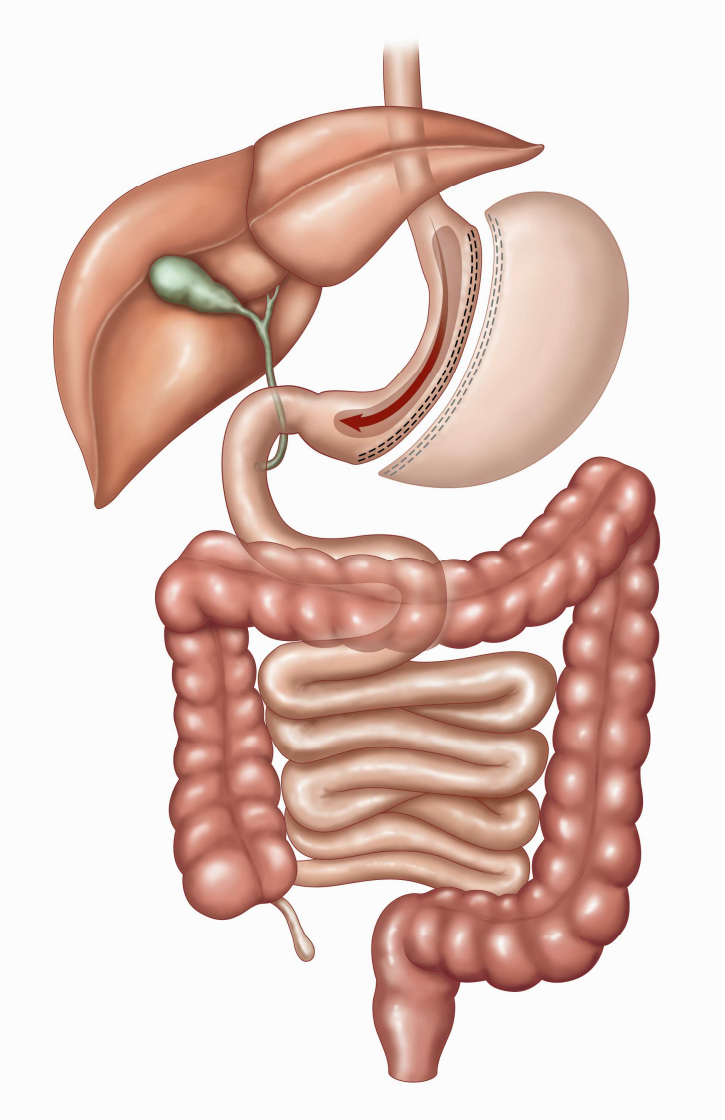
# Nutrition Guidelines for Sleeve Gastrectomy



Wellness Services

## NCA Surgical Weight Loss Program

Revised OCT 2009

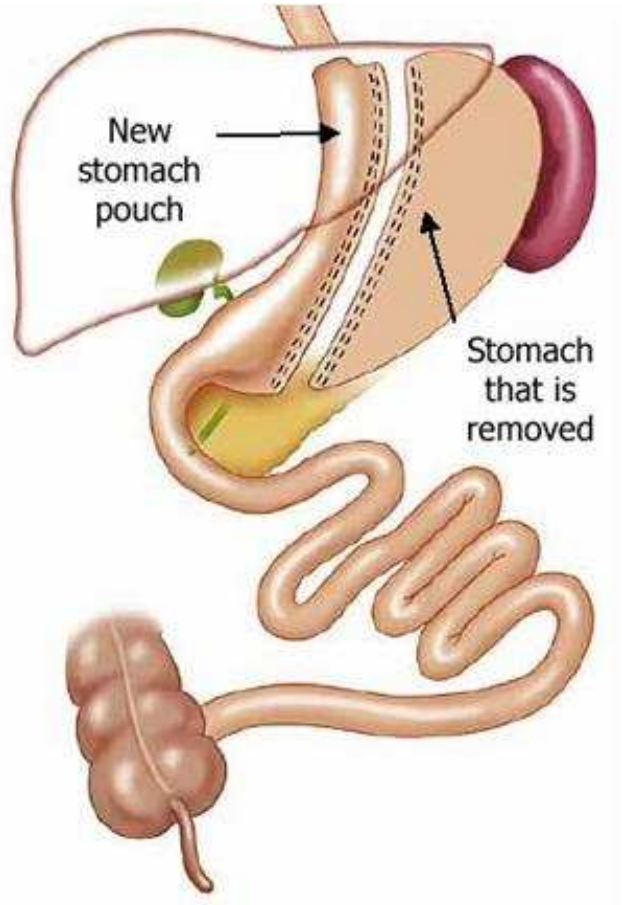
# Introduction

Gastric sleeve surgery is *not* a cure for obesity. It is simply a TOOL to help you begin your weight loss to improve your health. It will not make things simple. You will still have to rise to the challenge of choosing healthy foods. Even with surgery, it is possible to consume enough calories to prevent weight loss. Eating foods high in calories and sugar, constant snacking, or "grazing" throughout the day will result in unsuccessful weight loss or even weight gain.

**After the surgery you must drastically change your eating habits to achieve and maintain weight loss, avoid stomach pains, and maintain good nutrition.** This is why you should learn what changes are expected now to promote best outcomes.

Gastric sleeve surgery limits the quantity of food you can eat at any one time. Your new stomach sleeve will be approximately 20% the size of your former stomach and looks like a tube or a banana. The continuity of the GI tract is not interrupted as it is in gastric bypass, so the stomach's motility (digestive process) is intact. Initially, the amount of food you will be able to eat is about ¼ cup or less (2oz, 4 Tbsp, or 60cc), slowly progressing to approximately ½ cup (4oz, 8 Tbsp, or 120cc) at each meal, no more. Your goal is to work to acquire high quality nutrition in these small quantities. In the long term, you may be able to consume up to 1 cup (8oz) per meal, but you will still need to make wise food choices to preserve your nutrition and weight loss, consuming no more than 1,200 calories per day.

Following the guidelines in this booklet will help ensure that you are consuming a balanced diet. After your initial pre-surgery nutrition counseling sessions, quarterly follow up visits with the dietitian are strongly recommended.



# Guidelines for Successful Weight Loss

Prior to surgery, it is a good idea to start getting yourself prepared for the drastic nutrition and lifestyle changes that you will need to be following for ***the rest of your life***. By starting now to incorporate some of these healthy behaviors into your routine, you will have fewer changes to make following surgery and therefore will feel more comfortable and less overwhelmed.

## Prepare Your Home

Begin, by **cleaning out your cupboards and refrigerator of foods that are high in fat and sugar.** These will be items such as: sugar-coated cereals, cookies, candy, sweet granola bars, jelly, syrup, honey, potato chips, microwave popcorn, soda, ice cream, butter or margarine, regular condiments (sour cream, mayonnaise/ Miracle Whip, salad dressings, etc), regular or high fat dairy products (whole milk/Vitamin D and 2% milk, cheese, yogurt, 2% cottage cheese).

