

# **ENDOSCOPIC BARIATRIC PROCEDURES**

**NUTRITION GUIDELINES FOR  
DIET PROGRESSION**

**BEFORE YOUR PROCEDURE**

All medications should be converted to either liquid or crushable taken with 1 tablespoon of applesauce. Ask your prescribing physician to make this change. We cannot change your prescriptions. You may return to your normal form of medications when you begin the soft foods portion of the diet.

Contact information for questions:  
 General GI Clinic: 617-732-6389  
 Dietitian Phone Line: 617-732-8884

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Typical Dietitian Appointment Schedule	Typical Endoscopist Appointment Schedule	Dates of Appointments
Individual appointments are 30 minutes; groups and classes are 45-60 minutes		
<b>Before Surgery:</b>	<b>Before Surgery:</b>	
<ul style="list-style-type: none"> <li>• Nutrition Assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Initial Consultation</li> </ul>	
<ul style="list-style-type: none"> <li>• Nutrition Follow-Ups as needed</li> </ul>	<ul style="list-style-type: none"> <li>• 1st Pre-Op Visit</li> </ul>	
	<ul style="list-style-type: none"> <li>• 2<sup>nd</sup> Pre-Op Visit if needed</li> </ul>	
<b>After Surgery:</b>	<b>After Surgery:</b>	
<ul style="list-style-type: none"> <li>• 2 weeks group</li> </ul>	<ul style="list-style-type: none"> <li>• 1 month</li> </ul>	
<ul style="list-style-type: none"> <li>• 6 weeks group</li> </ul>	<ul style="list-style-type: none"> <li>• 3 months</li> </ul>	
<ul style="list-style-type: none"> <li>• 3 months</li> </ul>	<ul style="list-style-type: none"> <li>• 6 months</li> </ul>	
<ul style="list-style-type: none"> <li>• 9 months</li> </ul>	<ul style="list-style-type: none"> <li>• 1 year</li> </ul>	
<ul style="list-style-type: none"> <li>• 1 year</li> </ul>		
After 1 year, meet with dietitian twice per year (every 6 months) forever	After 1 year, meet with endoscopist twice per year (every 6 months) forever	

## Skills for Success

Endoscopic bariatric procedure is only a tool. You must commit to a healthy lifestyle (diet, exercise, behaviors) to stay successful forever.

### Fluids

Choose sugar-free, non-carbonated fluids.  
Sip fluids throughout the day, aiming for 48-64 ounces.  
Know the signs of dehydration: headaches, dizziness, dark urine.  
No caffeine until stage 4.  
Avoid alcohol 6-12 months after surgery.

### Eating Behaviors

Take bites the size of a dime.  
Chew, chew, chew; puree the food with your teeth. Wait between bites to see how your stomach feels. Aim for 30-40 minute meals.

### Make Eating Mindful

Avoid grazing, nibbling, and picking throughout the day. Have regularly scheduled eating events.  
When you're eating, just eat! Avoid distractions. Eat off a smaller plate.

### Separate Fluids from Solids

Wait to drink fluids until 30 minutes after you eat solid food. It's okay to drink before eating.  
*Why?* Eating and drinking at the same time can overfill your stomach and make you feel sick.

### Plan Ahead

Life is busy now and it will be busy after surgery too. You will make healthier choices when you plan ahead.  
Chop/peel ingredients in advance and meal prep.  
Pack food and fluids for busy days.  
Bring your own food to social events if you aren't sure what will be served.

### Stay Accountable



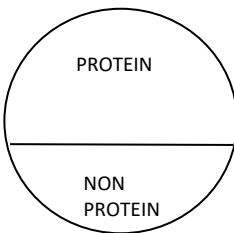
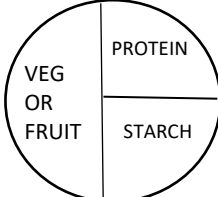
Track yourself: food and beverage choices, exercise, and weight are good places to start.  
Keep your appointments with the CMBS team.  
Let your support team know how they can help you stay on track.

## Getting Ready for Surgery

### What to Buy Before Surgery

- Measuring Cups & Spoons
- Food Scale to measure food portions, Personal scale for regular, at home, weight checks
- Sugar-free Fluids
- Protein Shakes\*
- Vitamin & Mineral Supplements\*

*\*Choose protein shakes and vitamin & mineral supplements from the shopping guides.*

When To Start	Where	Duration	Diet Stage		Example Foods	Fluid Goal	Vitamins
Day of Procedure	Home & Hospital	12-24 hours	Stage 1 Nothing to Eat		Water	32 to 48 ounces	
Post Op Day 1	Hospital	1 day	Stage 2 Water and Sugar Free Clear Liquids		Water, Crystal Light, Broth, Decaffeinated coffee or tea	44 ounces	
Post Op Day 2 Start Date	Home	45 days	Stage 3 Protein Shakes and Sugar Free Clear Liquids		Premade protein shakes, protein powder mixed with milk or water, all fluids listed in Stage 2	60 ounces	Start Chewable or liquid vitamins
Post Op Day 46 Start Date	Home	2 weeks	Stage 4 Soft Proteins: 60-80 grams per day pureed foods and semi-solids plus protein foods		<b>60-80 GRAMS PROTEIN:</b> cottage cheese, eggs, canned tuna or salmon, canned chicken or turkey <b>NONPROTEIN:</b> mashed canned vegetables, canned fruit in juice	64 ounces	Continue Chewable vitamins
Post Op 8 Weeks Start Date	Home	Ongoing	Stage 5: Solid Calorie Diet		Balanced diet: lean proteins, non-starchy vegetables, fruits, small portions of starches	64 ounces	May transition to swallowable vitamins

## STAGE 1: Nothing to Eat or Drink

<b>Begin:</b>	Day of Procedure
<b>Duration:</b>	12-24hrs
<b>Fluid goal:</b>	32 to 48 ounces
<b>Instructions:</b>	Patient should avoid all oral intake until the following day

## STAGE 2: Water and Sugar Free Clear Liquids

<b>Begin:</b>	Morning after procedure
<b>Duration:</b>	1 day

### Diet instructions:

- Fluids are the number one priority
- 2 ounces of non-caloric, non-carbonated, non-caffeinated liquids every hour for the first 6 hours
- Then 4 ounces per hour for the next 8 hours
- Record all fluid intake
- Use 1 ounce medicine cup and take 1 sip every 5 minutes
- Sip slowly and stop as soon as you feel full
- Do not use straw

