

LAPAROSCOPIC GASTRIC BANDING DIET

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Before Your Surgery

30 days before surgery: Stop taking hormones, both birth control and hormone replacement.

21 Days (three weeks) before surgery: Start taking daily: a multiple vitamin, a B complex vitamin, and an iron supplement (325mg ferrous sulfate or 65mg elemental iron). Discuss any blood thinning medications with your pre-op coordinator. You may need to make changes in what you take one-two weeks before surgery.

14 Days (two weeks) before surgery: Stop taking all herbal medications and supplements. Stop taking all anti-inflammatory medication such as aspirin, Excedrin, Aleve, Nuprin, Advil, Motrin, and ibuprofen.

If you have not already stopped drinking caffeinated drinks such as coffee, tea and soda, start weaning off them at this point. (It takes 10-14 days to detox from caffeine.)

1 day before surgery: The day before surgery your diet will consist of clear liquids only. The clear liquid diet consists of foods that are clear and liquid or become liquid at room temperature. You can eat the allowed food items without limit all day up until 12:00 midnight.

Allowed liquids include:

- Water
- Clear broth (low sodium if you have hypertension)
- Clear juices (apple, cranberry & grape)
- Fruit flavored drinks
- Plain/flavored gelatins
- Smooth fruit ices or popsicles
- Decaf coffee, tea or coffee substitute

If you have diabetes, make sure you take in enough carbohydrates in your clear liquids for your insulin/medication usage.

Do not take your iron supplement. You will resume taking it three weeks after surgery.

Day of surgery:

Do **not** take any diabetic medication.

Take all other prescribed medications--with as little water as necessary to swallow them.

After Your Surgery

You will begin on an IV. At some point the doctor or nurse will authorize sipping approved liquids. **(Do not use a straw even if you are provided with one.)**

You'll start with one ounce of liquid that you can sip slowly over a 15 minute period. **(1 ounce (oz) = 2 Tablespoons = 30 ml)**

With medical approval, you can sip at a faster rate—but no more than one sip every five minutes.

Keep the one ounce cups provided so that the nurses can measure your rate of intake.

You will be offered a variety of liquid foods. Try only one at a time and no more than three different foods during the day. Examples of possible foods include diet cranberry juice, apple juice, fortified-protein gelatins/drinks, protein supplement drinks, etc.

Even if it is uncomfortable to get up and down, the more you walk, the more quickly you will feel better.

Diet Progression

After surgery, you will gradually introduce liquids and then food into your diet. There are three stages that are described on pages 7 to 10. Unless your doctor tells you differently, the timing of the stages is as follows:

Stage 1: Liquids (First week)

Count from the day of surgery:

Sample	Start: <u>9/1</u>	To: <u>9/8</u>	(1 week)
Yours	Start: _____	To: _____	(1 week)

In this stage, you sip water, other unsweetened liquids, and protein drinks throughout the day. (See page 7 for more details.) To stay hydrated it is important to drink at least 64 ounces of liquid—one sip at a time. Begin by sipping 1 ounce over a five minute period. When able, take up to 1 ounce sips, but wait at least **5 minutes between sips**. (1 ounce (oz) = 2 Tablespoons = 30 ml)

Stage 2: Puréed/Soft Foods Stage (Second week)

Sample	Start: <u>9/9</u>	To: <u>9/16</u>	(1 week)
Yours	Start: _____	To: _____	(1 week)

In this stage, you gradually introduce puréed or soft foods. (See page 8 for more details.) It is best to plan specific meal times for these foods and to continue sipping liquids in between meals. Remember to **wait 5 minutes** between sips. **Stop sipping 30 minutes** before you begin a meal, depending on comfort level.

During a meal, do not drink. Take a **bite** no more often than once every **5 minutes**. At first these meals may be as small as ¼ cup. It is important for you to stop eating when you feel full. **Never force** food past fullness.

When you have finished your meal, **wait 30 minutes before taking your first sip** of liquid. Continue to sip liquids, no more often than once every 5 minutes, until it is time to stop sipping in preparation for the next meal.