Instead, **fill your kitchen with foods that are good for you** and rich in vitamins and minerals that will work with your body to improve your overall health. In general, these are foods such as: fresh or frozen fruits and vegetables, whole-grain breads/English muffins/ rolls, brown rice, whole wheat pasta, oatmeal, unsweetened or high fiber cereals, extra-virgin olive oil or canola oil, natural peanut butter, nuts, chicken or turkey breast with no skin, fresh fish, shellfish, dried beans, low-fat or fat-free dairy products (skim/fat free milk, 1% milk, 1% cottage cheese, fat-free or 'light' yogurt, reduced-fat/part-skim cheese), heart-healthy spreads, butter sprays, non-stick cooking spray, sugar-free jams/jellies/preserves, sugar-free syrup.

Following surgery, **caffeinated and carbonated beverages are not allowed**, so start now by decreasing or eliminating your consumption of these beverages. Instead, choose beverages such as water, sugar-free flavored waters, sugar-free powdered mixes that can be added to water, decaf or herbal tea, and decaf coffee.

- ✓ **Eat 3 meals daily and limit unnecessary snacking between meals.**

  **Eat 3 meals each day**- spaced no more than 6 hours apart.

  **Eat breakfast!** Do not miss the first opportunity of the day to consume the nutrition you need and keep your metabolism on track.

  Since this surgery is a restrictive procedure, **the success of weight loss depends on what and how much you are eating.** Unhealthy snacking between meals (i.e. chips, cookies, crackers, etc) or eating frequently will prevent successful weight loss or cause weight gain due to excess calorie intake.

- ✓ **Eat slowly and chew you food until LIQUID.**

  **Chew your foods thoroughly**. Swallowing food in chunks may block openings and prevent food from passing. Not chewing properly can also cause pain, nausea, and vomiting. These side effects can be reduced if you:

  - Chew each bite of food 20 to 30 times to the consistency of applesauce. This lengthens meal time and you'll become full with less food.
  - Cut the food into very small bites.
  - Eat slowly, savor the flavors. Put your utensil down after each bite and wait one minute before taking another bite. It should take at least 30 minutes to finish a meal.

- Take 10-15 minutes to eat 1 ounce of food.
- Sit at the table to eat. Do not eat on the run or while watching TV, reading, working on the computer, etc. This way you are more conscious of what and how much you are eating.

**Use small, sectioned plates and bowls; try using a baby spoon.** These are more appropriate for the portion sizes that you will be eating.

## ✓ Avoid foods high in sugar.

**Diets high in sugar may cause weight gain.** Sugar is only providing empty calories.

**Sugar comes in many forms.** When trying to decide if a certain food is high in sugar, look at the ingredients listed on the label.

**Types and Names for Sugar** (If any of these items are in the first five ingredients, it will be too high in sugar for you to consume)**:**

| | |
|---|---|
| sucrose | dextrose |
| turbinado (or raw) sugar | fructose |
| high fructose corn syrup | honey |
| corn syrup | brown sugar |
| maple syrup | molasses |

**Replace sugar** in items and on your foods, with artificial sweeteners.

| **Generic Name** | **Brand Name** |
|---|---|
| Aspartame | Nutrasweet ®, Equal ® |
| Saccharin | Sweet-n-Low® |
| Sucralose | Splenda® |
| Stevia | Truvia®, PureVia® |
| Sugar Alcohols* | Sorbitol, Xylitol, Mannitol, Maltitol, Erythritol |

*Be aware that sugar alcohols are alternatives that may cause diarrhea and increased gas production. These are typically found in sugar-free candies or some protein bars.

## ✓ Limit high fat foods.

Low fat is **3 grams or less fat per serving** on a food label.

**Avoid any fried foods or foods that contain a coating or breading around them**. Bake, broil, steam, microwave, or grill foods, instead of frying, to reduce calories and reduce negative side effects from a high fat diet.

**Avoid high fat sauces** (gravies, cheese sauces, butter sauces, white/ cream or alfredo sauces, and cream soups), **high fat meats** (bologna, salami, pastrami, hot dogs, sausage, bacon, pepperoni, and most red meats)**, unhealthy snacks** (chips, etc)**, and sweets** (cakes, cookies, pastries, etc).

## ✓ Stop eating as soon as you are comfortably satisfied.

**Don't overeat.** Try to tell the difference between feeling no hunger and feeling full. You don't want to be full after having weight loss surgery. Overeating can cause nausea, vomiting, and the size of your stomach to stretch. Stop eating just before feeling full.

**Stop eating at the first sign of fullness.** Signs of fullness are:

- pressure or fullness centered below your rib cage
- nausea
- pain/discomfort in your shoulder area or upper chest

✓ **Make smart beverage choices and drink enough to prevent dehydration.**

**Eliminate carbonated beverages from your diet.** It causes too much gas. Even if you let a carbonated beverage sit until it is flat, when you drink it, the heat of your body will release more carbonation. So, it's simply a "no-no".

**Eliminate caffeine.** It irritates your stomach sleeve. It is also a diuretic, which means it makes you urinate and conflicts with your effort to stay hydrated.

**Eliminate high calorie drinks** such as milk shakes, regular soft drinks, sports drinks, juice, sweet tea, and alcoholic beverages from your diet. Beverages must be diet or sugar-free (**less than 10 calories per 8 oz serving**). Limit fat free milk to less than 16 oz per day.

**Do NOT use straws.** Straws can cause you to swallow a lot of air, which can cause gas.

**Sip on your beverages. No gulping!**

**Consume a total of 6-8 cups (48-64oz) of fluid daily,** by drinking small amounts of liquid (no more than 4 oz per hour initially), throughout the day.

**Increase fluid intake if** you experience any of the following: dark urine, headache, dizziness, lethargy, or a white coating on the tongue.

✓ **Avoid drinking and eating at the same time.**

**Drink *between* each meal, not with your meals.** Do not drink 30 minutes before or after your meals, and never drink during a meal. **Why?** Drinking before you eat will fill your sleeve with liquid and you will have no room for the nutritious food you need. Drinking after eating will wash the food out of your sleeve too quickly and you won't maintain feeling full, and will want to eat again too soon.

✓ **Choose what you eat wisely.**

**Start each meal with a protein source.** (See food guides) Eat the protein portion of your meal first, followed by vegetables, fruits, and then whole grain starches. ***Protein goal is 60-80 grams per day*.**

**Continue to select high fiber foods.** Considering you cannot consume as much as before surgery, your fiber goals are reduced. Strive for 10-12 grams fiber per day.

✓ **Exercise Regularly.**

Aim for at least 30 min 3 times per week. Schedule an appointment with the Exercise Therapist at WRAMC to get you started on an individualized exercise program.

✓ **Take vitamin and mineral supplements daily for the rest of your life.**

**Take a liquid or chewable multivitamin.** Make sure your multivitamin contains B12.
**Calcium citrate + Vitamin D.** Maximum 600mg calcium at one time for absorption.
Other vitamins or minerals as recommended based on your blood test results.