### Fluid options:

- Water
- Crystal light
- Propel Fitness Water or G2
- Bouillon or broth
- Fruit<sub>2</sub>O
- Decaffeinated coffee or tea (Diet Snapple)
- “Flat” decaffeinated diet soft drink or diet ginger ale
- Diet Jell-O
- Sugar – free popsicle (less than 20 calories each – limit 2-3 per day)

## STAGE 3: PROTEIN SHAKES

- Begin:** 48 hours after procedure
- Duration:** 45 days
- Fluid Goal:** **60** ounces per day  
(protein drinks do NOT count towards fluid goal)
- Protein Goal:** **60** grams per day
- Calorie Goal:** **900 – 1000** calories per day
- Vitamins:** TWO chewable multivitamins (children's or adult)
- Centrum adult or children's complete chewable
  - Flintstone's complete chewable plus additional 500mcg Vitamin B12 daily

OR

- TWO tablespoons of liquid multivitamin
- Centrum liquid

Calcium Supplement with Vitamin D 1200 – 1500mg per day

- Maximum 500 mg per dose
- Calcium Citrate is preferred due to better absorption

DO NOT take the multivitamin and calcium at the same time taking together may interfere with each other's absorption

**Diet instructions:**

- Record all fluid intake
- Use 1 ounce medicine cup and take 1 sip every 5mins
- Do not exceed **8** ounces per hour
- Sip slowly and stop as soon as you feel full
- Do not use straw
- Avoid gulping, it introduces air into your system and may cause gas pains
- Plan ahead and have the protein drinks ready to drink
- Do not drink with meals
- Fluids are the number one priority: It is VERY important that you stay hydrated

## STAGE 3: PROTEIN SHAKES (CONTINUED)

**Fluid options:** All from Stage 2

- Water
- Crystal light
- Propel Fitness Water or G2
- Bouillon or broth
- Fruit<sub>2</sub>O
- Decaffeinated coffee or tea (Diet Snapple)
- “Flat” decaffeinated diet soft drink or diet ginger ale
- Sugar – free popsicle (less than 20 calories each – limit 2-3 per day)

**Sample Meal Plan: Take a 30 minute break between each 8-oz of fluids**

8am	8oz Protein drink – 100-150cal
9am	8oz Water or low calorie beverage
10am	8oz Protein drink – 100-150cal
11am	8oz Water or low calorie beverage
12pm	8oz Protein drink – 100-150cal
1pm	8oz Water or low calorie beverage
2pm	8oz Protein drink – 100-150cal
3pm	8oz Water or low calorie beverage
4pm	8oz Protein drink – 100-150cal
5pm	8oz Water or low calorie beverage
6pm	8oz Protein drink – 100-150cal
7pm	8oz Water or low calorie beverage
8pm	8oz Protein drink – 100-150cal
9pm	8oz Water or low calorie beverage

**Guidelines for High Protein Supplement:**

- Calories: 150-200cal/serving
- Protein: minimum of 15gm/serving
- Sugar: maximum of 10gm/serving
- A typical protein shake is 8-11 ounces
- If you are using a protein powder, remember to add the protein, calories, and sugar from the liquid you are mixing with.
  - Example: 8 ounces of skim milk has: 8 grams of protein, 90 calories, 12 grams of sugar, and 12 grams of carbohydrates

## STAGE 3: PROTEIN SHAKES (CONTINUED)

Here is where you will find these numbers:

<b>Nutrition Facts</b>		<b>Nutrition Facts</b>	
Serving Size 1 scoop (31g) Servings Per Container 29		Serving Size 1 Shake (14 fl oz) (414mL) Servings Per Container 1	
<b>Amount Per Serving</b>		<b>Amount Per Serving</b>	
<b>Calories</b> 110	Calories from Fat 0	<b>Calories</b> 160	Calories from Fat 30
<b>% Daily Values*</b>		<b>% Daily Value*</b>	
<b>Total Fat</b> 0g	<b>0%</b>	<b>Total Fat</b> 3g	<b>5%</b>
Saturated Fat 0g	<b>0%</b>	Saturated Fat 1g	<b>5%</b>
Trans Fat 0g		Trans Fat 0g	
<b>Cholesterol</b> 15mg	<b>6%</b>	<b>Cholesterol</b> 20mg	<b>7%</b>
<b>Potassium</b> 90mg	<b>2%</b>	<b>Sodium</b> 410mg	<b>17%</b>
<b>Sodium</b> 170mg	<b>8%</b>	<b>Potassium</b> 560mg	<b>16%</b>
<b>Total Carbohydrate</b> 4g	<b>1%</b>	<b>Total Carbohydrate</b> 5g	<b>2%</b>
Dietary Fiber 2g	<b>8%</b>	Dietary Fiber 3g	<b>12%</b>
Sugars <1g		Sugars 2g	
<b>Protein</b> 23g	<b>46%</b>	<b>Protein</b> 30g	<b>60%</b>

**Lactose Intolerance:**

Lactose is the natural sugar in milk. Sometimes after surgery, your body cannot digest this sugar. This causes problems like nausea, cramping, bloating, gas, and/or diarrhea. It is not normal to have these problems from drinking protein shakes. You might be experiencing lactose intolerance.

**What if you are experiencing lactose intolerance?**

- Stop drinking protein shakes for 24 hours. Keep drinking your fluids.
- When you start drinking protein shakes again, avoid any shakes that have milk, ‘whey protein **concentrate**,’ or ‘milk protein **concentrate**’ in the ingredient list.
- Instead, choose a protein shake that is made from ‘whey protein **isolate**.’ The lactose has been filtered out of whey protein isolate.
- Call your dietitian if you need help finding lactose-free options.



## STAGE 3: PROTEIN SHAKES (CONTINUED)

Other problems related to Protein Shakes?

**If the taste is bothering you:**

- Flavor your shakes with extracts. You can find extracts in the baking aisle at the grocery store. You only need a couple drops so go slowly and taste-test along the way.
- Flavor your shakes with sugar-free syrups. You can find sugar-free syrups at the grocery store but you will have more flavor options if you order online. Common brands are Da Vinci Gourmet and Torani.
- Flavor your shakes with spices such as cinnamon, ginger, nutmeg, and cloves.
- Flavor your shakes with unsweetened cocoa powder or powdered peanut butter; limit to 1 tablespoon total per day.

**If the smell is bothering you:**

- Drink your shake from a bottle with a small opening.
- Drink your shake using a straw. Do not use the straw the suck all of the liquid from the cup.
- Drink your shake at a very cold temperature.

**If you need to chew:**

- Pour your protein shake into a popsicle or ice cube tray and freeze to make a protein popsicle.
- Semi-freeze your protein shake or blend it with ice to make a slushy.

