

to the muscle layer to help reduce post-operative pain. You may have a urinary catheter placed based on medical necessity and type of surgery, typically removed after surgery. Before you are taken out of the operating room, you will be transferred to a bed for comfort. The surgeon will speak to your family after surgery.

- When the operation is completed, you will be taken to the Post Anesthesia Care Unit (PACU) where you will remain for a few hours. During this time, pain control will be established. The nurses will ask you to report your pain on a scale of 0 – 10, 0 = no pain, and 10 = the most pain imaginable. The nurses will medicate you to keep your pain level tolerable and will monitor your vital signs.
- Following surgery, it is important to start moving to promote good circulation. You will be asked to start by moving your ankles, and eventually your legs once you are more awake. Bending or flexing your legs will help reduce the chance of low back pain, which is sometimes caused by lying on your back for extended periods. You will also be encouraged to take deep breaths.

- Once your pain is manageable and nausea is controlled, you will be taken to the nursing unit where a nurse will care for you.

## During Your Hospital Stay

- After arrival to your hospital room, nurses will continue to check your blood pressure, pulse, and oxygen levels frequently. The nurse will assist you to get out of bed a few hours after you arrive to your room, which is important to prevent formation of blood clots in your legs.
- Notify the nurse if you experience nausea so that they can address it.
- Walk the hallways at least 1 time per hour to alleviate gas pain and to prevent blood clots.
- Use your incentive spirometer at least 1 time every 15 minutes to help fully expand your lungs and prevent pneumonia.
- Your nurse will provide you with all beverages and protein shakes needed. You will not need to order any dietary items from the kitchen.



# Discharge Instructions

The decision to discharge after surgery is made on an individual basis. Before you are discharged, you must be able to get out of bed and walk, your pain must be well controlled, you must be able to drink fluids without difficulty, and must be able to tolerate protein shakes. Arrangements must be in place for someone to drive you home. You will receive written discharge instructions when you leave the hospital, which will include the following, plus additional information specific to you:



## Follow these instructions:

- You may take a shower 24 hours after surgery ends. No submerging in water until cleared by your surgeon (no swimming/baths).
- Keep all follow up appointments with your surgeon and dietitian.
- Schedule a visit with your Primary Care Provider and endocrinologist (if applicable) 1-2 weeks after surgery.
- Follow your diet exactly as prescribed. Do not advance your diet until your dietitian visit.
- Do not push, pull or strain (vacuuming, shoveling, mowing the lawn).
- Do not lift more than 15 lbs. until directed by your surgeon.
- Do not drive for 48 hours after anesthesia or 24 hours after your last dose of opioid pain medication.
- Check with your doctor before returning to work.
- To avoid constipation, drink at least 64 ounces of fluid daily and follow the Miralax protocol.
- Take your usual medications, unless otherwise directed by your doctor.

- Avoid caffeine and carbonated beverages until you meet with your dietitian.
- Avoid smoking and alcohol.
- Avoid use of NSAIDs (Non-Steroidal Anti Inflammatory drugs) entirely if you had gastric bypass. Limit use NSAIDs if you had the sleeve gastrectomy.
- Walk at least 1 time per hour during waking hours for the first month to prevent blood clots.
- Continue using incentive spirometer at least 1 time every 15 minutes for the first week.

## Call your doctor if you have:

- Tachycardia (fast heart rate >100 beats per minute)
- Abdominal pain (worsening, not relieved by pain medication)
- Chest pain, shortness of breath
- Fever and chills
- Nausea and vomiting
- Leg swelling, pain
- Dehydration
- Diarrhea
- Bleeding, drainage, swelling, redness, opening, foul smell or red streaks from incision sites.
- Pain not relieved by pain medications
- Any new or unusual symptoms, questions or concerns.

**You are the most important factor in your recovery.**

**Follow the above instruction carefully!**

# Potential Post-Operative Symptoms, Problems and Solutions

- **Swelling and bruising:** Moderate swelling and bruising are normal. Severe swelling and bruising may indicate bleeding or possible infections.
- **Discomfort and pain:** Mild to moderate or pain is normal after any surgery. If the pain becomes severe and is not relieved by pain medication, notify the bariatric clinic using contact instructions.
- **Numbness:** Small sensory nerves to the skin's surface are occasionally cut when the incisions are made or interrupted by undermining of skin during surgery. The sensation in those areas gradually returns, usually within 2-3 months when the nerve endings heal spontaneously. Be especially careful not to burn yourself when applying heating pads to an area that may have postoperative numbness.
- **Itching:** Itching and occasional small shooting electrical sensations within the skin frequently occur as the nerve endings heal. These symptoms are common during the recovery period. Ice, skin moisturizers, Vitamin E oil, and massages are often helpful.
- **Pain or swelling in legs:** Pain, tenderness, or swelling in the legs, particularly one leg, can be a sign of a blood clot forming in the deep veins of the leg. This is a serious condition that can be life threatening if a clot breaks loose and travels to the lungs. A sudden onset of shortness of breath could be a sign of a blood clot to the lungs. If you develop these symptoms, go to the nearest emergency room. To prevent blood clots, exercise regularly, walk regularly, and stay hydrated.
- **Wound infection:** Redness, swelling, increasing pain or drainage from a surgical incision site may be a sign of infection. If any of these symptoms develop, call the bariatric clinic.
- **Stenosis or stricture:** A stenosis, stricture, or narrowing of the outlet of the stomach can occur as the area heals. The usual symptom

