovery process.

Similar to full liquids, pureed foods and soft foods should be thought of and treated like medicine. You have to take the right amount of food at the right time to get healthy and heal properly. Advancing beyond your scheduled food phases can prevent this from happening.

### **Pureed food choices**

Pureed food is simply food that has a smoother consistency (like fat free refried beans.)

It is best to puree your own food. Pureeing a meal can be done with a good blender or food processor (see next page for tips.)

When blending, pick out any large food bits left in the puree before eating. This is to make sure the puree is smooth and not chunky.

Always choose foods that are high in protein and low in fat and sugar. Feel free to mix or add in a protein powder for added protein.

The serving size per meal is only 1/4 to 1/2 cup. To avoid wasting food, try freezing your purees for future use. Small plastic containers or even ice cube trays work great for storing small amounts.



### Tips for Making Pureed Food

- Cut meat into very small pieces or cubes before blending
- Use crock pots to soften meat
- Add skim milk, broth, tomato sauce, vegetable juice or water to increase smoothness of the puree

### **How will I know when I am full?**

When you are full, you will feel an uncomfortable fullness or “stuck” feeling under or slightly below your breastbone. This is your body telling you that you have had enough to eat.

You may feel full after only a few swallows of pureed food – this is quite normal. Remember, your stomach is very small and can hold less than 1/2 cup at any one time.

When you get that full feeling don't continue eating. Eating beyond fullness may lead to discomfort and vomiting.

*This is the time you have to learn to leave a meal unfinished and move on.*

Over time and with practice, you will be able to tell whether your next bite of food will bring on that feeling of fullness. Generally, patients who learn to anticipate feeling full and stop eating enjoy the greatest amount of weight loss.

## Protein

While on a pureed diet, you will still have to focus on high-protein foods in order to meet your daily protein needs.

Examples of high-protein pureed foods include:

### Puree Menu Item

4 Tbsp. pureed lean meats  
(chicken, fish, turkey)

1/4 fat free or 1% pureed  
cottage cheese

1/4 cup low-fat  
ricotta cheese

1/4 cup pureed turkey or chicken chili

---

1 cup milk (Skim, 1%, or Fairlife)

1/2 cup Greek yogurt

*High-protein foods are always priority.  
Eat your protein first, vegetables  
second, and then fruit or starch last.  
By following this rule, you will be able to  
meet your protein needs every day.*

If you find that you feel full before you are able to eat enough protein during a meal, you can always make it up by drinking a protein supplement between meals (see the “Protein” section for a list of suggested protein supplements.)

*Protein supplements and drinks,  
such as those you drank on the  
full liquid diet, are still  
valuable sources of protein.*

It is also important that you try assorted protein sources for each meal. For example, if you had tunafish at lunch, try turkey for dinner and have something different for lunch the next day. Slowly introducing other protein sources allows your pouch time to adjust to new foods.

## Fluids

Starting with your pureed diet, fluids are to be drunk between meals and NEVER with meals. In fact, it's very important to stop drinking 15 minutes before a meal and not restart drinking until 30-45 minutes after you have completed a meal.

This is a life-long rule and should be taken very seriously. Drinking with meals can cause your stomach to fill too quickly or may cause vomiting.

*Drinking fluid with meals can cause unpleasant side effects, so be sure to drink your 64 ounces of fluid between meals and never with them.*

## **Meal Planning**

In order to help you heal and adjust to new food textures, it is important you follow a structured meal plan. Your structured meals should be:

- 1) Scheduled and occur at a similar time each day
- 2) Uninterrupted and focused
- 3) Pre-planned for nutritional value

Meals can either be scheduled as five to six small pureed meals or three pureed meals with two high-protein snacks between meals.

When possible, plan meals during times that you would be able to eat slowly and enjoy the meal without distractions. Taking your time and staying focused while eating will help you avoid eating too much or eating the wrong foods.

Meals should always contain protein and be low in sugar and fat. Meal planning is a healthy lifestyle behavior that should be practiced and developed now. It is not just what you eat, but when and where you eat that needs to be pre-planned.

Poor weight loss or weight gain is usually due to unchanged eating habits and poor meal

planning. Therefore, develop these habits now to help prevent weight problems in the future.

## **Supplements**

It is important that you start taking your vitamin and mineral supplements as recommended by your dietitian.

*Remember, taking supplements is a life-long commitment and is necessary to remain healthy after weight loss surgery.*



# Pureed Diet

<b>Food Group</b>	<b>Foods Allowed</b>	<b>Foods to Avoid</b>
<b>BEVERAGES</b> Try to consume 6-8 (8 ounce) cups a day	Water or flavored sugar-free water Crystal Light® Sugar-free Koolaid® Diet decaf tea (iced or hot) Diet lemonade Decaf coffee (iced or hot) Low-sugar protein drinks (refer to page 83)	Anything else Soda (diet or regular) Caffeinated beverages Sugar-containing sports drinks
<b>SOUPS</b> 1T – ½ cup serving	Pureed chunky soups high in protein/meats, low in fat (no noodles, rice and potatoes)	Anything else
<b>DAIRY</b> 1T – ½ cup serving	Milk or Lactaid® milk (skim, 1% or Fairlife) Plain soy milk Nonfat Greek yogurt Protein drinks and shakes Low fat cottage cheese Low fat ricotta cheese	Milk or Lactaid milk (2% or whole) Flavored soy milk Ice cream Chocolate milk <i>Sweetened condensed milk</i> Frozen yogurt
<b>GRAINS</b> 1T – ½ cup serving	Cooked cereal in milk (cream of wheat, cream of rice, steel cut oats, oatmeal, diluted grits) made with protein powder or Fairlife milk	Anything else
<b>FRUITS</b> 1T – ½ cup serving	No-sugar-added applesauce Pureed fruit	Fruit juice
<b>VEGETABLES</b> 1T – ½ cup serving	Pureed cooked vegetables without seeds V8® Juice (Low Sodium)	Anything else
<b>MEAT/MEAT            SUBSTITUTES</b> 1T – ½ cup serving	Pureed fish, tuna, poultry, beef or pork Mashed or pureed tofu Egg substitute, scrambled egg or poached eggs, fat free refried beans	Anything else
<b>SWEETS/            DESSERTS</b> 1T – ½ cup serving	Sugar-free pudding Diet gelatin	Anything else

# Pureed “Rules”

- Each meal is only about **1/4-1/2 cup** (4 ounces or 8 tablespoons) for pureed foods or 1 cup for liquids/full liquids.
- Eat at least 5-6 times a day (every 2-3 hours) in order to meet your nutritional needs.
- Puree all foods well to applesauce consistency.
- **Never drink fluids with meals**, drink either 15 minutes before meals or 30-45 minutes after meals.
- Always take **15-20 minutes** to finish a meal.
- All meals and snacks must include a protein source.
- Always **eat your protein first**.
- When the fullness signal or discomfort develops, stop eating.
- Carry a water bottle with you everywhere you go and be sure to sip water **between all meals and snacks**.
- All foods and ingredients need to be low in sugar and fat.
- Avoid eating 1-2 hours before bedtime to reduce reflux symptoms.

## *Sample Menu For Pureed Diet*

<b>Breakfast</b>	4-6 Tbsp. oatmeal with protein powder and milk
<b>Morning Snack</b>	4-6 Tbsp. nonfat Greek yogurt 2 Tbsp. pureed peaches
<b>Lunch</b>	4 Tbsp. pureed tunafish 2 Tbsp. pureed, cooked carrots
<b>Afternoon Snack</b>	1 cup protein shake
<b>Dinner</b>	4 Tbsp. pureed chicken 1-2 Tbsp. chicken broth 2 Tbsp. pureed green beans
<b>Evening Snack</b>	4-6 Tbsp. low fat ricotta cheese 2 Tbsp. mashed bananas

# Phase 3 Recovery

## *Soft Diet*

*(weeks four, five, and six after surgery)*

Four weeks after surgery, you will transition fully to soft food. If you were having difficulty tolerating pureed foods, please discuss those problems with a member of our support team. Intolerance of foods may be a sign of either behavioral or surgical problems. Either way, these problems need to be treated before you can move on to the next diet phase. You must be successful with each diet phase in order to remain well-nourished and to heal properly.

*Contact our support team if you experience any of the following:*

- 1) *Persistent vomiting*
- 2) *Severe abdominal pain*
- 3) *Inability to reach your daily protein and fluid goals*

### **Soft Foods**

The soft food diet will allow you to expand your selection of healthy foods. Soft foods must be fork tender, well-cooked or canned. Foods with a hard texture, such as steak or dry chicken breast, can cause discomfort and complications for your new stomach. Soft foods are a gentle way to introduce more texture and density. If you need a knife to cut a food, it should not be consumed in the soft diet phase.

In the soft food phase of your recovery, you should begin redeveloping your eating mechanics (how you eat) and eating habits. These will be some of the more difficult things for you to adjust after weight loss surgery.

Here is a list of eating requirements that will help you digest foods easier:

- Eat a smaller mouthful of food – use baby utensils to control size
- Eat slowly and always chew your food well – chew until all food is liquid (applesauce) consistency
- Always set your fork/spoon down between bites to control your speed
- Stop eating when the fullness feeling or discomfort starts to develop
- And, of course, never drink fluids with your meals

## Problem Foods

When adding new foods to your diet, be sure to add only one new food at a time. This way, you can pinpoint problem foods. Problem foods are foods that can cause abdominal pain, vomiting and dumping syndrome. You may find that some foods produce more problems than others. It is important to know which foods these are and avoid them, especially so soon after surgery.

There are some common foods that have been known to cause problems. These include high-fat foods, such as take-out Chinese food, fried foods, and foods prepared and served in sauces.