**Stage 3 Key Points:**

- Be aware of signs of dehydration: sudden lightheadedness or dizziness, headaches, and urine color becoming darker throughout the day.
- If you're struggling to tolerate fluids, it's helpful to try different temperatures for your beverages. Some patients prefer ice cold while others prefer room temperature or warmer beverages. You can try warming up a protein shake up to 140 degrees; think "hot chocolate" or look for chicken and tomato soup flavored protein (see the Protein Shake Shopping Guide for more details).
- Keep track of the amount of protein shakes and fluids that you are drinking using a food log. If you cannot finish a protein shake in a 1 hour period, you can save it for the next meal time and log the amount you drank.

Changes in bowel regimens, such as less frequent movements or loose stools, are normal. If you are having discomfort, contact the endoscopic bariatric team or refer to page 32 for troubleshooting tips and solutions.

## STAGE 4: SOFT PROTEINS

<b>Begin:</b>	45 days after procedure
<b>Duration:</b>	2 weeks
<b>Fluid Goal:</b>	<b>64</b> ounces (oz)per day of fluids from Stage 2 (protein drinks do NOT count towards fluid goal)
<b>Protein Goal:</b>	<b>60 – 80</b> grams per day
<b>Calorie Goal:</b>	<b>900-1000</b> calories per day
<b>Vitamins:</b>	2 chewable vitamins – Flintstones complete plus additional 500mcg Vitamin B12

### Diet instructions:

- 3 oz of soft, moist protein foods 3 times per day PLUS 1-2 snacks per day
- Have a protein shake if you are unable to meet your protein needs through soft, solid food
- Maintain a food log. Record all oral intake.
- Eat slowly over 30 minutes
- Use children’s utensils or chopsticks.
- Take small bites and put utensils down between bites.
- Remember to chew well, to applesauce consistency.
- If you feel full, stop eating – continuous overeating can stretch your pouch. Remember it may take 20 min for your brain to know you ate anything.
- Do not eat foods and drink any fluids at the same time. Wait at least 30 minutes before or after eating a meal to drink anything.
- You may use a straw, but avoid using the straw to empty the contents of a cup or container
- Avoid foods that are high in sugar or fat as they may cause dumping syndrome.
- Marinated meats, boiled meats and the dark meat of chicken tends to be well tolerated
- Fibrous meats, such as dry turkey, chicken breast or hamburger, can be difficult to digest
- Do not fry your meats
  - Frying adds calories and can make foods hard to digest
  - Some people may experience dumping with fatty foods

## STAGE 4: SOFT PROTEINS (CONTINUED)

### Soft Protein Food options:

- Tomato Cream Soup (made with skim milk) – 8oz: 6gm protein, 90cal
- Cottage Cheese (low fat) – 4oz (1/2 cup): 13gm protein, 100cal
- Egg whites/substitute (no vegetables) – 4oz(½ cup): 10gm protein, 100cal
- Hard-boiled egg white - mashed (no yolk)– 2 large 2oz:  
6gm protein, 30cal
- Tuna (canned or fresh in water) – 3oz: 20-22gm protein, 95cal
- Salmon (canned or fresh) – 3oz: 20-22gm protein, 120-150cal
- Chicken or Turkey (canned or fresh) – moist, 3oz: 15-18gm protein, 120-150cal
- Imitation Seafood – 3oz: 10gm protein
- Tofu – 3oz: 12gm protein, 90cal

Try to meet the protein goal of 60-70 grams each day before choosing foods from the non-protein list. Your stomach will fill up quickly from the protein foods so you might not have room for the non-protein foods.

#### How to Count Grams of Protein

This is a container of Greek yogurt. The label says that the serving size is 3/4 cup. That means that each serving has 13 grams of protein. If you eat the whole serving, you have eaten 13 grams of protein. However, with your small stomach, you might not have room for the whole serving. If you eat half of the container, you have eaten 6.5 grams of protein.

### Nutrition Facts

Serving size 3/4 cup (170g)

Amount per serving	
<b>Calories</b>	<b>190</b>
% Daily Value*	
<b>Total Fat</b> 10g	<b>13%</b>
Saturated Fat 8g	<b>40%</b>
<i>Trans Fat</i> 0g	
<b>Cholesterol</b> 45mg	<b>15%</b>
<b>Sodium</b> 75mg	<b>3%</b>
<b>Total Carbohydrate</b> 12g	<b>4%</b>
Dietary Fiber 0g	<b>0%</b>
Total Sugars 8g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 13g	
Vitamin D 0mcg	0%
Calcium 261mg	20%
Iron 1mg	4%
Potassium 343mg	8%

\*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

## STAGE 4: SOFT PROTEINS (CONTINUED)

### Protein Foods

- Fat-free Greek yogurt (without fruit chunks)
- Low-fat cottage cheese
- Part-skim ricotta cheese
- Tofu
- Chicken or turkey (dark meat is fine)
- Fish (flaky fish like tuna, cod, haddock, salmon, and tilapia)
- Egg, egg whites, or egg beaters
- Protein shakes or powders

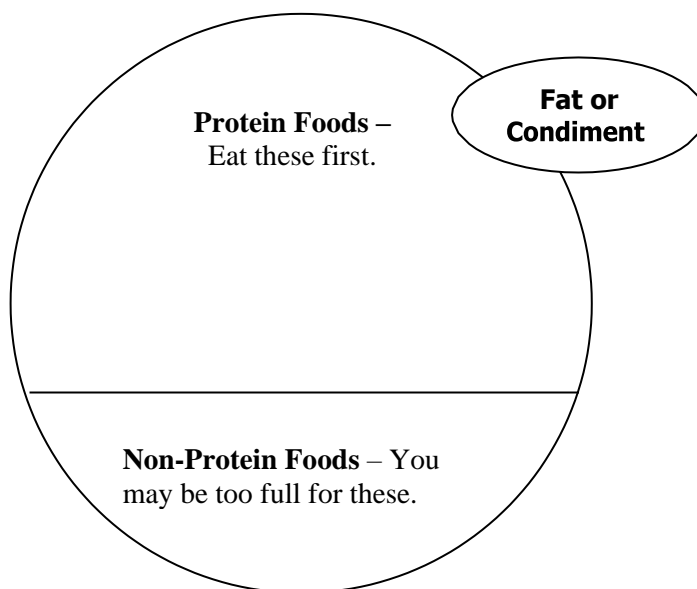
### Non-Protein Foods

- Fat-free or light yogurt (non-Greek)
- Unsweetened applesauce
- Canned pears or peaches (in own juice or water; no syrup)
- Soft banana
- Oatmeal, cream of wheat, or farina
- Tomato sauce
- Well-cooked vegetables (non-starchy or starchy) with no skins or peels

### Fats

- Light mayonnaise or salad dressing
- Hummus
- Avocado
- Smooth nut butter (not crunchy)
- Butter or oil

Example Plate – it might be this small!