Stage 3: Solid Stage (Beginning third week after surgery)

Sample	Start: <u>9/17</u>
Yours	Start: _____

In this stage you gradually introduce solid foods. (See pages 9-10 for more details.) Continue to plan specific meal times and sip liquids in between meals, no more often than once every 5 minutes. **Stop sipping 30 minutes before** you begin a meal.

During a meal, do not drink. Take a **bite** no more often than once every **10 minutes** if you are eating solid foods; once every **5 minutes** for puréed or soft foods. It is important for you to stop eating when you feel full. Never force food past fullness.

When you have finished your meal, **wait 30 minutes before taking your first sip** of liquid, depending on comfort. Continue to sip liquids, no more often than once every 5 minutes, until it is time to stop sipping in preparation for the next meal.

Summary of Guidelines

Surgery can increase your chances of successful weight loss and maintenance—and therefore improve your health and quality of life. But your long-term success will depend on what you do to support your surgery. The following chart summarizes some of the things your doctor wants you to do to support your health and success—and what could happen if you don't.

Guideline	Reasons
Take the recommended vitamins /supplements . (See pages 7 & 8 for details.) Get your blood checked at least annually to make sure you are getting all the nutrients necessary for your good health.	Because you are eating so little you are not getting enough of certain vitamins from your food. (Bypass patients, in addition, are not absorbing all of the vitamins in their food.) Vitamin deficiencies can lead to severe, permanent health problems, such as anemia, bone loss, and nerve damage.
Follow your doctor's directions about when to start drinking and eating after your surgery, as well as what types of liquids/foods you take in.	Your body is healing. If you don't proceed slowly enough, you can cause leaks or staple disruption. These, in turn, can be life threatening.
Wait at least 5 minutes between sips of liquid or bites of soft foods (like yogurt) and at least 10 minutes between bites of more dense foods (like chicken).	Drinking or eating too quickly leads to stretching the small stomach pouch and/or the opening between the pouch and the intestine. Over time, this type of stretching can cause a permanent increase in size—which will lead to weight gain.
Take small bites of food and chew to the consistency of baby applesauce or mashed potatoes before swallowing.	Your saliva begins the digestive process. If you swallow food that is not thoroughly chewed, it can act like a plug, blocking the food from progressing through your system. This is likely to be very uncomfortable and could cause stretching of the stomach pouch and/or the esophagus.
Eat and drink separately. Wait a minimum of 30 minutes before eating after drinking and after eating before drinking.	Eating and drinking together may result in the food swelling and stretching the stomach pouch. Drinking too close to eating (before or after) can also result in discomfort, dumping, and/or stretching.
Eat small amounts of healthy foods (1/4 cup initially, gradually increasing up to about 1 cup) three to six times a day. It is best to eat at the same times each day and to avoid getting overly hungry .	You can't eat very much so it is important you make healthy food choices. Dietary deficiencies can lead to poor health. Also, if you don't eat regularly you are likely to get overly hungry and eat too much, too fast—which can lead to discomfort and stretching, which will lead to weight gain.

Summary of Guidelines, continued

Guideline	Reasons
Introduce foods one at a time .	You are learning your body's tolerances after surgery. If you have two new foods at once and don't feel well, how will you know whether the problem was caused by one or the other of the foods—or the combination?
Choose low-calorie, unsweetened beverages .	Always check the labels. You may be surprised at how much sugar and calories many beverages have, including fruit juice. In general, after surgery you should avoid beverages with calories, except for protein supplements and non-fat milk.
Avoid high-calorie foods and beverages (sugars and fats).	These foods interfere with weight loss, increase hunger, and could result in the "dumping syndrome." This syndrome includes such symptoms as rapid heartbeat, cold sweats, light-headedness feeling weak, nausea and/or diarrhea. You may experience one or more of these symptoms—at different intensities.
Limit starchy foods .	Breads, rice, pasta, tortillas etc. can combine with the moistness in the stomach pouch and swell to the point of discomfort and stretching the pouch. They may also fill you up, interfering with your ability to get the nutrition you need from protein and vegetables
Avoid foods that are high in fiber ..	Foods like asparagus and celery have stringy fiber that can cause blockages.
Avoid NSAIDS nicotine, caffeine, acidic, and spicy hot foods/beverages.	These substances can irritate the lining of the small stomach pouch and increase the risk of ulcers and strictures. Caffeine also depletes calcium and may stimulate appetite.
Avoid carbonation .	Carbonation is a gas and expands—so it can stretch your stomach pouch. It also depletes calcium.
Limit alcohol	Your tolerance for alcohol is decreased and puts you more at risk for poor decisions and for damage to your liver. You may be more susceptible to becoming a problem drinker.
Do not chew gum or use straws .	Both practices result in swallowing extra air. Gum, if accidentally swallowed, can cause blockages. Drinking through a straw may cause larger sips than are desired.