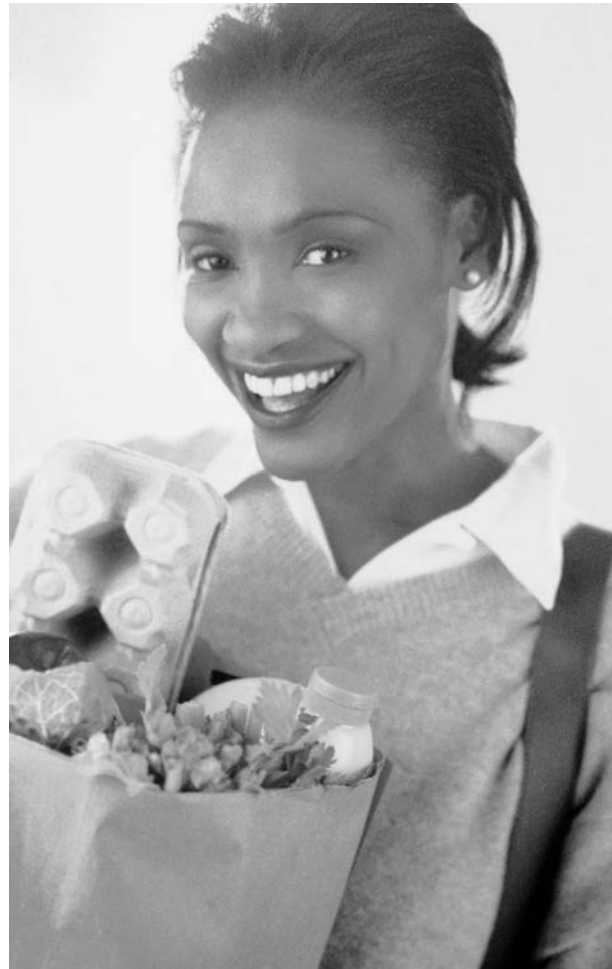
### Tips to Avoid Problem Foods

- Stay away from take-out Chinese
- Avoid at all costs any deep fat fried foods, such as hot wings or fries
- Choose spice-prepared foods over foods covered with sauces
- Always pick foods that are low in fat and sugar per serving
- Eat at home where you can control what goes into the food
- Prepare meats in crockpot for added tenderness

It is best to know how a food is prepared before you eat it. This way, you can avoid that food if you know it will cause problems. When possible, eat more meals at home where you can control what goes into the food.

*Knowing how food was prepared and exactly what is in it can prevent serious unwanted episodes of abdominal pain, vomiting and dumping.*

If you find you cannot tolerate a particular food while on the soft diet, move on and try something else. If you experience any unpleasant problems immediately or up to two hours after a meal, it is typically due to problem food.



# Soft Diet

Food Group	Foods Allowed	Foods to Avoid
<b>BEVERAGES</b> Try to consume 6-8 (8 ounce) cups a day <b>*Must            be consumed            between meals,            not with meals</b>	Water or flavored sugar-free water Crystal Light® Sugar-free Koolaid Sugar-free protein drinks, shakes and smoothies Diet decaf tea (iced or hot) Diet lemonade Decaf coffee (iced or hot) V8® Juice (Low Sodium)	Anything else Soda (diet or regular) Carbonated beverages Sugar-containing sports drinks
<b>SOUPS</b> 1T – ½ cup serving	Broth-based soups or stews made primarily with meat/poultry/seafood/beans	High fat cream soups, noodle soups or rice soups
<b>DAIRY</b> 1T – ½ cup serving	Milk or Lactaid® milk (skim, 1% or Fairlife) Plain soy milk Nonfat Greek yogurt Protein drinks and shakes Low fat cottage cheese, ricotta cheese, Sliced/string cheeses	Milk or Lactaid milk (2% or whole) Flavored soy milk Ice cream Chocolate milk Sweetened condensed milk Frozen yogurt
<b>GRAINS</b> 1T – ½ cup serving	Cooked cereal in milk (cream of wheat, cream of rice, steel cut oats, oatmeal, diluted grits) made with protein powder or Fairlife milk	Pasta, rice, bread, crackers
<b>FRUITS</b> 1T – ½ cup serving *Pair WITH protein source	No-sugar-added applesauce Banana or pureed fruit Canned fruit (in own juices or in water)	Fruit juice
<b>VEGETABLES</b> 1T – ½ cup serving *Pair WITH protein source	Cooked vegetables Cooked squash (acorn or butternut) Sweet potatoes	Raw vegetables
<b>MEAT/MEAT            SUBSTITUTES</b> 1T – ½ cup serving	Softened meats (marinated, stewed, poached, etc.) Deli meats (low sodium), Soft, flaked white fish Canned fish (salmon or tuna) Egg or egg substitute Beans	Fried or breaded meats, poultry or seafood
<b>SWEETS/            DESSERTS</b> 1T – ½ cup serving	Sugar-free pudding Diet gelatin	Anything else



# Soft Diet “Rules”

- Each meal is only about **1/2 cup** (4 ounces or 8 tablespoons) for soft foods or 1 cup for liquids/full liquids
- Eat at least 5-6 times a day (every two to three hours) in order to meet your nutritional needs.
- **Chew foods very well**, all food must be applesauce consistency before you swallow
- Always take only a small amount at one time, use baby utensils to help control portion.
- Eat **SLOWLY**, always take **15-20 minutes** to finish a meal.
- All meals and snacks must include a protein food (soft meat, milk, yogurt, protein supplement).
- Always **eat your protein first**. Fork or spoon stays on the most protein-rich food on the plate.
- **Never drink fluids with meals**, drink either 15 minutes before meals or 45 minutes after meals.
- All foods need to be low in sugar and low in saturated fat.
- You must be on soft foods for at least two weeks following the pureed diet.
- When the fullness signal or discomfort develops, stop eating.

## *Sample Menu For Soft Diet*

<b>Breakfast</b>	1 scrambled egg or ¼ cup egg substitute 1 slice low-fat cheese
<b>Morning Snack</b>	1 string cheese
<b>Lunch</b>	½ cup beef or chicken stew (no rice, noodles or potatoes)
<b>Afternoon Snack</b>	¼ cup low-fat cottage cheese 1 pear half (canned in water or its own juices)
<b>Dinner</b>	2 ounce baked soft tilapia with herb seasoning ¼ cup cooked carrots
<b>Evening Snack</b>	1 cup protein shake

# Phase 4 Recovery

## *Regular Diet*

You've made it. After six weeks, your new stomach has healed and is ready to try regular food (within reason, of course.)

A regular diet does not mean you should not follow a healthy diet. Your food choices and eating habits will form the foundation for a permanent healthy lifestyle. This requires a great deal of personal effort, every day, to keep your weight under control.

*Being on a regular diet does not mean eating smaller portions of unhealthy foods you used to enjoy. Making healthy food choices is crucial for long-term success.*

### **Regular foods**

Your diet will now consist of everything in each of the previous diets plus a few new types of foods:

- *Tender meat and poultry*  
(1 ounce = 7 grams of protein)
- *Raw fruits and vegetables*  
(1/4 to 1/2 cup = 0.5–1 gram of protein)

Many of the same rules apply to this diet as with your last couple diets. Be sure to follow those rules to avoid any complications. Even though you have reached this point, you may still have difficulty tolerating some foods.

Like the soft diet, it is important to add a “new” food only once every meal.

For example, if you choose to have a chicken breast with your dinner, be sure to eat it with something else that you have eaten on your soft or pureed diets. This helps to determine if a certain food will be a problem for you.

If you try too many new foods at one time, you will not be able to tell which food caused the problem.

### **Common Problem Foods and Solutions**

#### ***Tough meats (beef or hamburger)***

- *Marinate or use a meat tenderizer*
- *Cook at a lower temp for a longer time*

#### ***Membranes of oranges/grapefruit***

- *Peel away or spit out tough membranes*

#### ***Skins / seeds of some fruits and vegetables (strawberry seeds seem to be okay)***

- *Peel apples, pears, plums, etc.*
- *Remove the seeds from watermelon, oranges, etc.*

#### ***Fibrous vegetables (corn and celery)***

- *Cook well*
- *Blend or puree*

***Avoid bread, rice, pasta, chicken skin, fried foods, linked sausage skin and casing, etc.***

## Sample Menus For Regular Diet

	<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>
<b>Breakfast</b>	Yogurt parfait: 5 oz nonfat Greek yogurt ¼ cup Fiber One® cereal ¼ cup fresh berries	2 slices Canadian bacon ½ cup oatmeal (sweetened with Splenda® and cinnamon)	Cheese omelet: 1 scrambled egg (or ¼ cup egg substitute) 1 slice low-fat cheese ¼ cup blueberries ¼ cup non-fat Greek yogurt
<b>Morning Snack</b>	2 hard boiled egg whites 2 Tbsp hummus	5 ounces fat-free Greek yogurt	8 ounces water with Mio® and 1 scoop whey protein mix
<b>Lunch</b>	Tuna fish salad: 2-3 ounces tuna (in water) 2 tsp light or fat-free mayo (or plain, fat-free Greek yogurt) ½ tsp dillweed ½ cup fresh dipping veggies (celery, red peppers, etc.)	Grilled chicken salad: ½ cup salad greens 2-3 ounces grilled chicken 1 Tbsp light or fat-free ranch dressing	Chili: ½-1 cup thick chili with beans 1 ounce low fat cheese 1 Tbsp diced tomatoes
<b>Afternoon Snack</b>	½ cup fruit Part-skim mozzarella cheese stick	1 ounce almonds	½ cup low-fat cottage cheese
<b>Dinner</b>	Broiled salmon: 2-3 ounce salmon filet ¼-½ cup steamed asparagus	2-3 ounces shredded pot roast with 1 Tbsp gravy ¼ cup cooked potatoes ¼-½ cup cooked carrots	2-3 ounces cooked ham ¼ cup cooked sweet potatoes (without syrup) ¼-½ cup cooked broccoli
<b>Total Protein:</b>	<i>Approximately 70 grams</i>	<i>Approximately 60 grams</i>	<i>Approximately 80 grams</i>

### Exercise Tips

At this point, you should be able to try almost any exercise you want. However, ease into new exercises. Some things may be harder than expected and could cause injury. If you are unsure about anything, do not hesitate to contact your exercise physiologist.