## STAGE 4: PUREED FOODS AND SEMI-SOLIDS

### Pureed and Soft Solid Food Ideas

Type of Food	Amount	Protein (g)	Fat (g)	Calories
<b>STARCHES</b>				
Mashed potato	½ cup	2.0	4.4	111
Oatmeal	¾ cup	4.5	1.7	105
Farina	¾ cup	2.5	0.1	87
Cream of Wheat	¾ cup	3.3	0.4	115
<b>FRUITS</b>				
Applesauce (unsweetened)	½ cup	0.2	0.1	53
Peaches (canned in juice)	½ cup	0.8	0.05	55
<b>VEGETABLE</b> ( ½ cup whole = ¼ cup pureed)				
Green Beans (canned)	¼ cup pureed	0.8	0.1	13
Carrots (baby food)	2.5 oz (2 oz = ¼ cup)	0.0	0.0	30
Beets (canned)	¼ cup pureed	0.8	0.1	26
<b>MILK</b>				
Yogurt, nonfat	8 oz	8	0	90-120
Milk, skim or 1%	8 oz	8	0-3	80-110
<b>MEAT</b>				
Tuna, canned in water	1 oz (1 can = 6 oz)	7	1	40
Imitation crab meat	1 oz	3.5	<1	30
Cheese, low fat or fat free	1 oz	4	0-3	40-50
Cottage cheese, 1% or fat free	1 oz (4 oz = ½ cup)	3.5	<1	20
Egg, scrambled	1 oz	6	6	80
Chicken, pureed (dark meat)	1 oz	7	4.5	72
Turkey (baby food)	2.5 oz	8	5	90
<b>FAT</b>				
Butter	1 teaspoon	0	4.1	36
Olive oil	1 teaspoon	0	4.6	40
Mayonnaise, light	1 teaspoon	0	5	50

## STAGE 5: SOLID CALORIE DIET

**Start:** 2 months postoperatively

**Duration:** Ongoing

### **Diet Instructions:**

- 900 – 1200 calories a day
- Fluids: 48-64 ounces per day
- Protein: 60-70 grams per day
- Avoid all high calorie and soft, mushy foods that can easily pass through a dilated gastric pouch or dilated GJ outlet (stoma).
- Avoid all highly refined or processed foods
  - i.e. Protein bars, fast food, frozen meals
- Limit portion sizes of condiments
  - i.e. butter, gravy, cream cheese, peanut butter, oil
- Avoid liquid calories, all beverage should have zero calories
  - Crystal Light, Diet Snapple, Fruit 2O, water, etc are ok to drink

### **Important Information:**

- Examples of foods to avoid:
  - Beverages high in calories
    - Fruit juice, fruit smoothie or frappes
    - power drinks, soda, coffee with added cream or sugar
  - Foods that are processed that may contain high amounts of sugar or fat
    - Cookies, protein bar, prepackaged foods, frozen meals
    - Fast food, 100 calorie packs of any kind
- Only have a protein shake if you are unable to have a structured meal or eating event.
- **We encourage you to eat solid, bulky, high fiber, low fat foods for all of your meals**

STAGE 5: SOLID CALORIE DIET (CONTINUED)

Sample Diet:

Meal	Food	Liquid	Calories	Protein
Breakfast	-1 scrambled egg		78	6
	-1 piece whole wheat toast		100	3
	-2 links turkey sausage		140	13
		8 oz Decaf coffee	5	0
		8 oz water		
Snack	1 serving fruit		60	0
	Chewable Calcium	8 oz water	0	0
Lunch				
	2 cups salad greens with non-starchy vegetables 4 oz grilled/steamed chicken 2 teaspoons oil 1 Tablespoon vinegar OR 1 Tablespoon light dressing Herbs, salt, pepper		250-330	21-28
Snack	Chewable Multivitamin	8 oz water	0	0
	1 hard boiled egg		78	6
Dinner		8 oz water	0	0
	-3 oz grilled/steamed/poached fish -1 cup steamed broccoli -1/3 cup sweet potato Sodium free herbs/seasoning		120-150 50 80 0	21 2 3 0
Snack	Chewable Calcium	8 oz water	0	0
	1 serving fruit		60	0
		8 oz water	0	0
<b>Total</b>		8 oz water		
		<b>64 oz water</b>	<b>1021-1131</b>	<b>75-82g</b>

## STAGE 5: SOLID CALORIE DIET (CONTINUED)

**Variations:**

Instead of:

1 Egg  
 2 turkey sausages  
 1 piece whole wheat toast

Breakfast above

1 serving fruit in AM  
 1 cup cubed melon  
 1 cup fresh pineapple  
 ½ whole pear

Lunch above

2 teaspoons oil and  
 1 Tablespoon vinegar

1 hard boiled egg

Dinner above

1 cup cooked vegetables

Use:

¼ cup Egg beaters (30 calories, 6 g protein)  
 2 veggie sausages (120 calories, 13 g protein)  
 ½ Whole wheat English Muffin

1 cup skim milk and ½ cup of steel cut or Irish oatmeal

½ cup grapes

3-4 oz meat, fish, or poultry, a non-starchy vegetable, and a starch (rice, pasta, potato)

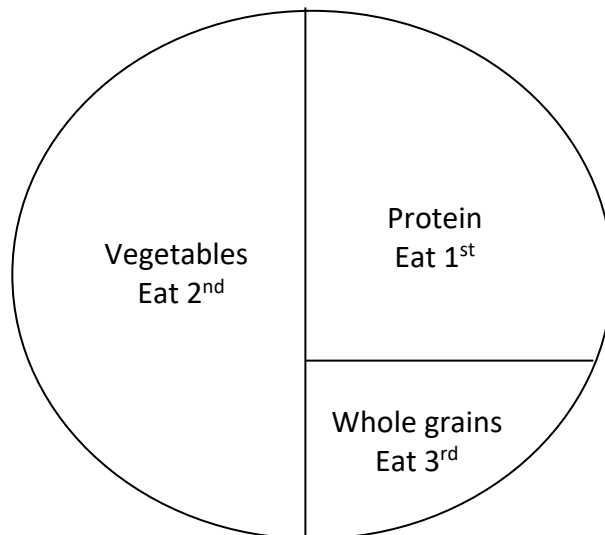
1 Tablespoon regular salad dressing  
 2 Tablespoons light salad dressing