Stage 1: Liquid Stage (First Week)

SUPPLEMENTS

Calcium 1000-2000 mg daily
Vitamin D 800-1000 mg daily (Okay to combine with *or* take separately from Calcium.)

LIQUIDS

The goal during these first weeks is to take in **at least 64 ounces (8 cups) of liquid**, including **60-120 grams of protein**. Given how small your stomach is and the fact that it will be swollen for some time after surgery, this can be difficult. Do the best you can, sipping no more often than **once every five minutes**. **Do not force** intake beyond comfort.

Avoid caffeine, carbonation, high-calorie liquids, and acidic liquids (like orange or tomato juice, coffee or tea).

Type of Food	Some Good Choices
Protein <i>Choose supplements that are high in protein and relatively low in carbohydrates and fat</i>	Low-carb, low-fat protein drinks, e.g., Isopure®, Premier Protein®, Pure Protein®, Protein Blasts®, Unjury®, Pro-Stat®, ProCel® Nonfat dry milk powder Flavorless protein (e.g., whey protein) powder to mix into other foods
Milk & Dairy	Nonfat or 1% milk or Lactaid® Unsweetened soy milk Sugar-free, nonfat pudding Nonfat, low carb yogurt or plain Kefir
Modified Solids <i>Made soupy, the consistency of strained soup</i>	Cream of Wheat® Cream of Rice® Malt-o-Meal® Reduced Fat Cream Soups (strained) Broth soups (strained)
Other Sugar free Liquids	Crystal Light (no tea) Diet Juice, Kool-Aid Herbal tea (100% tea-leaf free) Gelatin Popsicles

Stage 2: Puréed/Soft Food Stage (Second Week)

SUPPLEMENTS

Continue taking your Calcium and Vitamin D

PURÉED FOODS (ADD to foods used in Stage 1)

The goals during these three weeks are to take in **at least 64 ounces (8 cups) of liquid** and **60-120 grams of protein**. Given how small your stomach is and the fact that it may still be swollen, this can be difficult. Do the best you can, taking in food or liquid no more often than **once every five minutes**. **Do not force** intake beyond comfort. Limit each meal to ¼ cup or 4 level tablespoons.

<i>Additional Foods</i>	<i>Some Good Choices</i>
Protein	Eggs Soft Tofu
Milk & Dairy	Greek or nonfat, low-carbohydrate yogurt; plain Kefir Cottage Cheese Other soft cheeses Sugar-free, nonfat pudding or custard
Modified Solids (<i>normal consistency</i>)	Cream of Wheat Cream of Rice Malt-o-Meal Reduced Fat Cream Soups (purée “chunks”) Broth soups (purée “chunks”) Low-fat chili Non-fat “refried” beans Puréed tuna or chicken salad Puréed soft-cooked, non-gassy vegetables Unsweetened applesauce or puréed soft fruit (no seeds or skins)

Stage 3: Soft to Regular Foods (Starting the Third Week)

SUPPLEMENTS

In addition to the Calcium and Vitamin D you've been taking, **add a daily**

Multi-vitamin/mineral
(comparable to a Centrum A-Z)

You can take in liquid, chewable, or pill form.
If a pill is a little too large, you can break it and
take the pieces in a little yogurt or applesauce

B Complex

Continue taking all vitamin/supplements forever unless a doctor tells you to make changes.