**Please call us with any problems, questions, or concerns after surgery.**

## Examples include:

- Abdominal pain
- Chest pain, shortness of breath
- Fast heart rate
- Fever and chills
- Nausea and vomiting
- Leg swelling, pain
- Dehydration
- Diarrhea

During normal business hours, Monday-Friday from 8:00 am to 5:00 p.m., call the bariatric clinic at (603) 610-8095.

After hours, call the bariatric clinic at (603) 610-8095 to reach the on-call bariatric surgeon.

**In the case of an emergency, go directly to the nearest emergency room or dial 911.**

is vomiting after eating solid food in a patient who has previously been able to eat solid food. The problem often worsens and can lead to dehydration. The stricture can usually be dilated with a balloon during an endoscopic procedure, which is outpatient without sedation.

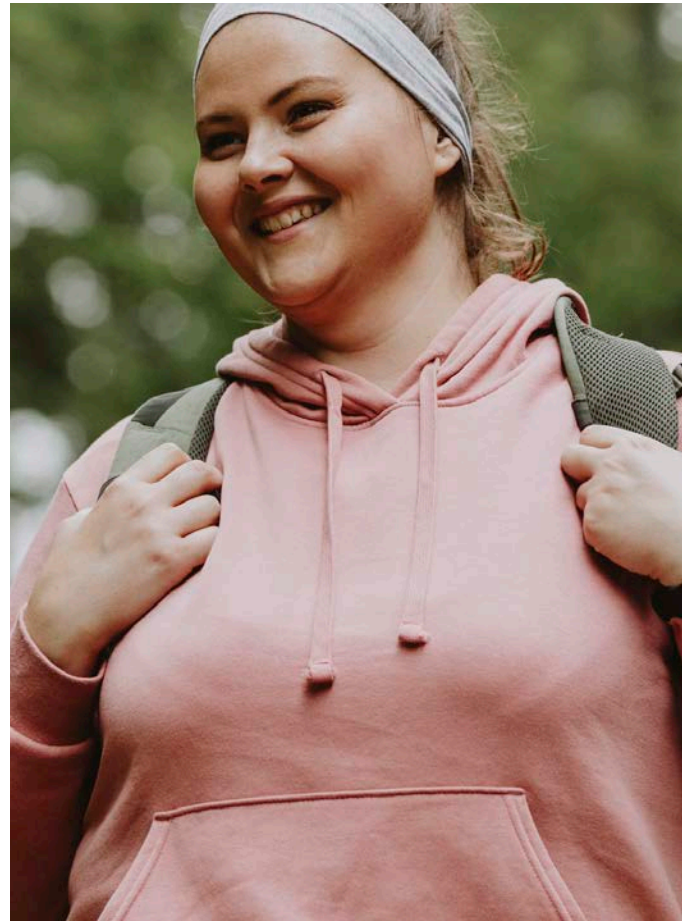
- **Nausea:** Nausea is often related to fullness, sensitivity to odors, pain medicine, not eating, postnasal drip, or dehydration. If you experience nausea for these reasons, medication is helpful. Nausea is often related to dehydration. It is important to stay hydrated, sipping fluids continuously throughout the day. Recording your fluid intake in a notebook or your mobile app will help to ensure you are meeting your 64 ounce per day minimum goal. If you have difficulty drinking

due to nausea, you may want to try peppermint tea, fennel tea, decaffeinated green tea, or hot or cold water with lemon. Persistent nausea and/or vomiting can lead to dehydration and electrolyte imbalances. To prevent this, we recommend you recognize when you are full by eating more slowly, taking smaller bites, chewing until food is completely liquefied (think applesauce-like texture), and avoid eating and drinking at the same time.