¼ cup boiled edamame (soybeans)

3-4 oz meat, fish, or poultry, a non-starchy vegetable, and a starch (brown rice, whole grain pasta, baked potato)

2 cups raw vegetables (exclude starchy vegetables, such as peas, corn, potatoes, lima beans, plantain, squash, and yams)

Sample Plate:

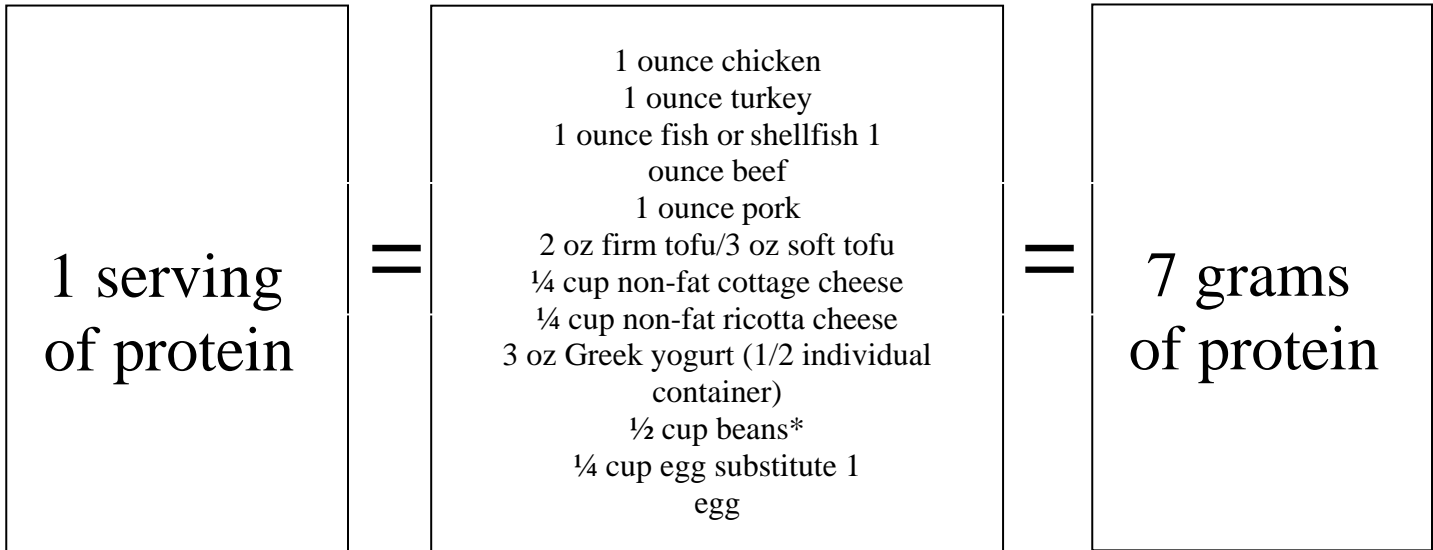




## SERVING SIZES

### Protein Foods

Each protein food contains 7 grams of protein per serving. You may eat multiple servings at a time.



*\*1/2 cup beans is equal to 1 protein serving + 1 starch serving*

1 ounce or 1 serving = about 7 grams of protein  
2 ounces or 2 servings = about 14 grams of protein  
3 ounces or 3 servings = about 21 grams of protein

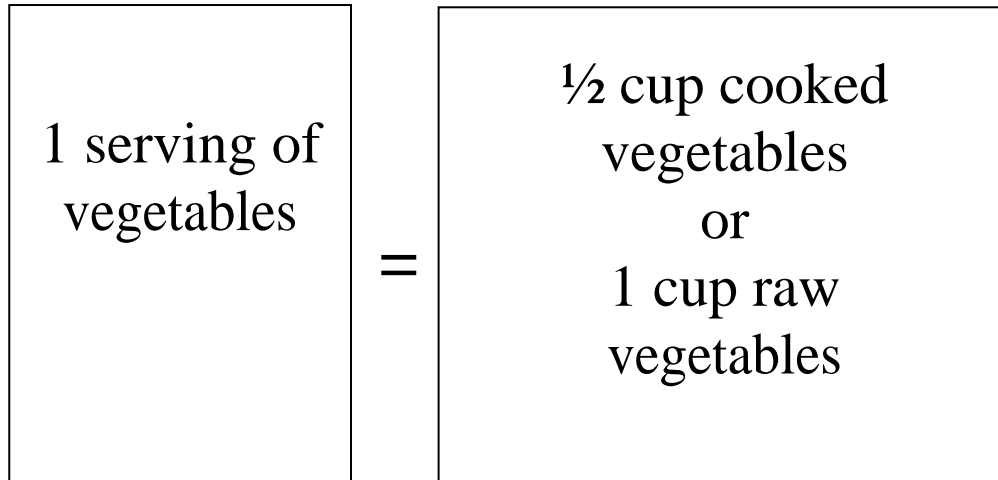
- Choose lower fat protein foods (like skinless chicken breast, 99% fat free ground turkey).
- Limit red meat (beef, lamb, pork).
- Processed meats can increase a person's risk of colorectal and stomach cancer. Processed meats include hot dogs, pepperoni, salami, sausages, corned beef, ham, bacon, pastrami, and any other meats that have been cured, smoked, salted or treated with any chemical preservatives. The dietitian can provide you with more information about processed meats.

**Remember to meet 8 protein servings every day (which is about 60-70 g of protein daily)!**

## Non-Starchy Vegetables

Each vegetable serving contains 5 grams or less of carbohydrates and 2-3 grams of fiber per serving.

*Fresh and frozen vegetables are ready to eat! Rinse canned vegetables to remove some salt.*



### Examples of non-starchy vegetables:

Artichoke  
Asparagus  
Beets  
Broccoli  
Brussels Sprouts  
Cabbage Carrots  
Cauliflower  
Celery Cucumber  
Eggplant  
Green Beans Kale

Lettuce  
Mushrooms  
Onions  
Peppers  
Radishes Salad  
Greens  
Spinach  
Sprouts  
Snap Peas  
Summer Squash  
Tomato  
Water Chestnuts  
Zucchini

**Aim for at least 2 servings of non-starchy vegetables every day!**

Starchy vegetables (corn, peas, potatoes, plantains, winter squash) are found on the Starches List (page 22).

## Fruits

Each fruit serving contains 15 grams of carbohydrates and 2 or more grams of fiber.

