



## Nutrition After Bariatric Surgery

The UW Health Bariatric Surgery Nutrition Program is designed to help you get the nutrients you need into your new stomach pouch of very limited size. Our nutrition program is intended to help you reduce unpleasant side effects and make sure you safely realize the maximum benefit of having taken the major life-improving step of Bariatric or weight loss surgery. The following is a brief overview of what you can expect.

The **LAP-BAND® System** procedure ultimately works by restricting the amount of food that you can eat at one time. A small egg sized pouch of stomach is above the band itself. As we gradually increase the amount of fluid in your band, this pouch will empty more slowly while you eat, and after meals. When your pouch is full you should not be hungry, and you will not be able to eat anything more without discomfort. For at least the first 6 weeks after surgery your band will be empty. During this time you may not notice any difference in how much you can eat, unless you eat too quickly or do not chew thoroughly. The restricted feeling and difference in how much you can eat comes gradually over time as we fill the pouch every 6 weeks.

Unlike the LAP-BAND® System, after the **gastric bypass** procedure your pouch will be smallest and have the most restriction in the weeks after surgery. The initial size of the pouch is less than one ounce. As the new pouch heals it will expand to about 6-8 ounces (3/4 to one cup) by about 6 months after surgery. Because you will eat dramatically less immediately following surgery, and because you will not readily absorb all that you eat after this procedure, following the nutrition guidelines described below is very important for your health and safety.

Living with a bariatric surgery will require that you make some permanent changes in how, what, and why you eat. Failure to follow these guidelines may result in inadequate weight-loss and even cause weight regain over the years following surgery. Both surgical procedures provide a physical limitation to the amount of food you can eat; it is your responsibility to change what or why you choose to eat. It is important to evaluate the role food plays in your life and how you may use food to cope with stress, boredom, emotions, etc. You may need to develop new coping skills since after surgery you will no longer be able to use food to comfort or cope.

You are not  
in this alone.

BARIATRIC SPECIALISTS:  
SURGEONS  
REGISTERED DIETITIANS  
EXERCISE PHYSIOLOGISTS  
PHYSICAL THERAPISTS  
NURSES  
HEALTH PSYCHOLOGISTS  
SUPPORT GROUPS

## **Prior to Surgery**

You will attend a class taught by a registered dietitian three to four weeks prior to surgery. This class will include detailed information about the nutrition changes required after surgery and the 2 week liquid diet before surgery. It will also be important to visit the nutritionist at two to six weeks, three months, six months, one year after your surgery and annually thereafter.

As you prepare for surgery, it is important to remove caffeine, carbonation, beverages with calories (except milk), and alcohol from your diet to make the transition away from these things easier after surgery. You will also be encouraged to separate liquids from your meals, eat slowly and mindfully, and chew food thoroughly to practice these essential skills required after surgery.

Prior to surgery you will be required to follow a two week liquid diet. This liquid diet is designed to better prepare you for surgery by facilitating weight loss, reducing the size of the liver and preparing you for the post-operative diet.

## **After Surgery**

### **Step 1: Sugar-free Clear Liquids**

Immediately after surgery, if you feel well and nausea is not a problem, you will probably be allowed to begin your diet. The first meal you receive will be a sugar free clear liquid diet. Please do not use a straw to drink liquids.

The following are examples of the clear liquids you may receive:

- Sugar-free Popsicles
- Sugar-free Crystal Light
- Water
- Sugar-free Jello
- Sugar-free cranberry juice

### **Step 2: Pureed or Mushy Foods**

The portions will be small. Examples include:

- 1 oz. pureed meat
- ¼ cup pureed vegetables
- Sugar-free Carnation Instant Breakfast or other protein supplement

This diet will continue for 3-4 weeks after the LAP-BAND® procedure, 4 to 6 weeks after gastric bypass. It takes time for healing and the swelling to subside. It is very important that everything you eat during this interval has been blended to a smooth consistency (like applesauce) in order to minimize stress on your new stomach pouch.

Initially your new stomach pouch will hold only about an ounce at a time. In order to get all the nutrients that you need to be healthy during weight-loss, plan on eating small and frequent meals. At first you may feel that you are spending your whole day eating and drinking to accomplish this. Usually people develop a routine that relieves this feeling after the first few weeks.

### ***~Helpful Tips~***

- Sip your liquids and eat your meals very slowly.
  - Each small meal should take you 30 minutes or more and it will take 30 minutes to drink 4 ounces of liquid.
- It is important to chew foods—even pureed foods—very thoroughly.
- Focus on protein, protein, protein.
  - You need a minimum of 60 grams of protein each day.
  - Protein is very important to maintain health during rapid weight loss and to heal properly from surgery.
  - At least in the beginning, it will be essential to drink a high protein beverage to meet protein needs as it will be difficult to eat many protein sources.
- Drink at least 8 cups of water or other sugar-free, caffeine-free, alcohol-free, calorie-free liquids between meals every day (over the course of the whole day). It is important to separate liquids from your meals and drink only between meals.