# *Pre-Op Surgery Diet Requirements*

Patients with severe obesity often have significant liver enlargement, which can make laparoscopic surgery difficult or impossible. This pre-op diet is designed to decrease the liver size and the amount of fatty tissue around the stomach to make laparoscopic surgery easier.

**Two weeks** before surgery, you will begin a full liquid diet. This will consist of low-carbohydrate, low-fat, high-protein supplements with a goal of 1000-1200 calories per day. *Strict adherence to this pre-operative diet is **mandatory**.*

- How much? Daily total calories ÷ calories/serving of protein supplement.
  Using the protein supplement label in Fig 1.1, one can has 170 calories.
  1000÷170=6, 1200÷170=7. So, 6-7 cans daily.
- Drink 48-64oz of water and/or sugar-free, caffeine-free, non-carbonated liquid (i.e. Crystal Light®).
- Drinks to AVOID: drinks with sugar (juices, Gatorade®, Kool-Aid®, Vitamin Water®), drinks with carbonation (sodas, including diet), drinks with caffeine (tea and coffee), and whole or 2% milk
- **Do NOT have a "Last Supper"! It will enlarge your liver and make surgery harder.**
- ATTENTION DIABETICS: carefully monitor your blood sugars and contact your PCM with questions/concerns. With a low carbohydrate intake, your meds may need adjusting.

**NO SOLIDS ALLOWED!**

Supplement guidelines:

***Women:*** 15-20 grams protein and no more than 5 grams carbohydrate per supplement serving

***Men:*** 20-30 grams protein and no more than 5 grams carbohydrate per supplement serving

There are many products with similar names, so the key is to ***ALWAYS check the label—Does it meet the guidelines?***

## Nutrition Facts

Serving Size: 1 Can (325ml)
Servings Per Container:

| **Amount per Serving** | | |
|---|---|---|
| **Calories** Total | 170 | |
| from Fat | 80 | |
| | | % Daily Value+ |
| **Total Fat** | 9 g | 14% |
| Saturated Fat | 2 g | 10% |
| **Cholesterol** | 15 mg | 5% |
| **Sodium** | 170 mg | 7% |
| **Potassium** | 680 mg | 19% |
| **Total Carbohydrate** | **5 g** | 2% |
| Dietary fiber | 4 g | 16% |
| Sugars | 1 g | |
| **Protein** | **20 g** | 40% |

- Supplements can be ready-to-drink or powders
- **Whey protein isolate** is better absorbed than whey protein concentrate (which contains lactose/milk sugar)

# Protein Supplements

| Product | Calories | Grams Protein (without milk) | Grams Carbohydrate | Price (may change) |
|---|---|---|---|---|
| Atkins Advantage® (1 carton, 11oz) | 150-160 (flavors vary) | 15 | 2-5 | $6.99 (4 cartons) |
| Carb Solutions Protein Shake Mix® (2 scoops) | 110-120 (flavors vary) | 20-21 | 3-5 | $15.99 (12 servings) |
| DesignerWhey® (1 scoop, 26g) | 100 | 18 | 3 | $17.59 (14 scoops) |
| EAS Myoplex Carb Sense® (1 pak) | 150-160 (flavors vary) | 25 | 5 | $49.99 (20 pks) |
| GNC Pro Performance Whey® (1 scoop, 28g) | 110-130 (flavors vary) | 20-21 | 2-5 | $26.99 (32 scoops) |
| Nature's Best Zero Carb Isopure® (2 scoops, 61g) | 210 | 50 | 0 | $68.99 (22 servings) |
| MuscleTech Nitro-Tech Whey® (1 scoop, 28.5g) | 110 | 20 | 3 | $44.99 (32 scoops) |
| Nature's Best Zero Carb Isopure® (1 bottle, 20oz) | 160 | 40 | 0 | $49.99 (12 bottles) |
| Protein Bullet Shot® (1 bottle, 2.8oz) | 134 | 42 | 0 | $35.99 (12 bottles) |
| Slim Fast Low- Carb® (1 can, 11oz) | 180-190 (flavors vary) | 20 | 4-6 | $6.99 (4 cans) |
| Smart Forme® Shake (1 carton, 8oz) | 100-110 | 15 | 3-4 | $16.99 (6 cartons) |
| Syntax Nectar® Whey Protein (1 scoop, 27g) | 90 | 23 | 0 | $44.95 (36 scoops) |
| Unjury® protein powder (1 scoop, 27g) | 80-100 (flavors vary) | 20-21 | 1-4 | $18.95 (17 scoops) |
| Worldwide Pure Protein Shake® (1 can, 11 oz) | 160-170 (flavors vary) | 35 | 2-4 | $36.49 (12 cans) |

These specific products only a sampling and are not endorsed by staff.

1 cup skim milk = 8g protein, 90 calories, and 12g carb

**Tips for Protein Shakes:**

- Non-fat plain yogurt can be added to shakes to increase protein and creaminess.
- Freeze skim milk in ice cube trays. Blend these "milk cubes" with your shake to make it cold and slushy. This also adds protein without diluting your shake.
- Turn an ordinary protein shake into a vanilla or mocha latte by adding 1 teaspoon of decaffeinated instant coffee to a vanilla or chocolate shake. Or add 1 serving Sunrise Orange Crystal Light® to a vanilla shake for a dreamsicle flavor.
- If you find that you do not tolerate milk, you can use fat free Lactaid milk or soy milk to add protein to your shake. Avoid flavored soy milk (i.e. vanilla, chocolate, almond) as it contains a large amount of added sugar.

# *Stage I Diet*
# *NPO then Clear Liquids*
# *Duration: After completion of swallow test- discharge*

After surgery, you will advance from NPO (nothing by mouth) to clear liquids once you pass your swallow evaluation to test your tolerance of foods. You will consume noncarbonated, clear liquids, 1 oz every hour, increasing to every 15 minutes as tolerated, to meet goal of 1-4 ounces per hour. By discharge, you should be able to consume forty ounces per day. 1 oz medicine cups will be on your tray to help with portion control. Be prepared that you may also need to dilute drinks provided to you in the hospital to better tolerate the clear liquids.

## Examples of clear liquids ("anything you can shine a light through"):

| | |
|---|---|
| Broth | Beef, chicken, vegetable |
| Gelatin | Sugar-free only |
| Tea | Decaffeinated |
| Others | Beverages should be: diet/sugar-free, less than 10 calories per 8oz serving, decaffeinated, non-carbonated |

**If while in the hospital, you are on a clear or full liquid diet and receive a food item that is not listed above or on the next page, check with your doctor or dietitian before eating it.**

WRAMC bariatric clear liquid hospital tray includes:

Sugar free gelatin
Broth
Tea
Equal/Sweet & Low (upon request)
Bottled water
Crystal Light (upon request)
(Skim milk or soy milk may be given once clears are tolerated)

# *Stage II Diet*
# *Full Liquids*
# *Start: upon discharge from hospital*
# *Duration: 2 weeks*

Once you are able to tolerate clear liquids, you will be advanced to a full liquid diet. Foods included in this stage should be **thinned** enough to pass through a straw, **but remember, do NOT drink from a straw!** Initially, you should drink around 2-4 ounces (1/4-1/2 cup) per hour, increasing water as tolerated to 8 ounces per hour. Remember to consume protein sources (meat and milk) first.