# Diet Strategies for Long Term Success

## **Each meal is only about 1 cup in size** *(8 ounces or 16 tablespoons)*

- Use small dessert plates for meals
- For meals on-the-go, prepack food in individual 4-8 ounce plastic containers

## **Eat at least 3 meals per day**

- Plan your meal times in advance and never skip a meal
- Avoid snacking between meals

## **Always eat your protein first**

- All meals must include a protein food (meat, yogurt, cottage cheese, etc.)

## **Chew foods well and eat SLOWLY**

- Take 15-20 minutes to finish a meal
- All food must be applesauce consistency before you swallow
- Always take a small mouthful at one time (use baby utensils to control portion)
- This helps prevent unpleasant side effects, such as cramping, nausea and vomiting

## **When you begin to feel full, stop eating**

- Listen to your body
- Eating beyond fullness may cause vomiting and/or decrease your rate of weight loss

## **Never drink fluids with meals**

- Drink either 15 minutes before meals or 45 minutes after meals
- This helps prevent nausea, vomiting and dumping

## **Drink a minimum of 64 ounces of fluid every day**

- Fluids must be non-carbonated, and calorie-free

## **Meet your protein goal every day**

*(Protein goal for men 80-90 grams / Protein goal for women 60-70 grams)*

- Track your protein consumption
- Drink protein supplements between meals, as needed, to meet your goal

## **Aim for a healthy, well-balanced diet**

- All foods should be low in sugar (5 grams or less) unless it is a fruit or dairy product containing natural sugars and low fat
- Always eat protein first, vegetables second, and starch/fruit last

## **Take your vitamin/mineral supplements EVERY DAY**

- This is necessary to avoid nutritional deficiencies

## **Keep a food log**

- Keep track and stay accountable of your diet
- This helps your dietitian identify any nutrition issues or pitfalls you may experience

# Basic Nutrition

## *Understanding Nutrition Labels*

Reading food labels is important for making healthy choices both before and after surgery. Pay extra attention to serving size, calories, protein, fat and sugar (carbohydrates). Following are some label reading tips for each of these things.

### Serving Size

Food manufacturers determine the serving size. All nutrients listed are for only one serving of that food item. Pay attention to the serving size and how many servings there are in the package. If you double the serving you eat, you double the calories and other nutrients.

BEWARE! Sometimes food manufacturers list ridiculously small serving sizes to make the product appear lower in sugar, fat and calories. Always ask yourself if the serving size appears reasonable. If not, move onto something else more healthful.

### Calories

Make your calories worth it. Look at the calories and serving size and then decide if that is something you should eat. Again, if you eat double the serving size, you double the calories – eat mindfully.

<b>Nutrition Facts</b>	
Serving Size 1 cup (228g)	
Servings Per Container 2	
<b>Amount Per Serving</b>	
<b>Calories 250</b>	Calories from Fat 110
<b>% Daily Value*</b>	
<b>Total Fat 12g</b>	<b>18%</b>
Saturated Fat 3g	15%
Trans Fat 3g	
<b>Cholesterol 30mg</b>	<b>10%</b>
<b>Sodium 470mg</b>	<b>20%</b>
<b>Total Carbohydrate 31g</b>	<b>10%</b>
Dietary Fiber 0g	0%
Sugars 5g	
<b>Protein 5g</b>	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

Source: U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition. "How to Understand and Use the Nutrition Facts Label." <http://www.cfsan.fda.gov/~dma/foodlab.html>

## Fat

Dietary fat is required in order for certain vitamins (A, D, E and K) to be absorbed. With this in mind, it is still important to choose low fat foods and get the most out of your weight loss.

Also, after surgery, you may not be able to tolerate foods with a lot of fat. A fatty meal may lead to unwanted side effects, such as diarrhea and dumping.

BEWARE! Foods labeled “fat-free” are often too high in sugar for weight loss surgery patients. Always look at both the sugar and fat content of foods.

## Protein

Food labels will help you determine how much protein is in foods. Protein is listed as grams per serving. The more protein a food has, the easier it will be to reach your daily protein goal.

**Protein will always remain the focus of your diet.**

Be sure to look at serving sizes to determine just how many grams of protein you are consuming.

## Sugar

Some foods contain natural sugars, added sugars, or both. For example, fruit and milk contain natural sugars, meaning no sugar was added during processing. Natural sugars are better because most people can tolerate them after weight loss surgery.

The sugar content of foods is listed under “Total Carbohydrate.” However, this number includes both natural and added sugars.

**Look for foods with 9 grams or less of sugar.** Avoid foods with added sugar because they can make you very sick. In general, people should avoid added sugar – this is not specific to weight loss surgery patients, but it is more important due to the risk of dumping syndrome.

# Travel and Vacation Tips

## *For After Weight Loss Surgery*

After surgery, it will likely take a great deal of preparation on your part to find an eating and exercise routine that fits your daily lifestyle. Trying to adjust your routine to a new environment can be done with planning and preparation.

When possible, try to maintain your same eating schedule when you are away from home.

Plan your travel time to allow for stops along the way. You still need to get in 20–30 minutes of walking each day that you are away. Find a park, museum, mall or tourist stop of interest to you along the way. Make your stop time an activity time.

### **Do Your Homework**

Before going on vacation, do Internet research of your destination. If you are staying at a hotel, check out the online restaurant menu for healthy food choices. Also, find out what kind of exercise facility is available where you are going. If there is not a gym at your hotel, many hotels have arrangements with gyms nearby that would be free of charge to you.

It is important to find out if your room has a refrigerator. This way, you can have a place for your own food preparations and/or protein drinks.

If you are staying with friends or family during your vacation, consider your meal needs ahead of time as well as how you can fit exercise into your festivities.

### **Road Trips**

Packing a cooler is the best thing you can do when going on the road. Prepare your healthy snack ahead of time in ready-to-eat portions. Keep everything cooled well. Non-perishable single serve low sugar fruit cups, applesauce cups and protein bars can also be good healthy choices for a road trip.

*Water bottles are a must for any vacation. Stay hydrated.*

### **Dining Out**

If you are planning to dine out on your vacation, check out restaurant websites or myfitnesspal to help make healthy food choices at restaurants away from home.

### **Airlines and Airports**

Many airlines no longer provide in-flight meals, so food preparation needs to begin at home. If there is a meal provided, contact the airline service directly to tell them your food preferences and special needs before you travel. Avoid browsing through airport food courts before your flight and try to have healthy meal alternatives on hand.

We do not recommend that you travel more than 1 hour away within the first 2 weeks after surgery and no flying in the 1st 30 days.

## **Cruises**

Cruise ship vacations are especially challenging for a weight loss surgery patient. The endless food choices that many cruises offer can be tempting. Again, preplanning meals and checking with the cruise lines about healthy meal alternatives is essential to stay on track.

Fortunately, deck walking and other cruise activities provide a good way to meet your activity goals. Bring a pedometer and track how far you walk on board.

Because cruises can be so challenging for many patients, it is probably better to look at other types of vacations for you and your family, especially during your first year after surgery.

## **Visiting Friends and Family**

Staying on track at someone else's home can be tricky. Consider discussing your meal needs with your host and be sure to explain to them that you are trying to eat healthier. This will help avoid any uncomfortable or embarrassing dinner table situations. Offering to cook a meal is another way to control what you eat while at someone else's home.

Maintaining your exercise schedule is important while you are visiting. Inviting a friend or relative on a walk with you is a good way to get the activity you need while spending quality time.





# Grocery Shopping and Family Meals

A significant adjustment after surgery is a trip to the grocery store. Now, many of the aisles in the store will have nothing for you.

Impulse or spontaneous food shopping must be replaced with planned food lists and scheduled food store visits. Going into a store without preparation should not be done. Instead of just wandering up and down each aisle making spontaneous food choices, your shopping strategy is to get just what you need and get out.

*Focus on what foods you need to remain healthy, instead of what food you can't have or might miss in your diet.*

Following a healthier diet can be more expensive; it also may lead to more grocery runs for fresh foods. However, you may find the expense of better food shopping may be offset by the cutting out of impulse purchases.

## **Kitchen Pantry**

Your kitchen pantry shelves store processed foods. As you become a healthier eater, the amount of food stored on these shelves will decrease. Very few packaged foods contain the nutritional requirements for a bariatric surgical patient. Your dietitian will help you come up with appropriate foods to stock your shelves and refrigerator with.

## **Family Meals**

At first, sharing mealtime with your family and friends will be challenging, especially during the first few weeks after surgery.

Trying to enjoy a protein shake while others are eating things that you used to crave and enjoy can be very discouraging and depressing. There are two things to remember.

- 1) You are not eating for enjoyment.
- 2) You are eating to restore your health.

*Rather than practicing food avoidance, it is good to learn to say no to foods that are not healthy with other people around you.*

You also have to realize that you are scheduling your meals for you, not your family. Setting up a family meal schedule can be very beneficial for your whole family, but it is very necessary for you. Involve your family in the meal planning process so meals can be suitable for all.