SOFT to REGULAR FOODS (ADD to foods used in Stages 1 & 2)

The goals during this stage are to continue taking in enough liquid (at least 64 ounces) and protein as you gradually develop a way of eating that will support your weight-loss, fit into your lifestyle, and satisfy your taste and texture preferences. To protect the size of your new, small stomach continue to wait **at least 5 minutes** between sips or bites of soft foods and **10 minutes** between bites of more dense foods, e.g., chicken or beef. **Do not force** intake beyond comfort.

Protein needs are individual. Experts on obesity and obesity surgery recommend higher levels of protein while losing weight or maintaining significant weight loss. (See page 11 for more information on protein.) As you develop your new lifestyle, experiment with different levels of protein and see how your energy, stamina, and hunger are affected with different protein intake. Your size, amount of muscle, and amount of physical activity are likely to affect how much protein you need.

See the **chart on the next page** for some suggestions about foods you may want to begin adding at this time, as well as some foods that are best to avoid or minimize as you work toward your health and weight goals. Remember to try **only one new food** at a time.

Additional Foods	Some Good Choices	Foods to Avoid/Minimize
Protein (<i>broiled, baked, grilled, or steamed</i>)	Chicken, turkey, fish, lean pork or ham Lean beef: tender cut or hamburger Eggs, tofu	High-fat meats Fried foods
Milk & Dairy	Nonfat or 1% milk or Lactaid Unsweetened soy or rice milk Greek or nonfat, low-carbohydrate yogurt, plain Kefir Cottage Cheese, other low-fat cheeses Sugar-free, nonfat pudding or custard	Whole or 2% milk Ice cream, milkshakes Sweetened frozen desserts Regular hot chocolate, lattes or flavored coffee drinks
Vegetable	Soft, cooked vegetables Green beans Squash Spinach Lettuce	Gas-forming foods—unless they don't bother you. (<i>broccoli, cauliflower, brussel sprouts, cabbage, onions, cucumbers, raw vegetables</i>) Your tolerance may increase over time. Celery and asparagus—unless cut into very small pieces
Fruit	Fresh fruit Unsweetened frozen or packaged fruit	Canned fruit in sweet syrup Fruit juices
Starches	Yellow squash Potatoes or yams Whole grain crackers	Sweets, breads, rice, pasta, tortillas Popcorn, French Fries Sweetened cereals or granola bars
Fats	Olive or canola oil Low fat salad dressing, nut butters Small portions of avocado, nuts	Solid fats Large portions of any fat
Beverages	Water Decaffeinated tea or coffee Non-carbonated, sugar-free drinks	Caffeinated, carbonated, or sweetened beverages Fruit juices, smoothies Alcohol
Other	Low-fat soups Sugar substitutes	Sugar, honey

After Adjustments

Each time your band is adjusted, you will need to return to the Stage 1 Liquid diet for 24 hours before resuming your pre-adjustment diet.

Information On Protein

There are many factors that affect the amount of protein that will most beneficial for an individual. Studies report that a relatively high-level of protein intake is desirable during weight loss as protein tends to help you feel full, improves your body composition (fat:lean ratio), and increases your metabolism. Dietitians usually estimate the minimum amount of protein a person needs according to one of several formulas based on height. One commonly used formula for protein intake during weight loss is shown below and you can use it to find the minimum amount of protein intake suggested as you lose weight. Many successful patients report they feel and do best when they take in *100 or more* grams of protein a day.

Minimum Daily Protein During Weight Loss

Females:

$$\begin{aligned} & \text{_____ Inches in height } \mathbf{over} \text{ 5 feet} \\ \times 5 = & \text{_____} \\ + 100 = & \text{_____} \div 2.2 = \text{_____} \times 1.2 = \text{_____} \\ & \text{Minimum Grams of Protein} \end{aligned}$$

Example if 5'4" tall female:

$$\begin{aligned} & \text{_____ } 4 \text{ _____ Inches in height } \mathbf{over} \text{ 5 feet} \\ \times 5 = & \text{_____ } 20 \text{ _____} \\ + 100 = & \text{_____ } 120 \text{ _____} \div 2.2 = \text{_____ } 54.54 \text{ _____} \times 1.2 = \text{_____ } 65.45 \text{ _____} \\ & \text{Minimum Grams of Protein} \end{aligned}$$