## Examples of full liquids:

| Food Group | Recommended |
|---|---|
| High Protein Foods | Canned (water-packed tuna, chicken/turkey breast, salmon) or cooked meats, blended and thinned with broth<br>Protein shake (refer to supplement guidelines on page 6)<br>Water-based protein supplement |
| Milk/ Dairy Products | 1% or skim/fat-free milk or lactose-free milk<br>Low- carbohydrate/lite and fat-free, thinned yogurt<br>Low-fat, plain soy milk<br>Low-fat buttermilk |
| Vegetables | Vegetable juices - V-8 juice, tomato juice, carrot, etc (low sodium)<br>Blended and thinned, well-cooked vegetables |
| Fruit | Any 100% juices, unsweetened or light (no added sugar)<br>Pureed fruit thinned with unsweetened juice or milk |
| *Starches* (LIMIT) | Hot cereals (oatmeal, cream of wheat, grits)<br>-blended & thinned with milk<br>Noodles or rice (blended and thinned)<br>Blended cold cereals thinned with milk |
| Beverages | Must be: Non-carbonated, decaffeinated, diet/sugar free and less than 10 calories per 8oz serving |
| Other | Strained or pureed low-fat soups<br>Low sodium broths |

# *Stage II Full Liquids*
# *Sample Meal Pattern*

0700-0800 4 oz high **protein** food/ protein beverage
0800-0900 4 oz approved **beverage** of choice
0900-1000 4 oz **fruit**- pureed and thinned or unsweetened/light juice
1000-1100 4 oz milk/ **dairy** product
1100-1200 4 oz **vegetable**- pureed and thinned or low-sodium juice
1200-1300 4 oz high **protein** food/ protein beverage
1300-1400 4 oz approved **beverage** of choice
1400-1500 4 oz **fruit**- pureed and thinned or unsweetened/light juice
1500-1600 4 oz high **protein** food/ protein beverage
1600-1700 4 oz milk/ **dairy** product
1700-1800 4 oz approved **beverage** of choice
1800-1900 4 oz high **protein** food/ protein beverage
1900-2000 4 oz **vegetable**- pureed and thinned or low-sodium juice
2000-2100 4 oz high **protein** food/ protein beverage
2100-2200 4 oz approved **beverage** of choice

Approx: 417 calories, 34g protein, 15g fat, 37g carbohydrate (using a 15g protein/can supplement, water, light juice, skim milk, and low sodium V8)
***To get adequate protein, add 2 scoops protein powder (20g protein/scoop) = 577 calories, 74g protein, 15g fat, 39g carbohydrate (using unflavored protein powder)***

# Stage III Diet
# Puréed/Blended Foods
# Start: approximately 2 weeks after surgery
# Duration: 1 week

Foods in this stage of the diet are similar to those in Stage II but they do not need to be thinned. Foods should be the consistency of cottage cheese or unsweetened applesauce. Baby food is a convenient option. You should consume approximately 1/4-1/2 cup per meal (4-8 Tablespoons). Remember to only drink beverages between meals (at least 30-45 minutes before or after meals).

## Instructions for pureeing foods:

1. Cut food into small pieces about the size of your thumbnail.
2. Place food in the blender.
3. Add enough liquid (fat free chicken broth or fat free gravy) to cover the blades.
4. Blend until smooth like applesauce.
5. Strain out the lumps, seeds, or pieces of food.
6. Use spices (avoid spicy ones) to flavor food.
7. Blend and enjoy!

**Use ice cube trays to control portion sizes.** Each cube holds about 1 ounce.

## *Stage III Diet Puréed/Blended Foods Sample Meal Pattern*

| | | |
|---|---|---|
| Breakfast: | 0700-0800 | 2 oz protein |
| | | 2 oz fruit* |
| Fluids: | 0830-0930 | 4-8 oz water |
| | 0930-1030 | 4 oz protein shake |
| | 1030-1130 | 4-8 oz approved beverage of choice |
| Lunch: | 1200-1300 | 2 oz protein |
| | | 2 oz vegetable* |
| Fluids: | 1330-1430 | 4 oz protein shake |
| | 1430-1530 | 4 oz dairy |
| | 1530-1630 | 4-8 oz approved beverage of choice |
| Dinner: | 1700-1800 | 2 oz protein |
| | | 2 oz vegetable* |
| Fluids: | 1830-1930 | 4-8 oz water |
| | 1930-2030 | 4 oz dairy |
| Snack: | 2030-2130 | 2 oz fruit |
| Fluids: | 2130-2230 | 4-8 oz water |
| | | *omit if full |

*Approx:* 556 calories, 41g protein, 18g fat, 56g carbs (using greek yogurt, baby food, and a 15g protein/can supplement)

***To get adequate protein, add 2 scoops 20g protein/scoop protein powder = 716 calories, 81g protein, 18g fat, 58g carbs (using unflavored protein powder)***

## Examples of pureed/blended foods:

| Food Group | Recommended | Foods to Avoid |
|---|---|---|
| High Protein Foods | Baby food meat<br>Blended canned (chicken or turkey breast, water-packed tuna, salmon) or cooked poultry or fish *(recommend blending with reduced sodium/reduced fat broth instead of water, to enhance taste)*<br>Light tofu (mashed)<br>Vegetarian or fat-free refried beans (try blended with mild picante salsa to thin)<br>Blended/mashed dried beans, lentils<br>Egg substitute (preferred)<br>Poached or scrambled eggs<br>Protein Shakes (same nutrition guidelines as page 6)<br>Creamy peanut butter | Baby food "meals" where meat is mixed with starch<br>All others |
| Milk/Dairy Products | Skim/fat-free or 1% milk or lactose-free milk<br>Low-fat plain soy milk<br>Light yogurt (fat-free, 100 calories and less, or low-sugar)<br>Low-fat or fat-free cottage cheese (2% or less)<br>Low-fat or fat-free ricotta cheese<br>Low-fat buttermilk<br>Sugar-free pudding or custard<br>Sugar-free frozen yogurt | Whole, 2%, and chocolate milk<br>All others |
| Vegetables | Blended, well-cooked vegetables (recommend blending with reduced sodium/reduced fat broth instead of water, to enhance taste)<br>Baby food vegetables | All others |
| Fruit | Applesauce (natural, no more than 14 grams carbohydrate per 4oz serving)<br>Mashed bananas<br>Any blended fruits (without skin or seeds)<br>Baby food fruit | All others |
| Starches (LIMIT) | Hot cereals (blended oatmeal, grits, cream-of-wheat)<br>Cold flake/rice cereals blended with milk<br>Blended milk toast<br>Blended potatoes, noodles or rice<br>Mashed yams/sweet potatoes | All others |
| Fats & Condiments | **Best Fats for Health:**<br>Plant stanol ester butter spreads<br>Avocado<br>Olive oil-based dressings<br>Olive oil, canola, or peanut oil-based oils/ products<br>Cooking sprays<br>**Acceptable Fats:** Butter sprays<br>**Occasional Fats:** Low-fat or fat free mayonnaise, Low-fat salad dressings<br>**Condiments:** Mustard, Mild picante sauce | Ketchup, barbeque sauce, teriyaki |
| Extras for Variety | Sugar-free jello<br>Sugar-free popsicles<br>Low fat cream soups, tomato soups<br>Any low fat soup or chili ONLY if you blend it (low sodium preferred) | All others |
| Anything from previous food stages. | | |