Learning to schedule and plan ahead of time may seem silly and not necessary to you, but these learned behaviors help you to conquer and alter habits and patterns that you have had all your life.

Always take the time to measure your portions, and ensure protein is the focus of all meals.

***Learn to be a part of the meal time experience with your family and friends, but keep in mind that you are eating to be healthy.***



# Protein

Maintaining good protein status is crucial after weight loss surgery. Using protein supplements and selecting high-quality protein foods will allow you to meet your protein needs every day.

## What is protein?

Protein is found in many foods. Although protein can be found in both animal and vegetarian (non-animal) foods, animal foods typically have higher protein than vegetarian protein foods. Animal protein foods include meat, poultry, eggs, cheese, milk, yogurt and fish. Some vegetarian protein foods include beans, peanut butter, tofu, nuts and grains.

*In general, proteins from animal sources are higher in protein than those from plant sources.*

## Why is protein so important?

In order to understand why protein is so important, you should first know how your body digests and absorbs protein.

Before you had surgery, your stomach was able to digest protein using stomach acid. Stomach acid would break protein down to a smaller form so your body could easily absorb it. Once your protein foods were broken down, they would go into your small intestine where they would be absorbed.

With gastric bypass surgery, most of the stomach and the first part of the small intestine are bypassed. This causes a big change in protein digestion and absorption. So, in order to digest and absorb protein after gastric bypass surgery, you need to be eating high-quality protein foods for the rest of your life. The higher-quality the protein food, the better the mix of amino acids, and the more likely your body will successfully absorb it.

With the gastric sleeve surgery, the stomach and small intestine remain intact and functioning, but you may still be at risk for protein malnutrition. This is because the restriction of foods can lead to not consuming enough protein. It is still important to be sure that your daily protein goal is met and high-quality protein foods are eaten.

For a list of high-quality protein foods, see the table on page 74.

If you do not choose high-quality protein foods, you could be at risk for a protein deficiency (protein malnutrition.)

Protein malnutrition will result in:

- 1) Poor healing and recovery
- 2) Loss of muscle mass
- 3) Constantly feeling tired or run down
- 4) Hair loss beyond that which may be typical after surgery
- 5) Slower weight loss

*Consuming enough high-quality protein is essential to prevent protein malnutrition.*

In order to avoid protein malnutrition, you must become constantly aware of your protein food choices. Starting day one after surgery, your job is to meet your recommended daily protein goal. If you do not take the time to educate yourself, with our guidance, you might fall back into the same food behaviors that contributed to your severe weight problem and related health issues.

Protein supplements are required to meet daily protein goals the first 2-4 weeks after surgery. Protein supplements are available in many forms, including drinks, shakes, bars, powders, etc. Depending on your situation, some supplements may be better for you than others.

## **What are my supplement choices?**

Not all protein supplements are equal. When you begin shopping for protein supplements, you will notice that common supplements are whey, soy or milk-based products and are often sold as either concentrates or isolates.

The quality of a supplement determines how much protein you get from that supplement. Protein isolates are better quality because they typically contain more protein than protein concentrates.

# Are You Getting Enough Protein?

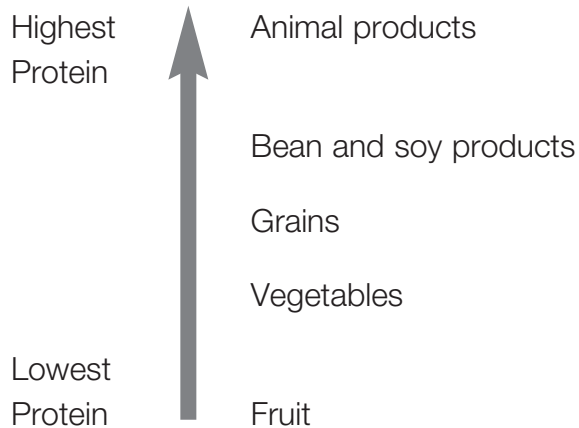
It is important for you to meet your protein goal every day for the rest of your life. If you choose a variety of protein-rich foods and include protein supplements as snacks, you will most likely be able to meet your protein goal. It may take some time and careful planning at first, but eventually you will find it easier to follow a diet with adequate protein.

## **Your daily post surgery protein goal is**

**Women: 60-70 grams of protein**

**Men: 80-90 grams of protein**

As mentioned previously, foods from animal sources (like meat, eggs, dairy, etc.) will have the most protein and the highest protein. Soy milk and soy products (like tofu) are also good protein-rich choices. Vegetables and grains have some protein, but not a lot, and fruits usually have very little, if any.



Include protein at each meal and snack. Once you move beyond full liquids, you can continue to drink a protein shake between meals to ensure that you are meeting your daily protein goal.

Here are some additional ways to increase the protein content of meals:

- Use Fairlife milk in soups, hot cereals, and purees.
- Use dried peas and beans (canned is okay) often. Add to combination dishes, and soups. Puree chickpeas with a little olive oil, water and lemon juice to make a dip or spread. Use as a dip for soft vegetables.
- Keep a variety of sliced and shredded low-fat cheeses on hand. Use to top salads and soups, or melt over egg dishes.
- Make salads protein-rich by adding beans, a hard boiled egg, chopped meat, or tuna (or salmon) canned in water. When cooking meat, make extra to add to a salad the next day.
- Be creative and try new things.

# Tips for Tracking Protein Intake

- 1) **Keep a food log** – Recordkeeping is very important so that both you and the dietitian can see that you are meeting your daily protein goal.

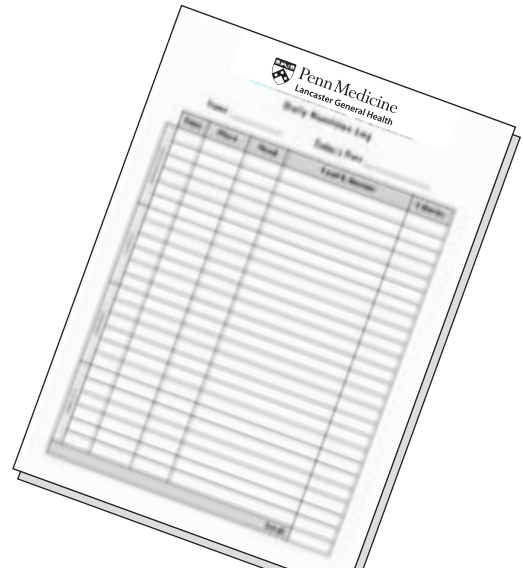
As a general rule of thumb, 1 ounce of meat or meat alternative (like tofu) contains 7 grams of protein.

Be sure to add the grams of protein from your protein supplements, especially if added to foods.

- 2) **Read nutrition labels** – Look at the serving size and the grams of protein per serving. A food's serving size will determine how much protein you are consuming.
- 3) **Measure everything** – Use scales and measuring cups/spoons to measure ingredients. This will help you figure out the protein content of foods you prepare, as well as to help keep portions and calories in check.

Taking the time to measure and weigh everything is a very important behavioral tool and it will help you develop healthy eating habits.

- 4) **Pre-plan meals** – If you are able to pre-plan a day's worth of meals, you can plan in advance how much protein you are getting.



Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
<b>Calories</b> 250	Calories from Fat 110
% Daily Value*	
<b>Total Fat</b> 12g	<b>18%</b>
Saturated Fat 3g	15%
Trans Fat 3g	
<b>Cholesterol</b> 30mg	<b>10%</b>
<b>Sodium</b> 470mg	<b>20%</b>
<b>Total Carbohydrate</b> 31g	<b>10%</b>
Dietary Fiber 0g	0%
Sugars 6g	
<b>Protein</b> 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g



# Protein Options



## Choose more...

### **Very Lean Proteins (~35 calories, 1 gm fat per oz)**

Chicken (white meat, no skin)  
 Turkey (white meat, no skin)  
 Ground 94% lean turkey  
 Fish filet (Cod, flounder, haddock, halibut, trout, tuna)  
 Shellfish (Crab/imitation crab, lobster, scallops, shrimp, clams)  
 Deli meats (with 1 gram or less fat per oz such as deli thin turkey or ham)  
 Egg whites  
 Egg substitutes  
 Turkey sausage  
 Cottage cheese (nonfat or low fat)  
 Fat free cheese  
 Fat free Greek Yogurt

### **Lean Proteins (55 calories, 2-3 gm fat per oz)**

Chicken (dark meat, no skin)  
 Chicken (white meat, with skin)  
 Chicken sausage  
 Duck/goose (well-drained fat, no skin)  
 Turkey (dark meat, no skin)  
 Salmon, swordfish, herring, catfish  
 Oysters  
 Sardines  
**90-94%** lean ground beef, venison, turkey or buffalo  
 Veal roast or lean chop  
 Lean pork (ham, Canadian bacon, tenderloin, or center loin chop)  
 4.5% cottage cheese  
 Low fat cheese  
 Egg (whole)

## Choose less...

### **Medium-fat Proteins (75 calories, 5 gm fat per oz)**

Chicken (dark meat, with skin)  
 Ground chicken (if less than 90% lean)  
 Chicken wings  
 Fried or breaded chicken  
 Ground turkey (dark meat, 85% lean)  
 Any fried fish  
 Breaded fish (frozen, premade)  
 Veal cutlet  
 Lamb (rib roast)  
 Ground beef, corned beef  
 Meatloaf (made with 80-85% lean meat)  
 Lean beef (trimmed such as round, sirloin and flank steaks; tenderloin; roast-chuck or rump)  
 Tofu  
 Ricotta cheese  
 Mozzarella cheese

### **High fat Proteins (100 calories, 8 gm fat per oz)**

Pork (spareribs, ground pork)  
 Bologna, salami, pimento loaf  
 Sausage (bratwurst, Italian, Polish, smoked)  
 Hot dog  
 Bacon  
 Cheeses (except mozzarella and Ricotta)  
 Peanut butter

\*1 ounce of a high protein food is approximately 7 grams protein  
 Aim for at least 3 ounces of lean protein at meals



# Vitamin Supplements

Supplements are a lifelong commitment. After weight loss surgery, you will not be able to meet your body's vitamin and mineral needs with diet alone. Many vitamins and minerals will be absorbed differently, so supplements are required to avoid nutritional deficiencies (see page 92 for more information on nutritional deficiencies.)