Use fresh, frozen or canned fruits with no sugar added.

Eat fruit in its whole form instead of blending or juicing. Whole fruit will fill you up more!

### Fresh, Frozen, & Unsweetened Canned Fruit

Apple (2 in. across).....	1 apple
Applesauce (unsweetened) .....	½ cup
Apricots (canned).....	½ cup or 4 halves
Apricots (medium, fresh).....	4 apricots
Banana (8 in. long).....	½ banana
Blackberries .....	¾ cup
Blueberries .....	¾ cup
Breadfruit .....	¼ cup
Cantaloupe .....	1 cup cubes
Cherries (canned).....	½ cup
Cherries (fresh).....	12 cherries
Chico fruit (like kiwi).....	½ chico fruit
Figs (fresh).....	2 figs
Grapefruit (medium).....	½ grapefruit
Grapefruit (segments).....	¾ cup
Grapes .....	15 grapes
Honeydew melon .....	1 cup cubes
Guava, guayaba.....	½ cup
Kiwi .....	1 kiwi
Mamey .....	2/3 cup
Nance fruit (cherry like) .....	1 cup, pitted
Mandarin oranges.....	¾ cup
Mango .....	½ mango
Nectarine (2 ½ in. across).....	1 nectarine
Orange (2 ½ in. across).....	1 orange
Papaya.....	1 cup
Passion fruit .....	1/3 cup pulp
Peach (fresh).....	1 peach or ¾ cup
Peaches (canned).....	½ cup (2 halves)
Pear (fresh).....	½ large or 1 small
Pears (canned).....	½ cup or 2 halves
Persimmon .....	2 persimmons
Pineapple (canned).....	1/3 cup
Pineapple (fresh).....	¾ cup
Plantain and green banana .....	½ a plantain or ¾ cup small green banana
Plum .....	2 plums
Pomegranate.....	½ of fruit
Raspberries .....	1 cup
Soursop .....	1/3 cup pulp
Starfruit .....	3 cups cut up
Strawberries (whole).....	1 ¼ cup
Tamarind .....	11-12 raw tamarinds
Tangerine (clementines).....	2 tangerines
Watermelon .....	1 ¼ cup cubes

Every fruit & amount  
listed on this page  
=  
1 serving of fruit

### Dried Fruit (no added sugar)

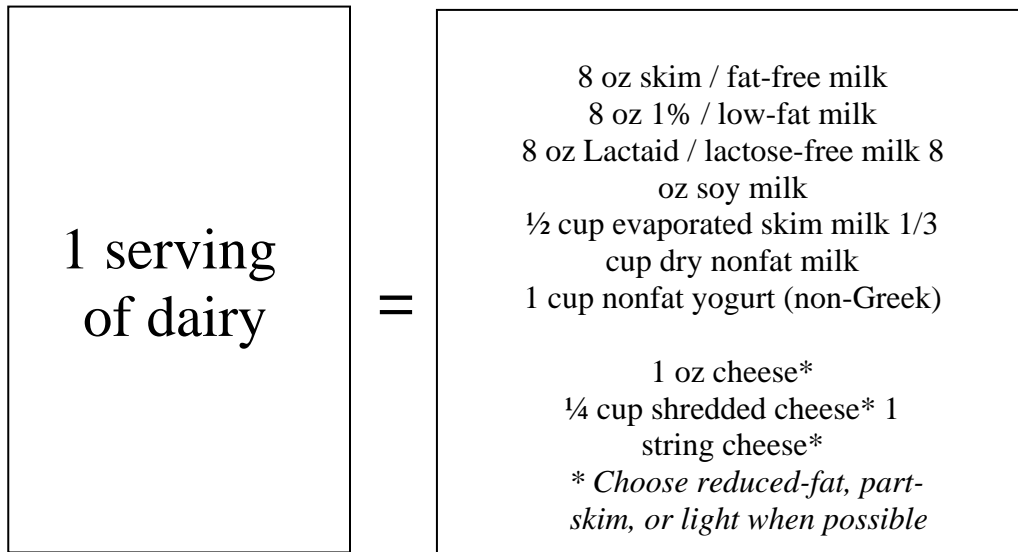
*Serving sizes for dried fruits are small because they are calorie-dense foods.*

Apples.....	4 rings
Apricots.....	7 halves
Dates.....	2 ½ medium
Figs.....	1 ½
Prunes.....	3 medium
Raisins.....	2 Tablespoons
Dried cranberries.....	2 Tablespoons

**Aim for 2 servings of  
fruit every day!**

## Dairy

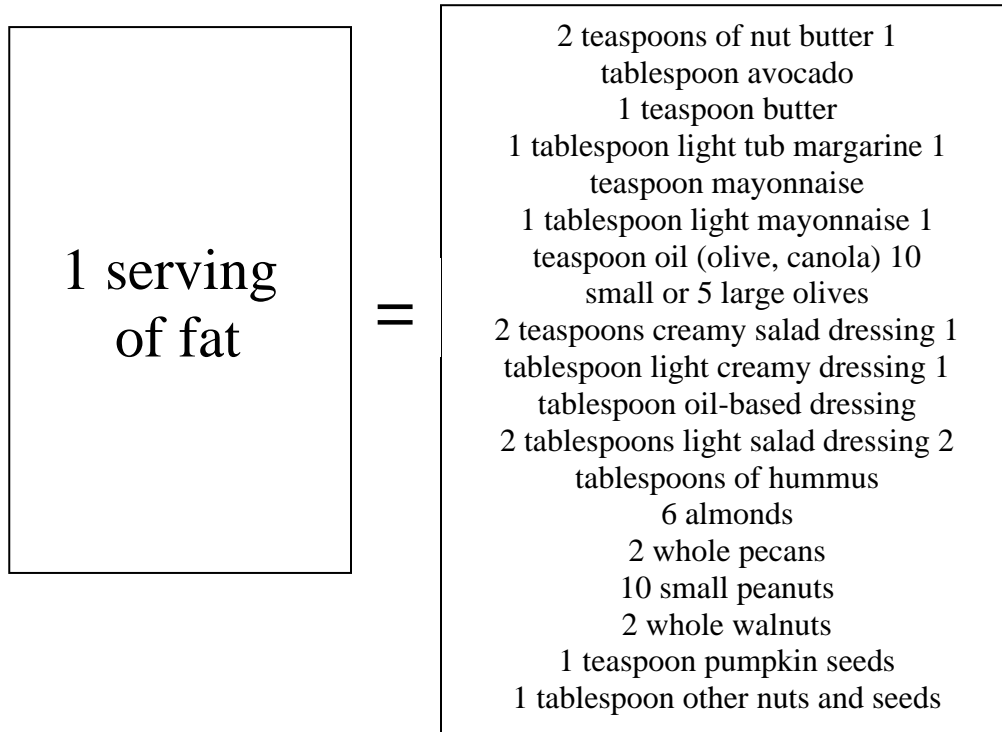
Each serving of dairy contains 6-8 grams of protein. Watch out for added sugars!