# *Stage IV Diet*
# *Soft and/or Regular Foods*
# *Start: approximately 3 weeks after surgery*

Your physician will let you know if you are ready to start regular foods. Begin experimenting with more solid foods. Remember to chew well (***approximately 20-30 chews***), eat slowly and savor the flavors. Some foods may be difficult to tolerate. To transition to from purée to regular, you will consume soft foods first, gradually adding in foods with a tougher consistency. Both, soft food and regular foods lists are provided to give you ideas for your meal plan.

You should consume 1/2 cup (6oz or 8 Tbsp) at each meal. Try to keep your meal pattern at 3 meals and one snack per day.

Drink recommended beverages 30 minutes before and after eating. Food should be prepared using low-fat cooking methods (baked, broiled, grilled, steamed, poached or microwaved).

*Through trial and error, you may find you tolerate some foods better than others. Refer to page 16 for common food intolerances. It is recommended that you add foods one at a time into your diet. After adding a new food, wait one to two days before adding another new food.*

**Try not to talk or be distracted by the television, computer, reading, etc and eat until you get accustomed to a new way of eating.** This helps to avoid getting distracted and not chewing well enough before swallowing.

**Keep healthy foods available and do not purchase unhealthy foods.**

**Take out exactly the amount of food you need to eat and put the box or package away so you won't be tempted to eat more.**

**If you're going to a party, offer to bring an entrée or appetizer to ensure that have at least one acceptable food choice available.**

**Don't go to the grocery store hungry.** Make a shopping list ahead of time and stick to the items you've written on the list. Avoid impulse purchases.

**Stop eating 2 hours prior to bedtime.**

**Pay attention to the taste of your food.** Savor each bite by becoming aware of flavor, texture, and consistency.

**Avoid snacking on processed foods.** (chips, pretzels, etc)

**Keep in mind that your food must be low-fat, low calorie, sugar-free, and portion controlled for the rest of your life.** This is the commitment you must make to achieve and maintain maximal weight loss.

## Examples of Soft Foods (follow for 1 week):

| Food Group | Recommended | Foods to Avoid |
|---|---|---|
| High Protein Foods | Canned meats (salmon, water-packed tuna, chicken/turkey breast)<br>Cooked fish, shellfish, and poultry*****<br>Eggs, egg whites, egg substitute<br>Light tofu and other meat substitutes<br><br>*(Anything from previous stages)*<br><br>****NOTE: Tough, overcooked, high fat or dry meats may not be tolerated, Recommend moist cooking methods***. | Red meats (beef, pork, veal, lamb)<br>Breaded or fried meats<br>Poultry skin<br>Fatty meats<br>Processed meats (bologna, salami, pastrami, hot dogs, sausage, bacon, pepperoni, etc)<br>Potted meats<br>Spam |
| Milk/Dairy Products | Reduced fat (2%) or fat free cheese<br>Soy cheese<br><br>*(Anything from previous stages)* | High fat cheese (Cheddar, Brie, Feta, Greek, Goat, etc)<br>String Cheese |
| Vegetables | Soft, canned vegetables- no added salt<br>Well-cooked, fresh or frozen vegetables<br><br>*(Anything from previous stages)* | Vegetables in butter or topped with cheese, cream sauces, rich dressings, battered or fried<br>Raw vegetables |
| Fruit | Soft canned fruits in lite or own juices & rinsed<br>Bananas<br>Soft fruit- NO SKIN (peaches, nectarines, pears, melons, mango, etc)<br><br>*(Anything from previous stages)* | Canned fruits in heavy syrup<br>Dried fruit<br>Skins and membranes on fruits (i.e. citrus fruit and grapes may not be well tolerated) |
| Starches | Hot cereals (oatmeal, cream of wheat, grits)<br>Baked potato (no skin), sweet potato/yam (no skin)<br>Whole wheat pasta, brown rice<br>Crackers- saltine/ wheat type<br>Flake/rice based cold cereals<br>Lentils, well-cooked dried beans<br>Fat-free bean dip or refried beans<br><br>*(Anything from previous stages)* | Pastries, muffins, donuts, cookies, cakes, brownies, biscuits, popcorn, French fries, sweetened cereals, butter crackers, granola, chips, pasta in rich sauce, top ramen |
| Fats & Condiments | Creamy peanut butter (or other nut butters)<br>1/3 Less- fat or fat- free cream cheese<br>Avocado<br>Black or green olives<br>Mild salsa or Picante sauce<br><br>*(Anything from previous stages)* | Regular salad dressing, mayonnaise, cream cheese, gravies, bacon, butter |
| Extras for Variety | Low-fat soups (soft and well-cooked)<br>Low-sodium, fat-free Broth<br><br>*(Anything from previous stages)* | |
| Anything from previous food stages. | | |