Males:

$$\begin{aligned} & \text{_____ Inches in height } \mathbf{over} \text{ 5 feet} \\ \times 6 = & \text{_____} \\ + 106 = & \text{_____} \div 2.2 = \text{_____} \times 1.2 = \text{_____} \\ & \text{Minimum Grams of Protein} \end{aligned}$$

Example if 5'10" tall male:

$$\begin{aligned} & \text{_____ } 10 \text{ _____ Inches in height } \mathbf{over} \text{ 5 feet} \\ \times 6 = & \text{_____ } 60 \text{ _____} \\ + 106 = & \text{_____ } 166 \text{ _____} \div 2.2 = \text{_____ } 75.45 \text{ _____} \times 1.2 = \text{_____ } 90.54 \text{ _____} \\ & \text{Minimum Grams of Protein} \end{aligned}$$

Experiment with different levels of protein. Your first goal is to get at least the minimum amount of protein for your weight. If you have difficulty tolerating protein supplements, this may take some time. **Do not force** intake beyond comfort. Take in more protein if it helps you lose/maintain weight, feel better, stay full longer, and/or have fewer cravings for sweets.¹ During maintenance some people will feel better at lower levels of protein. Trial and error is probably the best way to determine your optimal level of protein. If you have difficulty, consult with a dietitian knowledgeable about weight-loss surgery.

To figure out how much protein different foods have you can look at food labels (see page 12) and/or look up protein amounts in books or on the internet. Many different books provide nutritional information, including grams of protein per serving. You can find these books in the library or any bookstore. There are free websites that provide nutritional information and/or calculate how much protein you're getting based on your description of what you eat. An example is www.fitday.com.

¹ While it is theoretically possible to take in too much protein, it is very unlikely that you will do so after surgery unless you have certain, specific health problems that protein intake can affect, e.g., kidney disease. If you have such problems, your doctor should advise you about protein intake.

Information On Sweeteners

AVOID/LIMIT SUGARS

You can avoid the problem of dumping by not consuming sweets, candies, or other sweetened foods and beverages. Certain high-fat foods, such as salad dressings, barbecue sauces, and mayonnaise may also cause problems.

“Sugars” include: White sugar, brown sugar, honey, corn sweetener, corn syrup, maple sugar, molasses, raw sugar, sucrose, and turbinado sugar.

Lactose (in dairy products), **maltose** (in breads) and **fructose** (in fruit or used to sweeten packaged foods) may be used in limited amounts. If they cause you discomfort, discontinue use.

SWEETENERS THAT YOU MAY USE

Sorbitol – Mannitol – Xylitol (use with caution – potential laxative effect)

The sweeteners Sorbitol, Mannitol, and Xylitol are sugar alcohols. They may cause diarrhea. Found in sugar-free mints and hard candies.

Aspartame

Aspartame is marketed under the label NutraSweet®, Equal®, and Natrataste®. It is very sweet (180 to 220 times that of table sugar). Because it loses its sweetness when heated, aspartame is effective only in foods that do not require cooking or baking.

Acesulfame-K

This sweetener is marketed as Sunette® and Sweet One®. It does not break down at high temperatures and so can be used in cooking and baking.

Saccharin

Known as Sweet-n-Low®, saccharin and is 300 times as sweet as sugar. It breaks down at high temperatures.

Sucralose

Sucralose is marketed as Splenda®. It does not break down at high temperatures and can be used in cooking and baking. Some people who are lactose intolerant may experience similar symptoms with Sucralose.

Stevia

Stevia is extremely sweet and only a few grains are needed to flavor a food or beverage.

Food Labels

Eat Right

(Adapted from the American Dietetic Association Tip Sheet)

Become a smart shopper by reading food labels to find out more about the foods you eat. The Nutrition Facts panel found on most food labels will help you:

- Find out which foods are good sources of protein, fiber, calcium, etc.
- Compare the calories and nutrients in similar foods to find out which is better for you.
- Search for low-sodium foods
- Look for foods that are low in saturated fat and trans fats

Start with the Serving Size

- Look here for both the serving size (the amount for one serving), and the number of servings in the package.
- Remember to check your portion size to the serving size listed on the label. If the label serving size is one cup, and you eat two cups, you are getting twice the calories, fat and other nutrients listed on the label.