**All supplements must be chewable, liquid, crushable, or dissolvable.** This is especially important in the first few months after surgery. Many of the recommended supplements can be purchased at local drugstores, vitamin shops or through on-line sources.

Here are the recommended supplements based on weight loss procedure:

***Roux en Y Gastric Bypass and Sleeve:***

- Multivitamin - twice a day (not a gummy)
- Calcium citrate w/ vitamin D (1000 mg)
- Iron \*\*
- B12 (500 mcg) daily

\*\* Recommended for menstruating females and/or those individuals with a history of iron deficiency

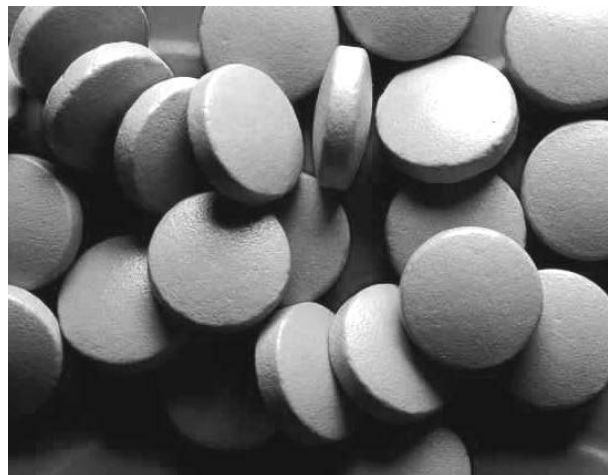
Your supplement needs may vary depending on your specific situation. Additional supplements might be required. Your surgeon and dietitian will closely monitor you and make the determination if and when you need additional supplements.

## Supplement Schedule

It is important you follow a supplement schedule because some vitamins and minerals can be difficult to absorb if taken at the same time.

Here is a sample supplement schedule:

<b><i>Breakfast:</i></b>	Multivitamin B12
<b><i>Lunch:</i></b>	Calcium
<b><i>Dinner:</i></b>	Multivitamin
<b><i>Evening Snack:</i></b>	Calcium
<b><i>Bedtime:</i></b>	Iron (if needed)





# Nutritional Deficiencies

## *After Weight Loss Surgery*

Any time a person experiences rapid weight loss, they are at risk for a variety of nutritional problems. Problems include anything from hair loss to weak bones to permanent brain abnormalities. Many of these problems are commonly due to a nutrition deficiency (not getting enough of a certain vitamin or mineral.)

For weight loss surgery patients, nutritional deficiencies are a special concern due to the rapid weight loss and changed anatomy, making patients unable to absorb certain vitamins and minerals after surgery.

Some nutritional problems develop soon after surgery and must be identified quickly to avoid long-term consequences. Others can occur slowly within the first year after surgery. With regular blood work, we can tell if you are not getting enough of a vitamin or mineral.

In the first year after surgery, we monitor your blood work a little closer until your weight loss has stabilized. After that point, yearly blood work is required to check for any abnormalities or nutritional deficiencies.

To avoid nutritional deficiencies, it is crucial to take your recommended vitamin and mineral supplements after weight loss surgery.

*Nutritional deficiencies can be prevented with regular follow-up and using vitamin and mineral supplements for the rest of your life.*

There are specific vitamins and minerals that can become deficient in weight loss surgery patients.

### **Vitamin B12 (Cobalamine)**

A vitamin B12 deficiency is common after gastric bypass surgery. Because the stomach is altered with gastric bypass, vitamin B12 can no longer be absorbed naturally. Your body has stores of B12, but these can run out within one year after surgery. B12 is also recommended for sleeve patients, and we will monitor the need for continued supplementation post-operatively.

Symptoms of a B12 deficiency include fatigue, low blood counts (anemia), numbness, memory loss and problems with walking.

Food sources for B12 are in the table at the end of this section.

However, relying on foods for B12 will likely not be enough after gastric bypass surgery because B12 intestinal absorption is changed. A B12 supplement may be necessary.

*Vitamin B12 pills cannot be absorbed by many gastric bypass patients.*

Approved B12 supplements are available in nasal sprays and sublingual (dissolves under the tongue) forms. B12 shots are also available.

## Vitamin B1 (Thiamine)

A vitamin B1 deficiency can occur as well in weight loss surgery patients. Your body stores thiamine in your muscles, but stores only last about three to six weeks. Not eating enough foods with thiamine can use up available stores and put you at risk for a thiamine deficiency.

Vomiting can also cause thiamine deficiency, so be sure to eat plenty of thiamine-rich foods and continue to take supplements with thiamine when having episodes of vomiting.

Food sources for B1 are in the table at the end of this section.

*To prevent a thiamine deficiency, take a multivitamin with thiamine or a B-Complex vitamin as recommended by your dietitian.*

Symptoms of an early thiamine deficiency include fatigue, poor memory, vision changes or nervous system changes.

Long-term symptoms include nervous system changes, such as difficulty walking, numbness of the toes, burning in the feet, muscle cramping in the calves and loss of reflexes.



## Folate

For similar reasons to vitamin B12, a folate deficiency can develop after weight loss surgery.

Folate is especially important for women who are considering pregnancy. Not getting enough folate during the early stages of pregnancy can lead to neurological damage to a developing fetus.

A folate deficiency can usually be prevented by taking a daily multivitamin that contains at least 400 micrograms of folate. Please note, folate is called “folic acid” when it is in supplement form.

Food sources for folate are in the table at the end of this section.

## Vitamin A

Vitamin A is important for the health of your eyes, immune system, skin, lungs and wound healing. Vitamin A is a fat soluble vitamin, therefore gastric bypass patients are at an increased risk for Vitamin A deficiency due to fat malabsorption. Vitamin A deficiency includes symptoms of night blindness, low tear production or eye dryness, dry hair and nails.

## Zinc

Zinc is used by most all tissues of the body. It is absorbed throughout the small intestines, therefore, gastric bypass patients are also at an increased risk for a zinc deficiency. Signs of deficiency can include hair loss, poor wound healing, abnormal or diminished sense of taste.

See Table 1 on the following page for natural sources of these vitamins.

*Table 1 – Food source choices for vitamins*

<b>VITAMIN</b>	<b>NATURAL FOOD SOURCE</b>
<b>Thiamine (B1)</b>	beef, pork, liver, whole grains, dried beans, green peas, bananas, soybeans, spinach
<b>Zinc</b>	fish, liver, dark-colored fruits and leafy vegetables
<b>Vitamin A</b>	all meats, egg yolks, dairy products, nuts & seeds
<b>Folate (B9)</b>	oranges, beef liver, spinach, beans
<b>Cobalamine (B12)</b>	beef, poultry, eggs, milk, liver, fortified breakfast cereals, clams, trout, salmon

*Table 2 – Problems associated with vitamin deficiencies*

<b>Anemia</b>	iron, B12, zinc, vitamin C, vitamin E or copper deficiency
<b>Hair loss</b>	protein, zinc or vitamin A deficiency
<b>Osteoporosis</b>	calcium, vitamin D, vitamin A or magnesium deficiency
<b>Fatigue</b>	zinc, selenium, vitamin E or vitamin C deficiency
<b>Poor wound healing</b>	zinc, selenium, vitamin E vitamin C deficiency



# Iron

Iron deficiency (low iron levels) and anemia (low blood count) is a possible problem, especially for women, after weight loss surgery.

The most common causes of iron deficiency are:

- 1) Decreased absorption of iron since the first portion of the intestine is bypassed with gastric bypass surgery
- 2) Less stomach acid available to make iron more easily absorbed
- 3) Lower iron intake from eating less food after surgery
- 4) Not taking recommended vitamin and mineral supplements after surgery
- 5) A combination of any of the above

Common symptoms of iron deficiency are fatigue and changes in body temperature. Craving ice can be a common symptom.

*Your dietitian will recommend iron supplements for you based on your individual needs.*

After surgery, the amount of iron in a multivitamin supplement is generally not enough for a patient to prevent or treat an existing iron deficiency. Alternative treatments are available and should be discussed between you and the bariatric support team.

*Iron can cause constipation. If experiencing constipation take a fiber supplement daily.*

Eating foods that are rich in iron can be very helpful at treating and preventing low iron levels.

Some iron-rich foods include:

- Meat
- Eggs
- Fish
- Liver
- Green leafy vegetables

## **Tips to Increase Your Iron**

- Eat iron-rich foods with vitamin C foods. Vitamin C foods, such as citrus fruits, can increase your absorption of iron.
- Avoid taking calcium supplements with iron.
- Take iron and calcium at least four hours apart.
- Remember, milk and antacid pills contain calcium.

# Calcium & Vitamin D

Weight loss surgery can worsen calcium and vitamin D deficiencies that existed before surgery. Therefore, it is important to fix these deficiencies before surgery as well as avoid future deficiencies of calcium and vitamin D.

## Vitamin D

Two thirds of weight loss surgery patients are vitamin D deficient before surgery, meaning they have low levels of vitamin D in their body.