## Examples of Regular Foods (start after 1 week on soft foods):

| Food Group | Recommended | Foods to Avoid |
|---|---|---|
| High Protein Foods | Fish, shellfish, canned tuna (packed in water), chicken, turkey (skinless white meat), lean ham, eggs/egg substitutes, light tofu and meat substitutes, nuts (chewed well)<br>Creamy peanut butter (choose Natural brands for less sugar)<br>Lean beef (loin or round cuts), lean pork (loin cuts) with all visible fat trimmed<br><br>*(Anything from previous stages)* | Fried fish or chicken, hot dogs, bacon, sausage, steak, ribs, hamburger meat, organ meats, regular cold cuts, regular cheeses, potted meats, Spam |
| Milk/ Dairy Products | Skim or 1% milk, soy milk (light, calcium fortified, plain)<br>Lactose-free milk (fat-free or 1%)<br>Light yogurt (less than 100 calories per serving or low-sugar)<br>Low-fat cottage cheese, low-fat cheeses (< 3gms fat per ounce)<br>Low-fat ricotta cheese<br><br>*(Anything from previous stages)* | Whole or 2% milk, chocolate milk, ice cream, frozen yogurt |
| Fruits & Vegetables<br><br>* introduce raw items gradually | Bananas, citrus fruits, apples, peaches, pears, unsweetened applesauce, canned fruits (in natural juice or light syrup and rinsed)<br><br>Any soft-cooked vegetables (potatoes, beans, lentils and peas count as complex carbohydrates not vegetables)<br><br>*(Anything from previous stages)* | Canned fruit packed in heavy syrup, dried fruit, skins and membranes on fruits<br><br>Vegetables in butter or topped with cheese, cream sauces, rich dressings, battered or fried |
| Starches | Brown rice, whole wheat pasta, low-fat crackers, low-fat pretzels, light whole wheat bread (40 calories per slice), rice cakes, wheat bagels (toasted), starchy vegetables, oatmeal, cream of wheat, oat bran, unsweetened cereals (<5gms sugar per serving)<br><br>*(Anything from previous stages)* | Pastries, muffins, croissants, donuts, cookies, cakes, pancakes, waffles, brownies, biscuits, popcorn, butter crackers, granola, sweetened cereals, French fries, chips, pastas in rich sauces, top ramen |
| Soups | Low- sodium and low-fat broth and creamed soups made with water or skim milk<br><br>*(Anything from previous stages)* | Commercially prepared creamed soups made with whole milk/cream |
| Beverages | Must be: non-carbonated, decaffeinated, diet/sugar free and less than 10 calories per 8oz serving (water, sugar-free kool-aid®, sugar-free fruit flavored water), decaf tea, decaf coffee<br><br>*(Anything from previous stages)* | Soda, regular kool-aid®, juice, sweet tea, regular tea/coffee, milkshakes, beer, wine, liquor |
| Fats | Fat-free/ reduced fat salad dressings, mayonnaise, cream cheese; plant–stenol ester spreads; extra-virgin olive oil, canola Oil; butter Sprays; cooking Sprays; avocados<br><br>*(Anything from previous stages)* | Regular salad dressing, mayonnaise, cream cheese, gravies, bacon, sausage, butter, cream sauces, cheese sauces, fried/breaded items |
| Sweets | Sugar-free jello or popsicles; sugar-free, fat-free pudding; sugar-free jam/jelly/preserves; artificially sweetened syrup<br><br>*(Anything from previous stages)* | Regular jello/jam/jelly/ syrup; hard candy, chocolate, cookies, pies, cakes or other sweets |
| Extras | Mild Picante sauce or salsa, mustard, any herbs or mild spices<br><br>*(Anything from previous stages)* | Teriyaki sauce, ketchup, barbeque sauce, sweet & sour sauce, glazes |
| Anything from previous food stages. | | |

## Example Meal Pattern (3 meals + 1 snack)

**Breakfast:** 0700-0730
¼ cup egg beaters
2 Tbsp 2% or fat free shredded cheese
¼ medium banana

**Fluids:** 0800-1130
Approved protein supplement (≥15g protein, <5g carb, and no more than 12 oz fluid)
Approved beverage of choice (quantity as tolerated, recommend start with no more than 4oz per 30 minute interval)

**Lunch:** 1200-1230
2oz canned chunk chicken breast
½ Tbsp light mayonnaise
2 Tbsp well-cooked or canned green beans
½ peach (canned in 100% juice or ripe and peeled)

**Fluids:** 1300-1430
8oz skim or 1% milk, lactose-free milk, or soy milk
Approved beverage of choice

**Afternoon Snack:** 1500-1530
4oz light yogurt

**Fluids:** 1600-1730
Approved beverage of choice

**Dinner:** 1800-1830
2 oz. baked or broiled salmon
2 Tbsp well-cooked broccoli
2 Tbsp canned fruit cocktail in 100% juice

**Fluids:** 1900-Bedtime
8oz skim or 1% milk, lactose-free milk, or soy milk
Approved beverage of choice

Provides: 749 calories, 74g protein, 23g fat, 62g carbs (using a 15g pro, 160 calorie protein supplement)

# *Helpful Hints for Eating Out*

Order main meal as:

- Half portions or lunch-sized portions
- A la carte
- Senior citizens portions
- Children's menu—*take caution as these are usually high in fat*
- Low-fat appetizers, not breaded and fried *or with cheese (i.e. shrimp cocktail, chicken skewers, etc.)*

Consume only recommended foods in suggested portion sizes.

Plan ahead and decide what you will eat. You can view many menus and nutrition information online prior to going to the restaurant.

Avoid foods with cream-based sauces, cheese sauces, butter sauces, gravies, glazes, sweet-n-sour sauce, and teriyaki sauce.

Choose foods you know you can tolerate. Experiment with adding new foods to your diet at home, prior to trying them in a restaurant.

Share a meal with your spouse or friend.

Take home what you do not eat to enjoy later.

Remember not to drink any beverages with your meal.

Remember to eat slowly, savor your food and take time to enjoy the dining experience.

# *Common Food Intolerances*

Through trial and error, you may find that you are unable to tolerate some of the following food items:

- Tough meats, especially hamburger, pork (avoid first 4 months)
- Lettuce, salad, and raw vegetables (avoid first 4 months)
- White bread, rice, pasta
- Membranes of oranges or grapefruit
- Cores, seeds, or skins of fruits or vegetables
- Fibrous vegetables, such as celery or sweet potatoes
- Chili or other highly spiced foods
- Fried foods, high fat foods/sauces (cheese/butter/white/alfredo sauces, gravies)
- High sugar foods and beverages

Many people are able to tolerate some or all of the foods listed above. When experimenting with new foods, it is recommended that you only add one new food every two days. Adding too many new foods at once may lead to confusion as to which food caused problems.

# *Vitamins and Minerals*

After you've had weight loss surgery, you'll need to commit to a regimen of vitamin and mineral supplements for the rest of your life. You will be eating less food, and your body will be getting fewer nutrients. With gastric sleeve, you will not need to worry about malabsorption of your vitamins and minerals, but it is still just as important to make sure that you are taking the additional supplements recommended by your surgeon, physician, or dietitian.

After your surgery, you will need to take 1 adult multivitamin daily and 2-3 calcium citrate with vitamin D supplements each day. These are a minimum of what you will need to take daily. Additional supplements may be added based on your lab tests.

1) **Adult multivitamin/mineral.** If you prefer chewable, there are adult versions of chewable vitamins. Do not take with other supplements or dairy.

2) **Calcium Citrate with Vitamin D.** For better absorption, do not take with multivitamin or iron, and no more than 600mg at one time.

# *Special Concerns*

## Nausea & Vomiting

If nausea occurs after trying a new food, wait several days before trying it again. You may need to eat more liquid or pureed foods temporarily. Eating or drinking too quickly, too much, or not chewing your foods thoroughly may also cause nausea or vomiting. If you are having difficulty keeping food down, switch back to a clear liquid diet. After you are able to keep clear liquids down, advance your diet as you did after surgery. Sucking on ice chips may help relieve nausea and vomiting.

**If you are unable to keep food down for more than two days, or if you have signs of dehydration such as dry skin that wrinkles easily or lack of urine, call your doctor or go to the emergency room immediately.**

## Constipation

Constipation may occur temporarily during the first month after surgery, but generally resolves as your body adapts to the changes in the amount of food you consume.

Ensuring you have an adequate intake of fiber (approximately 10-12 grams per day) and fluids (6-8 cups per day) will help keep you regular. Good sources of fiber include bran cereals, whole wheat bread, fruits, and vegetables.