- **Vomiting:** Vomiting is not a normal reaction to eating after surgery. If you vomit, review the following list of incorrect behaviors that may cause vomiting:
  - » Eating too quickly
  - » Not chewing food properly
  - » Eating food that is too dry
  - » Eating too much food at one time
  - » Taking too large of bites
  - » Introducing solid foods too soon after surgery
  - » Drinking liquids with meals or immediately after meals
  - » Eating foods that don't agree with you

To avoid vomiting after eating, focus on correcting the above behaviors. In the beginning, it can be difficult to gauge the amount of food you should eat that will make you full. It is likely that very little food will result in fullness, maybe only a few teaspoons in the beginning. It is important to learn the signals your body gives when you're nearing fullness, and stop at the last bite when fullness occurs. Persistent vomiting can lead to dehydration and electrolyte imbalance, and long-term, can lead to vitamin deficiencies. If vomiting is persistent, stop eating solid foods. Vomiting may indicate a stricture or blockage of the outlet of the stomach. If you are vomiting, notify the bariatric clinic.

- **Bowel habits:** The surgery restricts the amount of food and fiber (or roughage) consumed, therefore, your bowel movements will be much smaller in size and less frequent. Some experience loose stools, some experience constipation. Once



your intestines adapt, it is normal to have 1-3 bowel movements of soft stool per day. It may be foul smelling and associated with flatulence. Immediately after surgery, if cramping and loose stools (more than 3 per day) occur, or constipation persists for more than 3 days, notify the bariatric clinic. After SADI-S it is expected to have 2-5 loose bowel movements daily. If you have persistent diarrhea beyond 1 year from your surgery, call your surgeon.

For constipation:

- » Drink more calorie-free fluids (at least 64 ounces a day)
- » Stay active and walk more often
- » Increase fiber intake
- » If you are on stage 4, try pureed beans, fruits, vegetables or oatmeal
- » If you are on stage 5, try beans, peas, lentils, fruits, vegetables, whole grains

- » You may need to add a laxative such as Miralax
- » If constipation persists for more than 3 days, notify the bariatric clinic.

For diarrhea:

- » Eat slower
  - » Avoid overeating
  - » Avoid drinking and eating at the same time
  - » Limit foods labeled “sugar free” since they may contain sugar alcohols (listed on Nutrition Facts label if present)
  - » Limit intake of caffeine
  - » Limit intake of sugar alcohols (Goal <5g per serving)
- **Dehydration:** Inadequate fluid intake can lead to dehydration. Since you cannot drink quickly after surgery, this can happen easily. If you go a prolonged period during the day without drinking, you are unable to compensate your fluid intake for that time missed. Symptoms include fatigue, dark colored urine, dizziness, fainting, lethargy, nausea, a constant dull ache over the lower back, and a whitish coating on the tongue. Your doctor may order blood testing to determine the severity of dehydration. Dehydration increases your risk for bladder and kidney infections, and increases your risk for developing blood clots in your legs. If you think you may be dehydrated, call the bariatric clinic. In some cases, you may need to come to the hospital on an outpatient basis for IV fluids.
  - **Dizziness/Lightheadedness/Fatigue:** Dehydration, inadequate calorie/protein/carbohydrate intake, vitamin deficiencies, low blood pressure, or medications are possible reasons for dizziness, lightheadedness, or fatigue. It is important to eat on a regular schedule, avoid skipping meals, drink adequate calorie-free fluids (64 ounces a day minimum), take your vitamins as directed daily, and check your medications for potential side effects. If your blood pressure is low, it may be helpful to add salt to your food, drink chicken broth, or beverages with added electrolytes like Powerade Zero.

- **Dumping syndrome:** Dumping syndrome can occur (mostly with gastric bypass) after eating high sugar or high fat foods, even if in a small amount, too quickly. When this happens, food passes very quickly from the stomach to the small intestine. Water from surrounding blood vessels is drawn into the small intestine resulting in nausea, vomiting, sweating, bloating, diarrhea, dizziness, sweating, low blood pressure, and stomach pain. Symptoms can occur between 30 minutes and 3 hours after eating. To prevent dumping syndrome:
  - » Avoid high sugar foods (no more than 10 grams total sugar per meal or snack)
  - » Avoid high fat foods
  - » Avoid drinking and eating at the same time
  - » Avoid alcohol
- **Taste changes:** You may experience changes in taste and food preferences, which is often temporary. Please call your dietitian if you feel these taste changes are preventing you from getting enough protein or fluids.
- **Flatulence:** It is important to remember that everyone has gas in the digestive tract. Gas comes from two main sources: swallowed air and normal breakdown of carbohydrate foods by harmless bacteria that is naturally present in the large intestines. Foods that can increase gas include broccoli, Brussels sprouts, cabbage, cauliflower, corn, dried beans, and onions. Eating too quickly, drinking carbonated beverages or alcohol and chewing gum can also increase gas. Gas-X or simethicone can help reduce flatulence for some individuals.
- **Heartburn:** Heartburn, especially with the sleeve gastrectomy, can occur after surgery. It is important you take your antacid medication as prescribed to you upon discharge. Avoid caffeine, alcohol, and spicy foods. Check the side effects of any medications you are taking that may cause heartburn. Call the clinic for persistent heartburn.
- **Leg Cramps:** Leg cramps may be due to electrolyte imbalance or not getting enough

fluids. To prevent leg cramps, ensure that you are eating a balanced diet, meeting your fluid goals of 64 ounces per day minimum, taking your vitamins as directed daily, and are physically active. If you are meeting your fluid goals, it may be helpful to incorporate low sugar drinks containing electrolytes such as broth, Gatorade Zero or Powerade Zero. Call the bariatric clinic if cramps persist or if pain, swelling, or redness occurs.