If you avoid the sun, wear sunscreen, have darker skin or wear protective clothing outside, you are at risk for low vitamin D levels. Excessive weight in the form of fat can also play a role in a vitamin D deficiency.

*Vitamin D is made in the skin from sun exposure. Therefore, sunlight is a great source of vitamin D.*

The major function of vitamin D is to regulate the body's calcium. Low vitamin D levels can cause bone density problems, such as osteoporosis.

Good food sources of vitamin D include eggs, tunafish, cod liver oil, sardines, salmon, liver and milk with vitamin D.

If we find you have a vitamin D deficiency before surgery, we will put you on a supplement to correct the problem. After surgery, your dietitian will recommend supplements in order to avoid a future vitamin D deficiency.

## Calcium

Calcium can be hard to absorb for many weight loss patients. Calcium absorption often requires stomach acid. Since the stomach no longer has enough acid, calcium absorption is decreased.



In order to ensure you get enough calcium, you must take daily calcium supplements after gastric bypass surgery. The only type of calcium that can be easily absorbed after surgery is calcium citrate.

*Calcium citrate is the recommended calcium supplement to use for easier absorption.*

High protein diets, like your food plan after surgery, may also lead to a calcium deficiency. Therefore, it is absolutely necessary to take the recommended amount of calcium citrate every day.

The recommended amount of calcium citrate supplements is 1000 – 1500 milligrams per day, depending on your diet.

Foods that have a lot of calcium include most dairy products, almonds, brazil nuts, tofu and oysters.

# Exercise

## “Moving More”

### Exercise and Physical Activity

Regular exercise and physical activity are essential when it comes to losing weight and keeping it off. The terms “exercise” and “physical activity” are often used interchangeably usually referring to the same thing. On the other hand, these terms can be defined as follows:

**Exercise** is a form of physical activity that is structured, planned, and is done at a certain intensity level, frequency and duration in order to improve or maintain one or more components of physical fitness.

**Physical Activity** is any bodily movement produced by the contraction of skeletal muscles that result in an increase of energy expenditure. It is encouraged that an increase in daily physical activity be a supplement to a regular exercise program. One should not substitute the other.

### Exercise is medicine

Regular exercise can provide the following health benefits:

- Decreased risk of chronic diseases and cancers (cardiovascular, metabolic, neuromuscular, and orthopedic diseases)
- Improving overall fitness and conditioning
- Increasing energy level
- Increased self esteem and confidence
- Improved sleep and sleeping patterns
- Decreased stress, anxiety, and depression
- Assist with weight loss and keeping weight off

### The importance of exercise before surgery

What you do behaviorally before bariatric surgery may ultimately affect the success that you have immediately after surgery and for years to come. Making a commitment to regular exercise now can set you up for success to stick with an exercise program ongoing. This is why prior to surgery our hope is that you choose to make structured exercise a priority in your life, almost like a habit that you establish. Also, regular exercise prior to surgery will enhance the recovery process following surgery as your body will be more conditioned and better able to handle the physical stress of surgery.

### Aerobic (cardiovascular) Exercise

Aerobic exercise is considered to be rhythmic in nature, involving large muscle groups for improvements in cardiovascular and respiratory fitness. Aerobic, or cardio exercise, improves the health and efficiency of your heart and lungs while increasing your stamina. In addition, aerobic exercise helps your body burn calories necessary for weight loss or weight maintenance. The key point to remember with aerobic exercise is to keep your heart rate elevated for a specific duration (minimum of 10 min.) to maximize health benefits.

Examples of aerobic exercise include:

- Walking
- Running
- Swimming
- Elliptical
- Biking
- Water Aerobics
- Exercise DVD's



## **Aerobic Exercise Guidelines for Healthy Adults under age 65**

150 total minutes of moderate aerobic exercise per week (or 30 minutes, 5 days per week) is the basic recommendation to maintain health and improve the risk for chronic disease. Although not weight loss surgery specific, the guidelines also state that for weight loss and maintaining weight loss, 60-90 minutes, instead of just 30 minutes, may be necessary. Moderate intensity means that you are raising your heart rate and likely breaking a sweat, however you should still be able to carry on a conversation.

### **Is exercise new for you?**

If you are just getting started or returning to exercise after a break, begin with low to moderate intensity aerobic exercise. For example, consider starting with one or more 10 to 15 minute walking bouts three days per week over the course of a few weeks. Gradually increase your duration to one continuous bout of 30 minutes. From there, slowly increase your intensity either by increasing your walking speed, frequency or duration.

### **Warm-Up and Cool-down**

The warm-up phase of an exercise program is meant to prepare the body for the physical demands of the workout. It may last as little as a few minutes or until the individual feels ready to exercise. Consider starting at 50% of your max exercise intensity for your warm-up. For example, if your max walking speed on the treadmill is 3.0 mph, start at 1.5 mph for the first 5 to 10 minutes then slowly increase your speed to 3.0 mph.

Your cool-down should conclude your aerobic exercise session. This should be 5 to 10 minutes in duration as well. The purpose of the cool-down is to allow for a gradual recovery of heart rate and blood pressure.

Consider cooling down at 50% of your max exercise intensity similar to the warm-up phase. For example, if your max walking speed on the treadmill was 3.0 mph, lower your speed to 1.5 mph for the last 5 to 10 minutes.

## **Muscular Strength Training**

Muscular strength training exercises (also known as weight lifting or resistance training) involves muscle movement against force. Free weights, machines, rubber tubing/resistance bands, or your own body weight can be used.

## **The Importance of Strength Training with Bariatric Surgery**

Incorporating strength training into your exercise routine is essential for many reasons. After weight loss surgery and an excess amount of weight loss, one goal is to preserve as much lean mass, or muscle, that is being lost. Muscle burns calories, so if you are losing muscle you are also reducing your body's ability to burn calories even while at rest. Therefore, it is encouraged that regular strength training be part of your complete exercise routine from the start, even before bariatric surgery. In addition to increasing your metabolic rate, regular strength training can preserve or increase strength, build bone density, improve balance, and can help you maintain independence with age.

## General Guidelines for Muscular Strength Training

It is suggested to perform exercises working all of the major muscles groups (chest, shoulders, upper and lower back, abs, arms, and legs). 1-3 sets of 8-15 repetitions, 2-3 times per wk is recommended.

When performing muscular strength exercises, remember to breathe, and always be in full control of the weights, lifting and lowering the weight slowly. Proper technique ensures optimal fitness gains and minimizes the risk of injury. *Please consult with an exercise physiologist or fitness professional before initiating a strength training program.*

## Stretching/Flexibility Exercise

Flexibility exercises involve stretching of the muscles and joints. Regular stretching is an important part of a complete exercise program, however it is often times overlooked and forgotten.

Benefits of regular stretching include:

- Improvement in joint and muscle range of motion and physical function
- *Possibility* of decreasing the risk of injury
- Stress relief and relaxation

General Guidelines for Stretching are listed below:

- Stretching can be done anytime, but it is ideal to stretch after exercise
- Stretching should be done at least 2-3 times a week
- Stretching exercises should involve all of the major muscle groups
- Do NOT bounce while stretching
- Hold each stretch for 15-60 seconds for multiple repetitions
- Be sure to breathe while stretching
- Stretching should not be painful, but a gentle pulling sensation

## Signs and symptoms that you should stop exercise

If you experience any of the symptoms below you should stop exercising and contact your family physician immediately:

- Chest pressure/pain/discomfort that does not go away with rest or nitroglycerin
- Unusual jaw, back or arm pain that can be associated with chest pressure/pain or discomfort
- Severe breathlessness
- Irregular heart rate (palpitations)
- Sweating with cold, clammy skin
- Severe dizziness
- Severe nausea
- Fainting

## Setting Goals

Setting short term and long term goals can be beneficial in helping you achieve success. Goals should be realistic; however they should also provide you with some motivational challenge.

The key to setting goals is making them

**SMART** goals:

<b>SMART Goals</b>
<b>Specific</b> – The exercise goals should be clearly and precisely established
<b>Measurable</b> – The exercise goals should be something that can be readily monitored
<b>Attainable</b> – Goals within your reach
<b>Realistic/Relevant</b> – The exercise goals should be somewhat challenging but within your capabilities and aligned with your goals
<b>Timely</b> – The exercise goals should be accomplished within a specific time period



SMART goals will typically include frequency, intensity, time, and type of activity you will be doing for exercise. Writing down your goals and logging the exercise you are doing to meet those goals is a great way to monitor your progress, keep yourself accountable, and also identify barriers to exercise. When it comes to exercise, be sure to have a concrete plan of action. Just telling yourself you will do some type of exercise whenever you have the time or whenever you feel like it will likely not get you very far. Therefore, the following questions may be helpful for you:

- ✓ What type of exercise will you do?
- ✓ What time of day will you exercise (before work, during lunch, after work)?
- ✓ Where will you exercise (home, gym, outside)?
- ✓ With whom will you exercise (by yourself, with a friend, with a spouse or children)?
- ✓ How long will you exercise (30 min., 45 min., 60 min.)?

Ultimately, it is important to find what works for you. It is encouraged to keep exercise simple, especially when first starting out, but most importantly keep exercise consistent in order to experience all of the benefits that regular exercise can offer you.

## Barriers to Exercise

Throughout your journey of losing weight, keeping it off, and maintaining a healthier lifestyle, it is important to recognize possible barriers that could limit your success of maintaining a regular exercise program. First, it is essential to realize that an individual approach to exercise is necessary. In other words, what works for one individual may not work for another. Regarding exercise, common barriers include time, physical

limitations, cost of a gym membership, and lack of motivation. Research shows that there has been increased interest in exercise as a means for improving health, daily functioning, and quality of life.