If you are having difficulty having a bowel movement, increase the amount of fiber and fluid in your diet. Also try having 4 ounces of hot water immediately after you wake. Hot beverages can stimulate your intestines and can help you have a bowel movement. Yogurt, prunes, and walking can also be helpful.

| Dietary Sources | Fiber Content |
|---|---|
| Kidney Beans, ½ cup | 4.5 grams |
| White Beans, ½ cup | 4.2 grams |
| Apple, 1 medium | 3.9 grams |
| Broccoli, ½ cup | 2.6 grams |
| Pear, 1 medium | 2.5 grams |
| Tangerine, 1 medium | 1.6 grams |
| Potato, 1 small | 3.8 grams |
| Peas (cooked), ½ cup | 5.2 grams |
| Light Bread, 2 slices | 5 grams |
| 100% Bran cereal, ½ cup | 10 grams |


## Dehydration

Patients who have had weight loss surgery are at greater risk of becoming dehydrated. Drinking 48-64 ounces (6-8 cups) of fluid every day can prevent dehydration. Drinking this much fluid is more challenging after surgery because you cannot drink as much at one time.

To avoid stretching your stomach, slowly sip your beverages. Initially it should take you 10-15 minutes to drink 1 ounce of fluid. Additionally, avoid drinking fluids 30 minutes before and after meals.

## Signs of Dehydration:

Dry mouth or dry skin
Headache
Dark urine, or little urine output
*If you have any of these signs, increase your fluid intake.*

## *Medication Changes*

During the first months after surgery, most people lose weight at a very rapid pace. As you lose weight, your need for certain medications will decrease, and eventually you may not need them anymore.

Occasionally, people suffer adverse effects, such as low blood pressure, from taking medications that were prescribed to them when they were at a higher weight. It is very important that you stay in close contact with your primary health care provider so he or she can adjust your medications as your weight decreases.

## Hair Loss

Three to four months after surgery, you may experience hair loss or thinning. Usually it is all-over thinning and is noticeable only to you. It is a side effect of the rapid weight loss. Other common causes of hair loss include an unbalanced diet and excessive stress. Having gastric sleeve surgery places a great deal of stress on your body, and initially following the surgery your

diet may be unbalanced. Ensuring adequate intake of protein, fluid, biotin, iron, and zinc may help. Hair loss usually slows down around five to six months post surgery.

## Excess Skin

After losing a large amount of weight, your skin may not "shrink" and you may find you have excess skin. The amount will depend on how much weight you lose, where you lose it, genetics, age, and gender. Weight training may help minimize the appearance of loose skim, but some patients elect to have plastic surgery to remove it. Procedures to remove excess skin are not usually performed until at least 18 months after surgery when weight loss has slowed. Having surgery too early in the weight loss process may require you to have additional surgery. Talk with your doctor to decide if plastic surgery is appropriate for you and when would be the best time for you to have surgery.

## Pregnancy

It is possible for women to have successful pregnancies after having bariatric surgery, but it is recommended that women wait at least 12-18 months after the surgery before attempting to become pregnant. Pregnant women have greater nutritional needs that may be difficult to obtain while their body is adjusting to the surgery and while losing large amounts of weight. This could result in complications and deficiencies for you and your baby and may result in birth defects. Consult your physician prior to attempting to become pregnant to discuss specific health care issues that could potentially have a negative impact on your pregnancy.
WARNING: Rapid weight loss increases fertility, so you must be careful to take the proper precautions to prevent pregnancy.

## Stretching Your Stomach Sleeve

Stretching your sleeve can keep you from achieving and maintaining your goal weight. Eating too much at one time or advancing your diet too quickly after surgery stretches the sleeve. To avoid stretching your sleeve, you should follow your doctor's and dietitian's instructions on how quickly you can advance your diet and follow the guidelines in this handout. You should also stop eating at the first signs of fullness. Signals that you are full include:

- feeling pressure just below your rib cage
- feeling nauseated
- pain or pressure in your shoulder area or upper chest

# *Exercise*

Exercise is just as important as your diet. For successful weight control, you should combine a healthier diet with a consistent exercise program. Exercise is a healthy habit that burns calories, reduces fat, and tones muscles.

Immediately after surgery, do not engage in heavy exertion, bending or lifting over 10 pounds. If any activity or position causes pain around your incision, don't do it. Do not sit in one place for long periods without getting up and changing position because inactivity increases the risk of blood clots forming in your lower legs. Another important note, do not engage in any abdominal exercises the first six weeks after surgery.

When your surgeon says you are ready, adopt a routine of regular exercise a minimum of 30 minutes, at least four days a week. Studies of people who succeed in reaching their goals after bariatric surgery indicate that over 75% exercise regularly to help maintain weight loss. Not only does regular exercise burn calories, but it also helps you avoid becoming weak and losing muscle mass as your body loses fat.

Within four to six weeks after bariatric surgery, it is extremely important to walk as much as you can to speed recovery and regain your strength. Walking promotes wound healing, circulation, bowel function, weight loss, and a healthy heart and lungs.

To maximize success, consult an Exercise Therapist to obtain an exercise program designed specifically for you.

**Exercise**

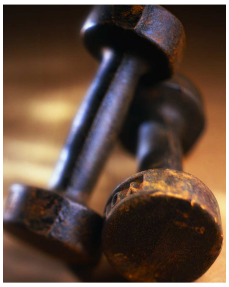
Cardiovascular (aerobic) exercise includes activities such as brisk walking, swimming, and cycling. These activities use large muscle groups continuously for an extended period of time and cause an increase in heart rate. You can start with 20 minutes on 3-5 days a week working towards a goal of 5 days a week for 60 minutes, which has been shown to be beneficial in weight loss.

Walking is a great place to start because it's free and can be done almost anywhere. Consider purchasing a pedometer to track your daily physical activity and monitor your progress.

Perform resistance exercises (weight training) in order to tone your muscles and maintain strength as you lose weight. For muscular endurance, start with 2 days a week on nonconsecutive days of the week. Start with 1 to 3 pound dumbbells and increase weight as exercises become easier. You also can progress in increasing sets up to 3 sets of 15-20 reps. Make sure to breathe out with pushing forward with exertion 1 second and return slowly to starting position for a longer period of time 1.3-1.5 seconds. Make sure to progress gradually. Usually add changes monthly. After surgery, don't lift more than 10lbs for up to 4 weeks. Check

with your surgeon as well. Don’t perform abdominal crunches for 4 weeks after your surgery.

Don’t have dumbbells? Use canned goods or other small items around the house for added resistance. You can use resistance tubing as well for major muscle groups. See the next two pages for examples of beginner resistance exercises for upper and lower body.



Most people report that exercise becomes easier and more enjoyable as they lose weight and build endurance. To increase motivation, consider exercising with a friend or family member, join a gym, or get involved in a group exercise class. Set realistic goals and keep an exercise log to track your progress. Exercise can be fun!!! Follow up with the exercise physiologist within 6 months of your surgery to review your body composition and goals.