- **Hernia:** Hernias are less common with robotic-assisted laparoscopic procedures in comparison to open procedures. A hernia occurs when a section of bowel protrudes through a weakness or opening in the abdominal wall. You may notice a bulging in your abdomen and pain. The pain may be dull and aching or sharp. You may feel pain when you lift a heavy object, cough, or strain during urination. Minimize the risk of developing a hernia by avoiding heavy lifting for three months after surgery. You may also experience nausea and vomiting. If you believe you have a hernia, schedule an appointment with your surgeon. Surgery is the only way to fix a hernia. If the hernia comes out, will not go back in when you lie down, and is associated with severe pain, nausea, and/or vomiting, then call the bariatric clinic or go to the emergency room.
- **Gallstones:** Gallstones can develop after rapid weight loss if you still have your gallbladder. Nausea, vomiting, and pain in the upper abdomen or back could be a sign of gallstones. If you develop these symptoms, call your surgeon to schedule an appointment.
- **Vitamin and mineral deficiencies:** It is important you take your vitamin and mineral supplements recommended by your dietitian lifelong. Refer to the vitamin/mineral instructions section of this manual for more information. Vitamin deficiencies can lead to anemia, confusion, memory loss, depression, mineral depletion of the bones, hair loss, and much more. Some of the effects of vitamin and mineral deficiency cannot be reversed. Most people do not develop deficiencies if they take their vitamin and mineral supplements as directed. Your vitamin lab values will be monitored regularly after surgery and reviewed with you. Sometimes, additional vitamin/mineral supplementation above the standard recommendation is needed.
- **Ulcers:** Ulcers can occur on or near the connection between the stomach pouch and the small bowel after gastric bypass. It is important you take your prescribed antacid medication in the early months after surgery to prevent ulcers. Pain in the upper middle abdomen could be a sign of an ulcer and should be reported to your surgeon. Ulcers are more likely to occur in patients who smoke or take non-steroidal anti-inflammatory drugs (NSAIDs) such as Aleve, Advil, Aspirin, Ibuprofen, and many more. Check with your doctor or pharmacist before taking a new medication. Tylenol is considered safe and comes in a liquid form. An ulcer can usually be treated with medication.
- **Redness and scars:** All new scars are red, dark pink, or purple. The scars will take about a year to fade. We recommend that you protect your scars from the sun for a year after surgery. A good deal of sunlight can reach the skin and cause damage, even through a bathing suit. Wear a sunscreen with an SPF of at least 15 when exposed to the sun. You will have scars after surgery. Most procedures are done laparoscopically, resulting in a few small incisions, but in some circumstances, the surgery may need to be performed as an “open” procedure, resulting in one larger incision. If you are concerned about the appearance of your scar, there is a way to make them less visible. Once your incision is fully healed, you may start using silicone pads such as Curad Scar therapy to make the scars look softer, smoother, flatter, and closer to your skin’s natural color. Keep your scars out of the sunlight to help them heal properly.
- **Hair Loss:** Some hair loss is expected in the first 6 months after surgery due to your body’s response to rapid weight loss. To prevent hair loss due to inadequate nutrition, ensure you are taking your bariatric vitamins daily as recommended and getting enough protein. If you hair loss starts after 6 months or continues beyond 12 months, talk with your dietitian.

# Nutrition Guidelines for Bariatric Surgery

## Pre-Operative Nutrition Goals Checklist

- Maintain or achieve pre-op weight loss goal (My goal weight: \_\_\_\_\_)
- Keep a daily food journal
  - Measure and weigh all food and drinks
  - Count protein (60-80 grams/day)
  - Count fluid (64 ounces/day)
- Purchase bariatric vitamins/mineral supplements (do not purchase until advised)
- Purchase a variety of protein supplements and practice drinking prior to surgery
- Exercise 30 minutes most days of the week
- Take 20-30 minutes to complete each meal
- Do not eat and drink together; wait 30 minutes after eating to drink
- Avoid soda, juice, sweetened or calorie-containing drinks and alcohol
- Eliminate caffeine-containing beverages and carbonated beverages 2 weeks before surgery, and avoid for at least 6 weeks after surgery.
- Demonstrate understanding of all post-operative bariatric diet stages
- Read the Nutrition Guidelines section of this handbook
- Attend at least one educational support group

# Food Journaling

A detailed food journal has multiple benefits including:

- Increased accountability and awareness of food and drink consumed
- Greater understanding by dietitian of patterns in patient eating
- Serving as a tool for counting protein and fluid consumed
- A tool to identify potential food intolerances and weight plateaus

It is recommended that you keep a food journal to track all meals, snacks, and beverages consumed before and after surgery. You may choose to make copies of the attached example form, or simply use a notebook to record required information. Additionally, you may use a smart phone application to track food and drink consumed, examples include:

MyFitnessPal • Loselt • FitBit • Baritastic (connect with us using program code 25252)

## What should I include in my food journal?

- Everything you eat and drink
- Portion of food/drink consumed
- Time of consumption
- Protein amounts (in grams)
- Fluid amounts (in ounces)

## Example Food Journal

Time	Foods and Drinks	Portion Consumed	Protein (grams)	Fluid (ounces)
8 a.m.	Whey protein powder	1 scoop	20	0
	Skim milk	8 ounces	8	8
	Frozen berries	½ cup	0	0
9 a.m.	Water	16 ounce bottle	0	16
10 a.m.	Greek yogurt, reduced sugar	1 individual container	15	0
noon	Tuna, canned in water	3 ounces	21	0
	Salad with lettuce, tomato, peppers, onions	2 cups	0	0
	Light salad dressing	2 tablespoons	0	0
1 p.m.	Crystal light	1 packet	0	16
2 p.m.	String cheese	1	5	0
	Banana	1 small	0	0
3 p.m.	Vitamin Water ZERO	1 bottle	0	20
5 p.m.	Skinless chicken breast, baked	3 ounces cooked	21	0
	Broccoli, steamed	1 cup	0	0
	Brown rice	½ cup	0	0
7 p.m.	Water	1 bottle	0	16
<b>Total protein and fluid:</b>			<b>90</b>	<b>76</b>

Exercise Type: Walking

Exercise Minutes: 30



# Food Journal Template

Time	Foods and Drinks	Portion Consumed	Protein (grams)	Fluid (ounces)
<b>Total protein and fluid:</b>				

<b>Exercise Type:</b>	<b>Exercise Minutes:</b>
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# Understanding Food Labels

Claims on the front of food packages can be confusing. The best way to know what is in your food is to check the “Nutrition Facts” label and the ingredient list. **Never assume a food is safe to eat after surgery, always check the label before eating!**

<b>Nutrition Facts</b>	
8 servings per container	
<b>Serving size</b>	<b>2/3 cup (55g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>230</b>
<b>% Daily Value*</b>	
<b>Total Fat</b> 8g	<b>10%</b>
Saturated Fat 1g	<b>5%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 160mg	<b>7%</b>
<b>Total Carbohydrate</b> 37g	<b>13%</b>
Dietary Fiber 4g	<b>14%</b>
Total Sugars 12g	
Includes 10g Added Sugars	<b>20%</b>
<b>Protein</b> 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

\* 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.

## Servings per container

This tells you how many servings you should get from the whole package. Is it realistic?

**Serving size;** All information listed on the label is based on this amount.

## Calories

A measure of energy. Everyone has different calorie needs. Too many calories will result in weight gain. Reducing calories will result in weight loss. Ask your dietitian how many calories you need.

## Protein

Your protein goal is 60-80 grams per day. Include foods with protein at most meals and snacks. NOTE: Not all foods with protein are healthy! Check other nutrients to make sure a food is healthy.

## Other nutrients to check (per serving):

- **Total Sugars:** We recommend you limit total sugar to no more than 10 grams at one sitting for prevention of dumping syndrome.
- **Total Fat:** We recommend you limit total fat to no more than 10 grams at one sitting for prevention of dumping syndrome.
- **Dietary Fiber:** 3 grams or more
- **Sugar Alcohols:** 10 grams or less (only listed on the label if present)

## You can also check the % Daily Value:

- 5% or less is considered low
- 20% or more is considered high

## Ingredients list:

It is listed below the Nutrition Facts label. Ingredients are listed from most predominant, to least. Avoid products where various forms of sugar (sugar, honey, corn syrup, etc.) are listed earlier in the ingredients list. To ensure you are selecting a whole grain product (bread, crackers, cereal, etc.), the first ingredient listed should contain the word “whole”.

# Vitamin & Mineral Supplement Guidelines

## Why do I need to take them?

Vitamins and minerals are absorbed differently after surgery. In order to avoid deficiencies that may occur as a result of surgery, it is required that you take the vitamins and minerals listed below lifelong. Below is a list of potential complications that can arise from vitamin/mineral deficiency:

- Anemia
- Dizziness, unsteady gait
- Irritability
- Fatigue
- Dry skin, brittle nails
- Memory loss, confusion
- Swollen tongue
- Depression
- Numbness or tingling in fingers/toes
- Diarrhea

**Note:** Experiencing these symptoms alone would not indicate that you have a vitamin/mineral deficiency. You will have regular lab work completed after surgery that would best indicate if a deficiency were present.