**Aim for 1-2 serving of  
dairy every day!**

## Fats

Each serving of fat contains 5 grams of fat. *Conversion tip:* 1 Tablespoon = 3 teaspoons



**Limit to 2-3 servings  
of fat every day!**

## Starches

Each serving contains 15 grams of carbohydrates.

Every food &  
amount listed on  
this page  
=  
1 serving of starch

**Choose 100% whole grain / whole  
wheat options whenever possible!**

### Starchy Vegetables

Corn.....1/2 cup  
Corn on the cob, 6 in. long.....1  
Green peas.....½ cup  
Plantain.....½ cup  
Baked potato (medium).....1/2  
Mashed potato.....½ cup  
Winter squash (acorn, butternut)\_\_\_\_½  
cup Yam/sweet potato.....1/3 cup

### Cooked Beans/Peas/Legumes (also count as 1 protein)

Beans and legumes (kidney, pinto, black, lentils,  
chickpeas, black-eyed peas).....½ cup  
Baked beans.....¼ cup

### Cereals/Grains/Pasta

Cold cereals (unsweetened)¾ cup  
Bran cereals.....1/3 cup  
Bran cereals (flaked).....½ cup  
Granola.....2 Tbsp  
Shredded wheat.....½ cup  
Bulgur (cooked).....½ cup  
Hot cereals (unsweetened)½ cup  
Grits (cooked).....½ cup  
Pasta (cooked).....½ cup  
Rice (cooked).....1/3 cup  
Quinoa (cooked).....1/3 cup

### Breads

Bagel (from cafe).....¼ (1 oz)  
Bagel (pre-packaged, grocery store) ½ (1 oz)  
Bread sticks.....2 (2/3 oz)  
English muffin.....½  
Hamburger or hot dog bun.....½ (1 oz)  
Pita, 6 in. across.....½  
Plain roll, small.....1 (1 oz)  
Bread.....1 slice (1 oz)  
Tortilla, 6 in. across.....1  
Sandwich thins/deli flats.....1

**Limit to 3 servings of  
starch every day!**

### Crackers and 'Snack Foods'

Animal crackers.....8  
Graham crackers (2.5 in. square)\_\_\_\_3  
Matzo¾ oz  
Melba toast\_\_\_\_5  
Oyster crackers.....24  
Popcorn (popped, 94% fat free).....3 cups  
Pretzels.....¾ oz  
Rye crisp (2 in. x 3 in.).....4  
Saltine crackers.....6  
Wheat Thins.....8  
Triscuits.....4

## TRACKING YOUR DAILY FOOD INTAKE

### Why is logging beneficial?

- Reveals food and activity habits that you may not be aware of
- Holds you accountable for what you eat and drink and how physically active you are
- Research shows that people who log their intake lose more weight
- Helps your dietitian and physician better understand your eating and physical activity habits

### **Noom:** \$50/month (iPhone and Android)

- Provides users with eating plans designed by RD's, allows users to log their own meals, access workout plans and track exercise, read article, search recipes, set goals, receive support and feedback from a personalized health coach, rate daily motivation, and connect with a group of peers with similar goals.
- Website: [www.noom.com](http://www.noom.com)

### **Lose It! Weight Loss Program App:** Free (iPhone and Android)

- Provides users with 3 easy ways to track food: searching the Lose It! database of 7 million+ foods, restaurant items and brands, scanning barcodes to upload nutrition information for a product, or by taking a picture of your plate for analysis by Lose It! nutrition experts.

- Website: [www.loseit.com](http://www.loseit.com)

### **My Fitness Pal Calorie Counter & Diet Tracker App:** Free (iPhone and Android)

- Users can not only track their food but can also link their account to over 50 other apps that support an overall healthy lifestyle.

- Website (Free): [www.myfitnesspal.com](http://www.myfitnesspal.com)



### **Baritastic:** Free (iPhone and Android)

- Allows users to upload photos and notes to help users track their journey. Also provides alerts to remind users to take vitamins, protein shakes, or eat a meal.

- Website: [www.baritastic.com](http://www.baritastic.com)



## VITAMIN AND MINERAL SUPPLEMENTS

### **Vitamin and Mineral Supplements:**

You will need to take vitamin and mineral supplements for the rest of your life after surgery. We recommend that you start with chewable or liquid supplements until stage 4. Over time, if you are comfortable swallowing a 'petite' tablet or cutting a pill in half, you can swallow your supplements.

### **Multivitamin with Minerals:**

- Take a 'complete' multivitamin(s) daily; dose will vary based on brand of multivitamin.
- Complete multivitamins contain iron, zinc, folic acid, and copper.
- Avoid gummy multivitamins – these don't have all the right nutrients.
- Separate multivitamin(s) with iron from calcium by at least 2 hours.

### **Vitamin B12:**

- Take 350-500 micrograms vitamin B12 daily in the form of a tablet or liquid.
- You can take vitamin B12 at any time or with any other supplements.
- You can also get vitamin B12 in a nasal spray or injection.
- Your multivitamin might have enough vitamin B12 in it. This will be listed on your shopping guide.

### **Calcium Citrate with Vitamin D:**

- Take 1200-1500 mg of calcium citrate daily split into 2-3 doses.
  - Your body can only absorb 600 mg of calcium at one time.
  - Check serving size on calcium nutrition facts label to determine how many to take at one time.
  - Separate calcium doses by at least 4 hours.
- Separate multivitamin(s) with iron from calcium by at least 2 hours.
- You can also meet your daily calcium needs from food and supplements. Talk to your dietitian.

### **Other Supplements:**

Some patients may need extra vitamins and minerals, such as iron, vitamin D, or B vitamins. We will check your vitamin and mineral levels regularly through lab tests and discuss extra supplements as needed.



## EXERCISE AND PHYSICAL ACTIVITY

Most people need to exercise at least 250 minutes (over 4 hours) each week to maintain weight loss. It takes time to build up to that amount of exercise but start where you're at. You can even break your exercise up into smaller amounts of time during the day. Remember, find an activity you enjoy!