# *Resistance Exercises for Upper Body*

(Start with 1 set of 12 repetitions of each exercise)

## Bicep Curl

Hold weights at sides, palms forward. Curl arms toward shoulders, rotating to palms out while beginning curl. Keep forearms in line with sides of torso.

## Seated Triceps Extension

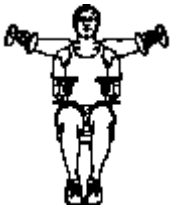
Raise one arm straight toward ceiling. Support this arm, below elbow, with other hand. Bend raised arm at elbow, bringing hand weight toward same shoulder. Slowly re-straighten your arm toward ceiling. Hold position. Slowly bend arm toward shoulder again.

## *Overhead Press*

Palms in, hold weights at shoulder level. Push upwards, extending your arms straight and rotating your palms forward at end of movement. Slowly lower arms back to start position.

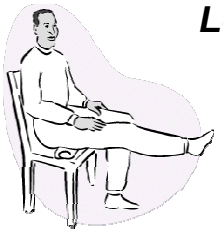
## *Lateral Raise*

Hold elbows at 90° angle. Raise hands and elbows level with shoulders, rotating the palms down at beginning of motion. Lead with elbows.



# *Resistance Exercises for Lower Body*

*(Start with 1 set of 12 repetitions of each exercise)*

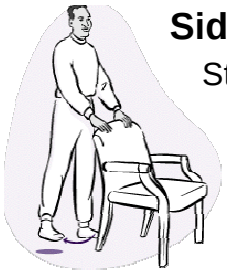


### *Leg Extension*

Sit in chair. Put rolled towel under knees, if needed. Slowly extend one leg as straight as possible. Hold position and flex foot to point toes toward head. Slowly lower leg back down. Repeat with other leg.

### Leg Curl

Hold onto table or chair for balance. Slowly bend knee as far as possible, so foot lifts up behind you. Hold position. Slowly lower foot all the way back down. Repeat with other leg.

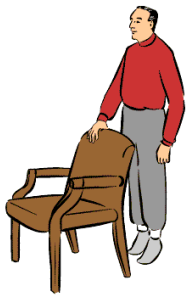


### Side Leg Raise

Stand straight, directly behind chair, feet slightly apart. Hold chair for balance. Slowly lift one leg to side, 6-12 inches. Hold position. Slowly lower leg. Repeat with other leg. Back and both knees are straight throughout exercise.

### *Heel Raises*

Stand straight, holding onto a table or chair for balance. Slowly stand on tiptoes, as high as possible. Hold position. Slowly lower heels all the way back down.



# Bariatric Surgery Resources

## Helpful Websites:

http://www.obesityhelp.com
ObesityHelp, Inc. Making the Journey Together

http://www.smallscar.com
The Johns Hopkins Obesity Surgery Center, Michael Schweitzer, M.D., F.A.C.S

http://www.bariatricedge.com/dtcf/pages/home.htm
Bariatric Edge: Ethicon Endo-Surgery, Inc. A Johnson & Johnson Company

http://www.weightlosssurgeryinfo.com/dtcf/
Weight Loss Surgery Info (sponsored by the Bariatric Edge)

http://www.bariatric-surgery.info/
Bariatric Surgery.info: About Weight Loss Surgery to Reduce Severe Clinical Obesity

http://www.asbs.org/html/about/patients.html
American Society for Bariatric Surgery: for patients

http://www.obesityaction.org/home/index.php
Obesity Action Coalition

http://www.obesity.org/
The American Obesity Association

http://www.nlm.nih.gov/medlineplus/weightlosssurgery.html
Medline Plus: Weight Loss Surgery

http://www.bariatricsurgeryfyi.com/
Bariatric Surgery FYI

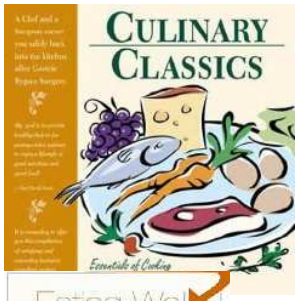
http://home.absurgery.org/
The American Board of Surgery

http://www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm
National Institutes of Health (NIH) Obesity Guidelines

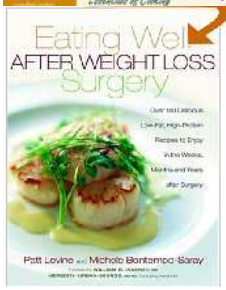
http://www.eatright.org/
The American Dietetic Association: Your link to nutrition & health

http://www.thebandsters.org/
Lap Band Surgery Information

# Cookbooks:

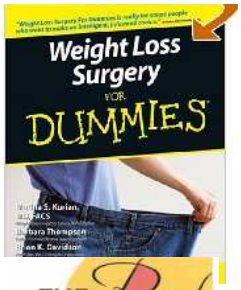



Culinary Classics: Essentials of Cooking for the Gastric Bypass Patient
~by David Fouts

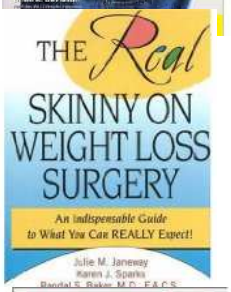



Eating Well After Weight Loss Surgery: Over 140 Delicious Low-Fat, High-Protein Recipes to Enjoy in the Weeks, Months and Years after Surgery
~by Patt Levine, Michele Bontmpo-Saray, William B. Inabnet, MD, & Meredith Urban-Skuros, MS, RD

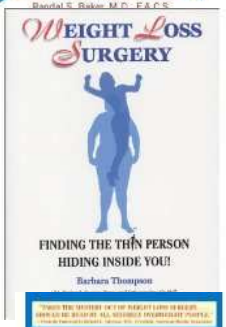
# Books:



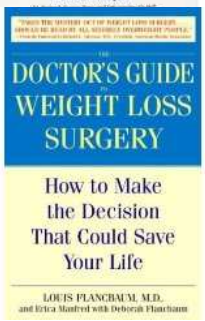

Weight Loss Surgery For Dummies
~by Marina S. Kurian, MD, FACS, Barbara Thompson, Brian K. Davidson




The Real Skinny on Weight Loss Surgery: An Indispensable Guide to What You Can Really Expect!
~by Julie M. Janeway, Karen J. Sparks, Randal S. Baker, MD, FACS




Weight Loss Surgery: Finding the Thin Person Hiding Inside You, Third Edition
~by Barbara Thompson




The Doctor's Guide to Weight Loss Surgery: How to Make the Decision That Could Save Your Life
~by Louis Flancbaum, MD, Deborah Flancbaum, Erica Manfred

## *My Gastric Surgery Team*

***Physician:*** _____

***Phone number:*** _____

***Nurse Manager:*** _____

***Phone number:*** _____

***Registered Dietitian:*** _____

***Phone number:*** _____

***Exercise Therapist:*** _____

***Phone number:*** _____

***Psychologist:*** _____

***Phone number:*** _____