Notice the **Calories** per serving

Also look at the total fat, carbohydrate, and protein per serving:

- **Fats** — Total fat includes saturated (including trans fat), polyunsaturated and monounsaturated fat. Saturated fat and trans fat are linked to an increased risk of heart disease.
- **Carbohydrates** — There are three types of carbohydrates: sugars, starches and fiber. The healthiest include whole-grains, fruits and vegetables. Simple carbohydrates or sugars occur naturally in foods such as fruit juice (fructose), or come from refined sources such as table sugar (sucrose) or corn syrup.
- **Proteins** — Proteins are found in meats, poultry, fish, dairy products and legumes. (See page ___ for more information.)

Check the **Ingredient List**

Foods with more than one ingredient must have an ingredient list on the label. Ingredients are listed next to the Nutrition Facts label. Ingredients are listed in descending order by weight. Those in the largest amounts are listed first.

Nutrition Facts			
Serving Size 1 cup (228g)			
Servings Per Container 2			
Amount Per Serving			
Calories 250	Calories from Fat 110		
% Daily Value*			
Total Fat 12g	18%		
Saturated Fat 3g	15%		
Trans Fat 1.5g			
Cholesterol 30mg	10%		
Sodium 470mg	20%		
Total Carbohydrate 31g	10%		
Dietary Fiber 0g	0%		
Sugars 5g			
Protein 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

What Claims on Food Labels Really Mean

FDA has strict guidelines on how certain food label terms can be used. Some of the most common claims seen on food packages:

- Low calorie — Less than 40 calories per serving.
- Low cholesterol — Less than 20 mg of cholesterol and 2 gm or less of saturated fat per serving.
- Reduced — 25% less of the specified nutrient or calories than the usual product.
- Good source of — Provides at least 10% of the DV of a particular vitamin or nutrient per serving.
- Calorie free — Less than 5 calories per serving.
- Fat free / sugar free — Less than ½ gram of fat or sugar per serving.
- Low sodium — Less than 140 mg of sodium per serving.
- High in — Provides 20% or more of the Daily Value of a specified nutrient per serving.
- High fiber — 5 or more grams of fiber per serving.

(The *Eating Right* tip sheet is authored by registered dietitians on staff with the American Dietetic Association.)

Resources

There are many resources in books and online that can help you as you develop a healthy, successful lifestyle. Some that patients have found helpful are:

Websites

Bariatriceating.com: Good recipes and tips from a veteran bypass patient

Eatright.org: Nutrition information

Fitday.com: Keep track of nutrition

FoodFit.com: recipes

FoodPicker.org: List of brand names for groceries and restaurant foods

NCES.com/catalog: Plate marked with portions

Livestrong.com: Keep track of nutrition

Obesityhelp.com: a good blog

Quickandhealthy.net: Meal Ideas

Sparkpeople.com: Meal ideas, adjust recipes to make healthier

Cookbooks

Before and After: Living and Eating Well After Weight Loss by Susan Maria Leach

Eating Well After Weight Loss Surgery by Pat Levine and Michele Bontempo-Saray

Weight Loss Surgery for Dummies by Marina S. Kurian, MD, FACS, Barbara Thompson, and Brian K. Davidson

References

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High Protein intake sustains weight maintenance after body weight loss in humans by MS Westerterp-Plantenga, MP Lejeune, I Mijs, M van Ooijen, and EM Kovacs *International Journal of Obesity and Related Metabolic Disorders*, 2004 Jan 28 (1):57-64.

2011 Manual of Clinical Nutrition Management Section B, B-16-30, Nutrition Management of Bariatric Surgery, Morrison Management Specialists.

Postprandial Thermogenesis Is Increased 100% on a High-Protein, Low-Fat Diet versus a High-Carbohydrate, Low-Fat Diet in Healthy, Young Women by Carol S. Johnston, PhD, FACN, Carol S. Day, MS and Pamela D. Swan, PhD. *Journal of the American College of Nutrition*, Vol. 21, No. 1, 55-61 (2002).

www.eatright.org – The American Dietetic Association.

www.webmd.com/diet/guide/high-protein-diet-weight-loss.