### **Step 3: Healthy Eating for Life after a Bariatric Surgery Procedure**

- After successfully completing Step 2, you may introduce soft solid foods into your diet
- Continue to eat 3 small meals each day
- Add one solid food item per meal per day as tolerated
- All new foods should be soft, cooked or canned
- Chew well so food is nearly pureed by the time you swallow
- Your portions must continue to be small (1 cup or less per meal or snack)
- Continue a protein supplement between meals
- Examples of soft foods include cottage cheese, fish, eggs, well cooked vegetables, soft fruits.

### **Why is it important to separate liquids from meals?**

The reasons for this are:

1. You do not want to over expand the pouch
2. You do not want to rapidly wash the food out of the pouch

Separating liquids is a permanent, critical part of your weight loss success. Initially we ask you to separate them by 30 minutes, over time that will increase to 1 1/2 -2 hours after eating. This is important to allow expansion of the pouch on solid foods, thereby creating a sense of fullness with a small amount of food. You want the pouch to empty slowly in an effort to manage your hunger and maintain this sense of fullness on the small amount of food. If liquids are taken too soon after eating, it will liquefy the food and allow it to empty too quickly. This can cause a risk of dumping, hunger, and allow you to eat more food. This is often what leads to weight regain in the years after surgery.

Over the next 6-12 months, you will be able to eat most foods, just in small portions. It will take time and effort to reintroduce regular foods into your diet. You will need to start with soft, well chewed, easily digestible foods in small amounts.

The dietitian will work with you to make this transition while maintaining healthy eating goals.

**~Things to avoid permanently~**

- Do not drink with a straw. The reason to avoid drinking through a straw is that it may overfill your stomach with fluid and air.
- Limit beverages with alcohol. You will feel the effects of alcohol more severely and it is an unwanted source of calories. For those who have the gastric bypass, in the first eighteen months while you are rapidly losing weight, we recommend no alcohol. After that time, it is not advisable but small amounts of alcohol may be used. You should never drive with any alcohol in your system as you will be more impaired than you realize.
- Avoid or limit caffeine. Caffeine can impair iron absorption and lead to dehydration.
- Avoid carbonated beverages. The carbonation may lead to unpleasant side effects and will also fill your pouch with air.

**Supplements**

You will need to begin your supplements when you begin the liquid diet before surgery. These are very important because of the radical change in your diet. If you had gastric bypass, you won't absorb some vitamins and minerals as efficiently as you used to. Specifically, we recommend each of the following:

**After the Gastric Bypass Procedure**

- Chewable multivitamin, 2 per day
- Calcium, 1,200 – 1,500 mg daily as calcium citrate
- Vitamin B12 supplement – 500 mcg per day
- Vitamin B-Complex or B-50 once a day
- Iron – for menstruating women or history of anemia

*Iron and calcium must be taken about four hours apart*

**After the LAP-BAND® System Procedure**

- Chewable multivitamin, 1 per day
- Calcium, 1,000 mg daily as calcium citrate
- Vitamin B-Complex or B-50 once a day

*Iron and calcium must be taken about four hours apart*

## ~Some Problems You May Encounter~

### **Both Gastric Bypass and LAP-BAND® Procedures**

#### **Vomiting/Nausea**

There are many reasons patients may vomit after surgery. These include:

- Eating too fast
- Not chewing food well enough
- Eating after your pouch is full
- Laying down too soon after eating
- Drinking fluids with meals

### **Gastric Bypass**

#### **Dumping Syndrome**

Symptoms of dumping syndrome may include abdominal cramping, cold sweats, light-headedness, nausea and diarrhea. Eating foods high in sugar, eating foods high in fat, eating too much food, or eating too fast causes this set of symptoms. Before your gastric bypass surgery, food was gradually released in small amounts from your stomach and into your small intestine. Undigested food can “dump” into your small intestine after quickly passing through your small newly-created gastric pouch. Consuming very large food molecules (like sugar) in your small intestine leads to the symptoms experienced in dumping syndrome. Symptoms of the dumping syndrome typically occur about 15 minutes after eating. ***To avoid the dumping syndrome; stay away from concentrated sweets, use a sugar substitute, and dilute fruit juice with water.***

#### **Stenosis**

In some patients, the new connection between the stomach pouch and the small intestine scars as it heals. In 5 percent of cases, this connection scars to such a degree that the patient is unable to empty food from the stomach pouch and into the small intestine. This is called stenosis of the gastrojejunostomy. These patients will find that they are unable to tolerate even liquids without vomiting. Most of the time these patients do well for the first few weeks after surgery and the stenosis symptoms are typically experienced 4 to 8 weeks after surgery.

#### **Lactose Intolerance**

Some patients, mostly after gastric bypass, will develop a lactose intolerance (unable to tolerate milk and milk products without unpleasant side-effects) after surgery. The symptoms are bloating, gas and abdominal cramping after drinking milk or eating milk products. You may become lactose intolerant even if you weren't before surgery.

If you have any questions or need more information, please contact the UW Health Bariatric Surgery Program Nutritionist at 608-265-7090.