## What form of vitamins do I need to take?

Vitamins come in many different forms, but not all are appropriate after surgery. See the list below to help choose the right form of supplements:



### Acceptable Form

- Chewable
- Liquid
- Tablet/capsules smaller than an M&M
- Tablet/capsules that are crushed
- Sublingual or fast-dissolve
- Nasal spray
- Soft chews or chewy bites



### Not Acceptable Form

- Gummy
- Timed-release, delayed-release, or enteric-coated
- Transdermal or skin patches

## Where can I purchase supplements?

- WDH Outpatient Pharmacy
- Amazon.com or other bariatric retail websites

## When should I start taking them?

- Before surgery (only if advised to by your dietitian)
- Two weeks after surgery (when advised to by your dietitian at your first follow-up appointment)

## How will I remember to take them?

- Organize in pill boxes
- Set alarms/reminders in phone
- Medication reminder apps
- Take at the same time you do another task (i.e. brush your teeth)

## How much do I need?

Below is a list of recommended amounts of each vitamin and mineral needed to prevent a deficiency after surgery. Your dietitian will guide you on



choosing the right supplements that contain everything listed below.

- Iron: 45-60 mg (females)
- Iron: 18 mg (for males without history of anemia)
- Zinc: 8-22 mg
- Copper: 1-2 mg
- Thiamine (B1): 12 mg
- Vitamin A: 5000-10000 IU
- Vitamin D: 3000 IU
- Vitamin E: 15 mg
- Vitamin K: 90-120 mcg
- Vitamin B12: 350-500 mcg
- Folate: 400-800 (800-1000 for menstruating women)
- Calcium: 1200-1500 mg (1800-2400 mg after SADI-S)

*This information can be found on the "Supplemental Facts" label on the back of your supplement bottle.*

## Which ones should I buy?

Vitamin and mineral supplements can be confusing. Your dietitian will provide individualized recommendations on which supplements to purchase.

<b>Bariatric Multivitamin (with or without iron)</b>	
<b>Recommended brands:</b>	<p>For Sleeve Gastrectomy &amp; Roux-en-Y Gastric Bypass:</p> <ul style="list-style-type: none"> <li>• ProCare Health Bariatric Multivitamin (available without iron, with 18 mg iron, with 45 mg iron)</li> <li>• Bariatric Pal Multivitamin ONE (available without iron, with 18 mg iron, with 45 mg iron, with 60 mg iron)</li> <li>• Celebrate ONE Multivitamin (available without iron, with 18 mg iron, with 45 mg iron)</li> <li>• Bariatric Advantage Ultra Solo Multivitamin (available without iron, with 45 mg iron)</li> <li>• Celebrate Multi Complete (available without iron, with 45 mg iron, with 60 mg iron)</li> <li>• Bariatric Fusion ONE Per Day Capsule with 45 mg iron</li> <li>• Bariatric Fusion Multivitamin (available without iron, with 45 mg iron)</li> <li>• Shiny Leaf Bariatric Multivitamin (available without iron, with 45 mg iron)</li> </ul> <p>For SADI-S:</p> <ul style="list-style-type: none"> <li>• Celebrate Multi-ADEK (available without iron, with 60 mg iron)</li> <li>• ProCare Health DS/SADI Bariatric Multivitamin (available with 60 mg iron)</li> <li>• Bariatric Advantage Advanced Multi EA (available with 45 mg iron)</li> <li>• Bariatric Advantage High ADEK Multi (available without iron)</li> <li>• Bariatric Advantage Ultra Multi (available with 45 mg iron)</li> <li>• Bariatric Fusion Multi-ADEK capsules (available with 60 mg iron)</li> <li>• Bariatric Fusion Multi-ADEK chewable (available with 45 mg iron and some calcium)</li> </ul>
<b>Notes:</b>	<p>A large 2017 study among gastric bypass patients found that use of a specialized bariatric multivitamin resulted in fewer vitamin and mineral deficiencies after surgery in comparison to a standard over-the-counter multivitamin.</p>