There are various factors that may play a role in influencing an individual's participation in a regular exercise program. Maintaining a regular exercise program is therefore a challenge that requires creativity, patience, and planning.

It may be helpful to ask yourself the following questions when it comes to your exercise program:

- What will get in the way?
- What might help me overcome that barrier?
- What, if anything, helped in the past?
- What is my specific plan?
- What have others done that has been successful?

As always, if you need help with any aspect of your exercise plan, please reach out to your exercise physiologist.

## Joining a gym

Having a membership to a fitness facility is not required and is not a necessity when it comes to developing an individualized exercise program. The exercise physiologist can help you put together a structured home exercise plan if you prefer. You can get an equally effective workout at home compared to a gym even though having a gym membership may provide you with additional options and types of exercise to choose from.

If you are thinking about joining a gym or community fitness center, below are some things to consider:

- **Shop around** – Visit several fitness facilities before making your decision. Take a tour and ask questions. Some facilities may even provide you with a trial membership.
- **Safety** – Is the staff qualified to handle any reasonable emergency situations? Is the facility clean and well maintained? Do they have an automated external defibrillator (AED) onsite?
- **Orientation** – Does the facility offer any type of screening method for the type of exercise you will be doing? Will staff set you up on a program and show you how to properly use the equipment?
- **Personnel** – Is the staff appropriately educated or certified? Is there sufficient staff at all times of the day? Is the staff helpful and friendly? Is the staff knowledgeable about your health conditions?
- **Types of programs** – Does the facility offer the programming, equipment, and classes in which you are interested?
- **Child care/Youth services** – If you have children, ask about the types of programs or care services available for kids.
- **Accommodations of special needs** – Ask questions in regards to any special needs you may have such as modifications of equipment, facilities, and programs.
- **Location convenience** – Is the facility in a location that will make it a convenience, instead of a hindrance, for you to get there on a regular basis?
- **Affordability** – Will the membership fee fit into your budget?

## Cross Training

Cross training involves incorporating multiple types of exercise and is a great way to add variety to your exercise program. For example, if you walk for exercise, try incorporating riding a bicycle or stationary bike along with swimming into your exercise routine. When incorporating more than one type of exercise in your program, be sure to emphasize exercises that you enjoy.

Additional benefits to cross training include:

- Preventing overuse injuries
- Preventing boredom
- Improves overall fitness level
- May help to break out of weight loss plateaus
- Keeping you motivated with various types of exercises to choose from

## Post Surgery Exercise Guidelines

Throughout the first 2 weeks following surgery, we want you to focus on simply moving your body. Listen to your body as you ease back into your exercise routine. Remember, your body is in recovery, and jumping back into too much exercise too soon will only prolong the recovery process. It is very important that you remain active and move your body regularly throughout the day as your risk for blood clotting increases the more you remain sedentary and inactive. Walking will probably be one of the easiest and most comfortable methods of remaining active after surgery. Depending on your preoperative exercise routine, you may choose to ease back into other forms of cardio exercise as well. An exercise physiologist will meet with you 4 months following surgery. If you have questions or concerns prior to that time, please do not hesitate to contact us.

Following are specific exercise guidelines within 2 weeks after surgery:

- Walk regularly throughout the day, such as every 2-4 hours, for at least 10-15 minutes at a time (this includes your stay in the hospital immediately following surgery).
- Think about where you might do some light walking such as around the house, outside, on a treadmill, or at the mall.
- Do NOT lift more than 30 lbs. and do NOT use swimming pool/hot tub facilities until you have been cleared by the surgeon as your incisions need to fully heal. Typically, you will be cleared at your 2-week follow-up appointment.
- If you have any questions, please contact the exercise physiologists in the Healthy Weight Management Fitness Center at 717-544-3881.

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## Support Groups

Lancaster General Health Physicians Healthy Weight & Bariatric Surgery sponsors a monthly support group meeting for patients considering surgery and for patients who have undergone weight loss surgery.

Support groups are held on the first Thursday of every month and are open to anyone. Family members and friends are also welcome to attend.

Support groups give patients a great opportunity to discuss personal or professional issues that arise from the illness of obesity and from surgery.

Despite the different weight loss operations available, there are many common issues which are relevant to almost every weight loss surgery patient or candidate. Having the chance to meet other people who have been through the same process or who are considering surgery can be very helpful.

Throughout the year, several support group meetings will have a guest speaker and specific topic presentations.

Please call Lancaster General Health Physicians Healthy Weight & Bariatric Surgery at 717-544-2935 for further information about support group times and locations.

# FAQs

## *Frequently Asked Questions*

### **What is “Bariatrics”?**

Bariatrics is the field of medicine offering treatment for people who are overweight. A complete bariatric treatment program includes nutrition, exercise and lifestyle changes. Medications, such as appetite suppressants, and weight loss surgery may also be recommended. The field of bariatric medicine includes research into the causes, prevention and treatment of being overweight.

### **Am I a candidate for weight loss surgery?**

A candidate for weight loss surgery would need to fit into one of the groups below:

- Have a body mass index (BMI) of 40 or more (calculate your BMI at [www.lancastergeneral.org/content/Bariatric](http://www.lancastergeneral.org/content/Bariatric))
- Be 100 pounds over ideal body weight, OR
- Have a BMI of 35 or greater with at least one major illness associated with obesity

A surgical candidate should also:

- Be between the ages of 18 – 65 years old
- Have failed to permanently lose weight in at least one documented weight control program
- Fully understand the risks and benefits of weight loss surgery
- Have stopped smoking prior to first visit
- Not have an underlying endocrine cause for severe obesity
- Be agreeable and committed to long-term follow-up

### **What is BMI?**

The BMI, or body mass index, is simply a height-to-weight ratio for measuring whether or not you have a weight illness. Candidates for weight loss surgery have a BMI of 40 or more and medical problems associated with being overweight. If you want to know your BMI, ask a member of our bariatric surgery team.

### **For what age range does Lancaster General Health Physicians Healthy Weight Management & Bariatric Surgery offer weight loss surgery?**

Lancaster General Health Physicians Healthy Weight Management & Bariatric Surgery is currently providing weight loss surgery for qualified individuals between the ages of 18 and 65.

### **What weight loss surgery procedure does Lancaster General Health Physicians Healthy Weight Management & Bariatric Surgery offer?**

Lancaster General Health Physicians Healthy Weight Management & Bariatric Surgery offers Roux en Y Gastric Bypass, the Adjustable Gastric Band and the Vertical Sleeve Gastrectomy using a laparoscopic approach. Your options for weight loss surgery will be discussed during an individual consultation with the surgeon.

### **What is the Vertical Sleeve Gastrectomy?**

The Vertical Sleeve Gastrectomy (“Sleeve”) is a laparoscopic weight loss surgical procedure that staples the stomach into a tube (gastric sleeve), roughly the size of a banana. It was originally designed for high risk patients, but it has now become accepted as an effective option for all weight loss surgery candidates. By removing the majority of the stomach, portion sizes and hunger between meals are greatly diminished.

### **How do I decide which surgery is best for me?**

Choosing which weight loss surgery is best for you is a personal decision. Your eating habits and overall health are important factors to consider when making your decision.

### **Who will perform my surgery?**

All the surgical weight loss procedures are performed by Dr. James Ku, Dr. Joseph McPhee, or Dr. Zachary Ichter.

### **What is laparoscopic surgery?**

Laparoscopic surgery is done through 4 to 6 half-inch incisions into the belly. The belly is inflated with a small amount of gas to create space for the surgeon to see. The surgeon sees into the belly cavity using a small video camera and special long instruments to perform the operation.

With an “open” surgery, the surgeon makes a large incision and operates directly on the stomach and bowel. The exact same operation can be done by the surgeon using either the laparoscope or open technique. The advantages of laparoscopic surgery include fewer complications, less pain and a shorter hospital stay.

### **Why aren’t all weight loss surgeries done laparoscopically?**

The first laparoscopic Roux en Y gastric bypass was done in 1994. Surgeons must have years of experience in laparoscopic techniques or recent fellowship training to develop the skill needed to perform the surgery safely. Not all bariatric surgeons have the specialized training necessary to perform laparoscopic weight loss surgery.

### **I was told I couldn’t have laparoscopic surgery, and I would have to have an “open” procedure. Is that true?**

For an experienced laparoscopic surgeon, there is no weight limit for laparoscopic surgery. Over 99% of patients are able to have their surgery performed laparoscopically.

### **What are the risks of weight loss surgery?**

The risks of weight loss surgery are similar to other surgical procedures. There are also early and late complications specific to each procedure. The risks associated with each procedure will be discussed with you before your surgery.

### **Will I need to receive blood with this surgery?**

Less than 5% of patients have bleeding problems with weight loss surgery. Most of the bleeding associated with surgery stops on its own and does not require a blood transfusion. Less than 1% of weight loss surgery patients receive a blood transfusion.

### **My religious beliefs do not allow me to receive any blood products. Will you still be able to operate on me?**

We respect the religious beliefs of all our patients. We often use alternatives to blood transfusion therapy. Any anemia, or low blood count, is corrected before your surgery.

**My primary care doctor doesn't believe in weight loss surgery and will not give me a referral letter. What can I do?**

Some doctors are fearful of weight loss surgery and how it was done 20 to 40 years ago. Your doctor may have cared for a patient who had a bad experience with weight loss surgery.

Patients now have access to experienced weight loss surgery teams that provide the support they need to be successful. These teams, which include experts in nutrition, exercise, and lifestyle change, have worked together to bring weight loss surgery out of the "Dark Ages."

**Will my insurance cover this surgery?**

Insurance coverage for weight loss surgery depends on your health insurance policy. You can call your human resources representative at work or your insurance company directly to find out the details of your coverage, including what weight loss procedures are covered. Some insurance plans specifically exclude weight loss surgery.