### Here are some ideas for increasing your physical activity before and after surgery.\*

- ✓ Walk more! You may start walking immediately after your procedure, if you have the energy.
- ✓ Make exercise a family event. Go for a walk together after dinner or on the weekend.
- ✓ Keep exercise clothes in your car to make sure you will go to the gym.
- ✓ To decrease impact on your joints, try pool exercises, water aerobics, or a stationary bicycle.\*
- ✓ Turn up the music and dance.
- ✓ Do yard work, gardening, or household chores that require brisk movement.
- ✓ Check out exercise videos online.
- ✓ Try chair exercises.
- ✓ Check out a new exercise class.

### Consider using the FITT principle to progress in your physical routine.

Frequency	Intensity	Time	Type
How often you perform these exercises.	How hard you are exercising.	How long are you exercising for?	This refers to the type of exercise you do.
Start with 1-2 times per week and increase up to 3 times per week.	Instead of resting between exercises, go through an entire set of each exercise of the above routine then repeat 2-3 more times! Or, to progress, increase the weight as you are able.	Try to build up to the recommended amount of exercise.	Try to achieve a balance throughout your week of both aerobic and strength training exercise.

### Phone apps: to track your activities:

- **RunKeeper** – Free app
  - Logs any activities: running, walking, yard work
  - Can be synchronized with other fitness applications and devices
- **MapMyRun** – Free app
  - Logs running, walking, hiking
  - Can be synchronized to other fitness applications and devices

## POSSIBLE PROBLEMS AND SOLUTIONS

We don't expect all of these problems to happen to you but if they do, we want you to know how to solve them. It is helpful to keep a record of anything unusual that occurs and what you did before and after it happened.

### **Dumping Syndrome**

Dumping syndrome is the body's reaction to eating and drinking foods and beverages with added sugar, such as cakes, cookies, candies, juice, and soda. The foods or beverages pass too quickly through the stomach pouch. This causes symptoms such as nausea, cramping, cold sweats, dizziness, extreme tiredness, and an increase in heart rate. Usually the symptoms will stop in 1-2 hours. Lying down can help patients to recover. Eating high-fat foods, such as fried foods, causes similar symptoms.

All patients are encouraged to avoid foods and beverages with added sugar and high-fat foods.

### **Dizziness, Headaches, Lightheadedness, Dark Urine (Signs of Dehydration)**

- ✓ Drink fluids with electrolytes (like Propel Zero or Powerade Zero).
- ✓ Add salt to your foods.
- ✓ Drink salty bouillon or soup broth.

Call the Physician's Assistant phone line at 617-732-8882 if you are unable to catch up on your fluids.

### **Constipation**

#### *Short-term Solutions*

- ✓ Increase your fluids – aim for 64 ounces daily.
- ✓ Try a laxative, such as Milk of Magnesia or Miralax, and take a stool softener up to 3 times daily.

#### *Long-term Solutions*

- ✓ Increase your fluids – aim for 64 ounces daily.
- ✓ Increase your fiber intake.
  - Eat more fruits, vegetables, and whole grains if your diet stage permits.
  - If you are unable to add more fiber through your diet, try a fiber supplement, such as Benefiber or Metamucil.
  - Slow and steady is the key to adding fiber to your diet. Start with a small amount, such as one serving of fiber supplement or one extra serving of food with fiber. Stick with that amount for 1-2 weeks before increasing as needed.
- ✓ Stay physically active.
- ✓ Continue taking a stool softener as needed.

### **Diarrhea**

- ✓ Limit or avoid foods with lactose. Lactose intolerance can occur after surgery. Please see page 8 for more details.
- ✓ Eat slowly and chew thoroughly.
- ✓ Do not drink fluids with meals.
- ✓ Avoid high sugar, high fat, and spicy foods.
- ✓ Limit the amount of sugar-free products (like sugar-free candies). These products may contain sugar alcohols (artificial sweeteners that end with -ol such as malitol, sorbitol, xylitol, etc.) that can cause diarrhea.
- ✓ Limit caffeinated beverages.
- ✓ Try a probiotic supplement – ask your dietitian for suggestions.
- ✓ Try psyllium, a natural soluble fiber.

### **Nausea and/or Vomiting**

- ✓ Tune into your eating behaviors. Take small bites, chew thoroughly and pause after each bite.
- ✓ Stop eating or drinking at the first sign of fullness, which may feel like pressure in your upper chest.
- ✓ Stay hydrated. Drink at least 48-64 ounces of fluids.
- ✓ Keep foods tender and moist.
- ✓ Determine whether you might have lactose intolerance (page 8).
- ✓ Avoid eating and drinking at the same time.
- ✓ If these suggestions do not work, or you vomit bright red or dark brown liquid, please call the PA line or your surgeon's office.

### **Bloating/Gas/Cramping**

- ✓ Limit or avoid foods with lactose. Lactose intolerance can occur after surgery. Please see page 8 for more details.
- ✓ Limit or avoid sugar alcohols (artificial sweeteners that end with -ol such as malitol, sorbitol, xylitol, etc.).
- ✓ Avoid carbonated beverages.
- ✓ If drinking through a straw causes these problems, avoid using one.

### **Heartburn**

- ✓ Every person has different food and beverage triggers of heartburn. Make a list of the ones that trigger heartburn for you and avoid them.
- ✓ Take your prescribed heartburn medication.
- ✓ Tune into your eating behaviors. Take small bites, chew thoroughly and pause after each bite.
- ✓ Avoid lying down for 3-4 hours after eating.

### **Hair Loss**

- ✓ Hair loss after bariatric procedure is called 'telogen effluvium' and generally occurs around 3-6 months. This happens because some of your hair follicles are in resting stage (telogen phase) during the time of the procedure, and the stress of significant weight loss can cause that hair to stay in the resting stage.
- ✓ There's generally not much you can do about hair loss at 3-6 months post-op except minimize washing and brushing to prevent extra fallout.
- ✓ If hair loss continues after month 6, speak to your dietitian. It could be related to iron, copper, zinc, or B vitamin deficiencies or not eating enough protein.
- ✓ You can also try Nioxin shampoo.

### **Dental Health**

- ✓ Because you won't be eating and drinking together after your procedure, you may be at a higher risk for dental carries. Also, acid reflux may damage your teeth, so consider the following:
- ✓ Swish your mouth out with water/mouth wash (don't swallow!) and spit after eating to remove food particles.
- ✓ Floss regularly.
- ✓ Consider brushing 3 times daily.
- ✓ Talk to your dentist about your bariatric surgery, especially if you have acid reflux.
- ✓ Consider adding a 3<sup>rd</sup> cleaning; instead of every 6 months, schedule a cleaning for every 4 months.