Calcium Citrate	
<b>Recommended brands:</b>	<ul style="list-style-type: none"> <li>• Citracal or generic brand calcium citrate tablets (~300 mg calcium per 1 regular tablet)</li> <li>• Citracal or generic brand calcium citrate petite tablets (~200 mg calcium per 1 petite tablet)</li> <li>• Bariatric Fusion Calcium Citrate Chewable (650 mg calcium per 2 tablets)</li> <li>• Celebrate Calcium PLUS 500 Chewable (500 mg calcium per 1 tablet)</li> <li>• Bariatric Advantage Calcium Citrate Chewable (500 mg calcium per 1 tablet)</li> <li>• Bariatric Advantage Calcium Citrate Chewy Bite (500 mg calcium per 1 bite)</li> <li>• Celebrate Calcium Citrate Soft Chew (500 mg calcium per 1 soft chew)</li> <li>• Bariatric Fusion Calcium Citrate Soft Chew (500 mg calcium per 1 soft chew)</li> <li>• Bariatric Pal Calcium Citrate Soft Chew (500 mg calcium per 1 soft chew)</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Check the label to ensure “citrate” is listed beside calcium on the label.</li> <li>• Other forms of calcium are not well absorbed, and over time, can lead to formation of kidney stones.</li> <li>• Calcium supplements often contain vitamin D3 and magnesium, which is ok to take.</li> <li>• Ok to take without food.</li> <li>• Doses should be taken at least 2 hours apart.</li> <li>• Do NOT take with iron.</li> <li>• Take 2 hours apart from multivitamin (since it contains iron).</li> </ul>

## Schedule

It is important to take your vitamins at the right times to maximize absorption. Use the recommended schedule below and work with your dietitian to select best timing.

<b>Breakfast</b>	• Bariatric multivitamin (with or without iron as recommended)
<b>Lunch</b>	• Calcium citrate
<b>Dinner</b>	• Calcium citrate
<b>Bedtime</b>	• Calcium citrate (if recommended 3 times a day)

## Interactions with other medications:

- Avoid taking your multivitamin or iron within 2 hours of thyroid medications (i.e. Synthroid, levothyroxine, etc.)
- Avoid taking your multivitamin or iron within 4 hours of taking antacid medications (i.e. omeprazole, Prilosec, pantoprazole, protonix, etc.)

# Beverages and Hydration

Drinking the right type and amount of fluid will help you to stay well hydrated to feel your best after surgery. Immediately after surgery, you will not be able to drink very quickly. You also will need to avoid drinking while eating and for 30 minutes after eating. Some people develop taste changes to various fluids. This can make it difficult to get enough fluid immediately after surgery.

## Drinking enough fluids will help to:

- Prevent dehydration
- Prevent constipation
- Eliminate waste products from the body
- Keep you full between meals

After surgery, **your daily fluid goal is a minimum of 64 ounces**. You may need additional fluid during times where you sweat more, such as during exercise or when in the sun or a hot environment. It is important you track your fluid intake in the beginning to make sure you are meeting your goal. Monitor for signs of dehydration including dry mouth, dark urine, infrequent urination, headache, and nausea. Call the clinic if you are having difficulty getting enough fluid, do not wait until symptoms worsen.

## Tips for Tracking Fluid

- While in the hospital, you will drink slowly out of a 1 ounce medicine cup.
- When you are discharged from the hospital, continue to track fluid in your food journal
- Drink from a water bottle or drinking glass that has ounces indicated.
- For example, if you drink from a reusable 16 ounce water bottle, you will know you will need to drink four 16 ounce bottles to meet your fluid goal.

## Tips for Meeting Fluid Goals

- Half of your fluids (32 ounces) should be from water or clear liquids
- Avoid drinking ONLY electrolyte fortified

beverages (i.e. Powerade Zero) since this can result in diarrhea

- Keep water with you at all times, take small sips periodically throughout the day
- Limit activities that inhibit your ability to drink, such as taking a nap
- Do not drink with meals and avoid drinking for 30 minutes after eating. This allows you less time to drink.
- Experiment with varied temperatures of fluids: room temperature, hot, cold, or iced
- Avoid caffeinated beverages in the first 6 to 8 weeks after surgery to allow for healing. After this, limit intake of caffeinated beverages since they can potentially worsen acid reflux. Avoid caffeine completely if you have an existing gastric ulcer.
- Avoid carbonated beverages in the first 6 to 8 weeks after surgery to allow for healing. After this, limit intake of carbonated beverages if you notice worsening acid reflux, pain upon swallowing, or abdominal discomfort. There is no evidence that carbonation “stretches” your pouch.

## Appropriate Fluid Choices

All liquids listed below are hydrating fluids and contribute toward your daily fluid goal:

- Water
- Decaf coffee
- Decaf or herbal tea
- Broth
- Skim, 1%, soy, or unsweetened non-dairy milk
- Protein shakes
- Sugar free drinks
- Sugar free jello
- Sugar free popsicles
- Sugar free Italian ice

## Portion Guide

Measuring your food can help to ensure that you are eating the correct serving size after surgery. One person's idea of a small portion may be very different than the next person's. This is why it is important to use standardized measurements (1 cup, ½ cup, etc.) with use of measuring tools:

- Measuring cups
- Measuring spoons
- Food scale

In this nutrition guide, you will see the following abbreviations for measurements:

- oz = ounce
- tbsp = tablespoon
- tsp = teaspoon

Sometimes portions of food are listed in ounces (measured using a scale), tablespoons (measured using measuring spoons), or cups (measured using measuring cups). These units of measurement can be easily converted using the guide below:

- 1 ounce = 2 tablespoons = 1/8 cup
- 2 ounces = 4 tablespoons = ¼ cup
- 4 ounces = 8 tablespoons = ½ cup
- 8 ounces = 16 tablespoons = 1 cup

This will allow you and the dietitian to know exactly how much you are eating after surgery to ensure you are not eating too much and stretching your pouch.