**If I don't have insurance coverage, can I pay for everything myself? How much do the surgeries cost?**

Some patients chose to pay out-of-pocket for their weight loss surgery. Make sure you have exhausted all of your insurance options or consider changing health plans before choosing to pay for the surgery yourself. At Lancaster General Health, an insurance specialist can discuss the costs of surgery with you and help you with your decision.

**What is sleep apnea? How do I know if I have it?**

About 70% of patients who qualify for weight loss surgery have some form of sleep apnea. People who have sleep apnea stop breathing during sleep. One or more breaths are missed

before the person starts to breath again. This cycle repeats itself many times during sleep. Sleep apnea is a serious medical condition, and many patients do not realize they have it. Excessive daytime sleepiness can be a symptom. Testing is performed before surgery to determine if you have sleep apnea and how severe it is. If you have sleep apnea, treatment is started before surgery.

**Why do I need to stop smoking before this surgery?**

Smoking is a destructive personal habit. Smokers who have general anesthesia have a higher rate of lung-related complications after surgery. Also, your risk of developing stomach ulcers is 10 times higher if you smoke after surgery. Weight loss surgery is an elective procedure offered to improve your health. All unhealthy habits must be avoided after surgery.

**How soon can my surgery be done?**

After consultation with the surgeon, it usually takes 3 to 6 months to get ready for the surgery. Meeting the insurance company's requirements for approval often takes the most time. Check with your insurance company as early as possible to find out what you need to receive coverage for your surgery.

**How long is the surgery?**

The length of the surgery depends on several factors. On average, a laparoscopic gastric bypass surgery takes 60 to 90 minutes. The laparoscopic vertical sleeve gastrectomy procedure averages 30 to 60 minutes.



**What happens to the bypassed stomach after a Roux en Y gastric bypass?**

No part of the stomach is removed during gastric bypass surgery. The portion of the stomach separated from the pouch still works normally, but it no longer receives food. As a result, stomach acid production declines. The bypassed portion of the stomach does not “shriveled up” or “die off” because the blood supply is unchanged. The stomach stays in the same position and drains digestive juices into the small intestine as it did before surgery.

**Can my family stay with me after the surgery?**

Yes. We typically limit each patient to one family member or close friend.

**How long will I need to be in the hospital?**

Barring any complications, patients are in the hospital for one day.

**Will someone need to take care of me after my surgery?**

After surgery, you will be able to take care of yourself completely.

**How often do I need to follow-up after surgery?**

Patients are seen 2 weeks and 4 weeks after surgery. They will also follow-up at 4, 8, 12 and 18 months. Then bi-annually for life.

**Who will be adjusting my medications after surgery?**

When you are discharged from the hospital, we provide you with a list of medications you are to take after surgery. We will send your medication list to your primary care doctor. Your primary care doctor will manage your medications while you lose weight. Do not stop or “self-adjust” medications without discussing your thoughts and concerns with your doctor first.

**Are there any activity restrictions after gastric bypass? Adjustable gastric band? Vertical sleeve gastrectomy?**

The activity restriction is the same for both procedures. You may not lift anything weighing over 30 pounds for two weeks. You may start walking, biking and becoming more active. However, you may not swim for two weeks.

**When can I return to work after surgery?**

The time to return to work is the same for all procedures. Depending on the requirements of their job, most patients could actually return to work a few days after surgery. We recommend you stay off work for at least 10 to 14 days after surgery. If indicated, we may allow you to remain home for up to 4 weeks after your surgical procedure.

**What do I tell other healthcare providers if I need emergency care or surgery in the future?**

Because weight loss surgery has become more common, most emergency care providers are familiar with caring for post-operative weight loss surgery patients. It is always best for you to let your healthcare providers know about your weight loss surgery. Some patients choose to wear a medical alert bracelet after surgery.

**Since I live far away from the hospital, what should I do if I need emergency care?**

What to do in case of emergency is something you should consider before coming here for surgery. If you live several hours from Lancaster General Health facilities, it may be wise for you to stay in the area until after your two week follow-up appointment. After the early post-operative period, emergencies can usually be handled or stabilized by a hospital close to your home.

**Is it safe to lose weight that quickly after surgery?**

The rate of weight loss after gastric bypass/sleeve surgery is as safe as weight loss after adjustable gastric band surgery. There is no evidence to suggest the slower weight loss seen with the adjustable gastric band is any gentler or easier on the body.

**How will I stop losing weight?**

After weight loss surgery, weight loss slows down for a variety of reasons. How well you stick with the recommended lifestyle changes is a big factor in how quickly you stop losing weight. Also, your body will adapt to the decreased food intake by becoming more efficient and adjusting its energy needs.

**Do people regain weight after weight loss surgery? All of their weight?**

Most patients will experience a rebound weight gain of 5 to 10% after weight loss surgery. This usually occurs when patients do not stick with the recommended lifestyle changes.

Patients can regain all of the weight they lost after surgery if they do not change their lifestyle. In addition, all of the medical problems related to being overweight can return.



### **Will I have more bowel movements after gastric bypass surgery?**

Once on regular food, 90% of surgery patients have no change in bowel movements. Some patients notice an improvement in bowel habits after surgery.

### **What is dumping?**

Dumping only occurs after gastric bypass surgery. It is the body's reaction to eating foods with a high fat or sugar content. Dumping usually occurs 30 to 60 minutes after eating and can cause nausea, vomiting, abdominal pain, heart pounding, headache, dizziness and diarrhea. A dumping episode can last 4 to 24 hours and rarely requires emergency care. Dumping can be a good tool for teaching patients to avoid unhealthy foods.

### **Will I ever be able to eat anything sweet after gastric bypass surgery?**

An "all or nothing" attitude towards sweets is not necessary after surgery. It is certainly possible to eat a bite or two of a sweet treat after surgery. However, "testing the waters" to find your sugar limit is not recommended. The fear of dumping is a powerful motivator and should not be tested.

### **Am I allowed to drink soda after surgery?**

Only diet drinks are recommended after weight loss surgery. Carbonation can cause discomfort after weight loss surgery and can contribute to nausea and vomiting. It is best to avoid carbonated beverages after surgery.

### **Can I drink alcohol after weight loss surgery?**

You should wait at least 6 months after surgery to begin consuming alcohol. Some studies suggest there is a lower tolerance to alcohol after gastric bypass surgery. Alcohol can also have a high calorie count. After surgery, you need to be careful of soft or liquid calories that can easily add up to slow weight loss or cause weight gain. Another concern about alcohol after weight loss surgery is the possibility of changing an addiction to food into an addiction to alcohol.

### **Do I have to give up caffeinated beverages forever?**

Caffeine can be an appetite stimulant and a diuretic. Until you can consume at least 64 ounces of fluid a day, it is best not to consume products with caffeine.

### **Will I ever be able to take capsules?**

Yes you can but if you have trouble swallowing them, check with your doctor or pharmacist to see if another form of the medication is available or if the contents of a capsule can be mixed with food. Initially after surgery, some people can have difficulty swallowing capsules.

### **I was told I can't take anti-inflammatory medicine after weight loss surgery. I have severe arthritis and need medicine to get around. What will I take if I can't take my medication?**

After Roux en Y gastric bypass, anti-inflammatory medicine increases the chance of developing an ulcer in your new pouch. Anti-inflammatory medications are not restricted after adjustable gastric band surgery. For Roux en Y patients with severe arthritis, Tylenol-based products are recommended. Mild narcotic pain relievers may also be prescribed. Even a modest weight loss may reduce or eliminate the need for medication to treat joint pain.

**I hate to exercise. Will that affect my weight loss after surgery?**

Most definitely! To lose weight you have to burn more calories than you eat. Becoming more active will widen the gap between energy eaten and energy burned. The wider the gap, the greater the weight loss. As you lose weight, physical activity becomes easier and the results become more apparent.

**Will I lose all of my hair? What can I do to prevent hair loss?**

People rarely lose all of their hair. Hair thinning can occur, but can be minimized by reaching your protein goal each and every day. The hair thinning process usually starts around 3 months after surgery and stops by 7th month. After 7 months, the hair starts to regrow. Taking your daily multi-vitamin is recommended.

**Will I need vitamin supplements for the rest of my life?**

Yes, nutritional supplements are required after weight loss surgery. You are eating less food and supplements help prevent nutritional deficiencies. Routine blood work is also necessary to monitor your nutritional status.

**Will my weight loss surgery affect future pregnancies?**

Weight loss surgery does not increase the chance of birth defects with future pregnancies. In fact, fertility increases for women after successful weight loss surgery. We recommend waiting 18 months before becoming pregnant.

Proper diet and nutritional supplements are necessary after weight loss surgery and when planning any pregnancy. It is best to plan any future pregnancies with your gynecologist and bariatric surgeon.

**How will this surgery affect me when I am older?**

Neither surgery has any negative impact on your body's natural aging process. In fact, losing weight at an earlier age helps improve your quality of life as you age.

**Will I need skin reduction surgery?**

About 15% of patients choose to have skin reduction surgery after weight loss has stopped. We recommend waiting two years after your original surgery before considering this option.

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# Resources

American College of Sports Medicine..... [www.acsm.org](http://www.acsm.org)

American Society for  
Metabolic and Bariatric Surgery..... [www.asmb.org](http://www.asmb.org)

National Institutes of Health..... [www.nih.gov](http://www.nih.gov)

Obesity Action Coalition..... [www.obesityaction.org](http://www.obesityaction.org)

Obesity Help..... [www.obesityhelp.com](http://www.obesityhelp.com)

The Obesity Society..... [www.naaso.org](http://www.naaso.org)