## Portion Size Chart

If you don't have measuring tools or are not at home while eating, the guide below will help you estimate a healthy portion size using common household items:

Food	Healthy Portion	Household Item Comparison
Meat*	3 ounces	A deck of cards
	2 ounces	2/3 of a deck of cards
	1 ounce	1/3 of a deck of cards
Cheese	1 ounce	4 stacked dice
Baked potato or sweet potato	6 ounces/1 medium	Computer mouse
Nuts or seeds	1 ounce	Small handful
Starches (pasta, rice, potato, sweet potato, corn, peas, oats), beans, lentils, cottage cheese, fruit	½ cup or 4 ounces	Tennis ball
Milk, yogurt, cereal, soup	1 cup	Baseball
Peanut butter, light margarine or light mayo	1 tablespoon	Ping pong ball
Salad dressing, hummus	2 tablespoons	Golf ball
Oil	1 teaspoon	Thumb nail

\* After surgery, a healthy portion of meat will depend on individual tolerance & diet stage progression.



# Protein



## What is protein?

Protein is a nutrient found in a variety of foods that is made up of building blocks known as amino acids. Amino acids are needed to create new proteins in the body. The body is unable to make about half of the amino acids that we need, so we must get them from food.

## Why is protein important?

Protein in the body is found in cells, muscles, organs, hair, and nails. When the diet is low in protein, the body breaks down muscles and organs to use as its protein source. This causes muscle loss or wasting. A diet too low in protein may impair healing after surgery, increase risk for infection, and alter digestion and absorption of other nutrients.

## Where is protein found?

Protein is found mostly in animal-based foods and some in plant-based foods. Protein-rich animal-based foods include chicken, turkey, fish, beef, yogurt, eggs, cheese, milk etc. These are a

high quality protein source because they offer all required amino acids and keep you fuller for longer. Animal-based sources of protein are also naturally higher in fat, so it is important to choose lean or low-fat versions whenever possible.

Protein-rich plant-based foods include soy, legumes (dry beans and peas), whole grains, nuts, and seeds. Some vegetables may also provide small amounts of protein in comparison to other sources. Many of these protein-rich plant-based foods are high in vitamins and minerals, and are usually low in calories and fat. Protein supplements (powders, shakes, bars) provide concentrated protein taken from various animal-based sources (i.e. whey, which comes from milk) or plant-based sources (soy). Protein supplements are usually high in protein and low in calories. For this reason, they can be used as a meal replacement before and after surgery to help lose weight while maintaining muscle mass. Liquid protein shakes are gentle on the stomach and easy to digest and can help you reach your protein goals post-operatively.

# Counting Protein

## How much protein do I need?

Most people require 60-80 grams daily after surgery. Your dietitian will tell you if you need more or less than this.

Counting your daily protein intake can assure you are meeting your goal of 60-80 grams per day. We recommend you count your protein intake daily for at least one month after surgery.

### 3 Easy Steps to Counting Protein:

1. Check the Nutrition Facts label!
2. If there's no Nutrition Facts label, use the guide below: (Avoid using Google!)
3. Record protein intake for each food in journal.

Nutrition Facts	
Serving Size 3 oz. (85g)	
Servings Per Container 2	
Amount Per Serving	
<b>Calories</b>	200
Calories from Fat 120	
% Daily Value*	
<b>Total Fat</b>	15g <b>20 %</b>
Saturated Fat	5g <b>28 %</b>
Trans Fat	3g
<b>Cholesterol</b>	30mg <b>10 %</b>
<b>Sodium</b>	650mg <b>28 %</b>
<b>Total Carbohydrate</b>	30g <b>10 %</b>
Dietary Fiber	0g <b>0 %</b>
Sugars	5g
<b>Protein</b>	5g
Vitamin A	5%
Calcium	15%
Vitamin C	2%
Iron	5%



1 ounce (oz) of any cooked meat = 7 grams



8 oz milk = 8 grams



1 egg = 6 grams



1 egg white = 3 grams



1 oz, ¼ cup shredded, or 1 slice cheese = 7 grams



Single serve (5.3 oz) Greek yogurt cup = 12 grams



½ cup cottage cheese = 14 grams



½ cup cooked beans = 7 grams



¼ cup any nut or seed = 7 grams



1 tablespoon nut butter = 4 grams

# Protein Supplements

Immediately after surgery, your goal for protein intake will be **60-80 grams per day**. Meeting this goal will help with:

- Healing process
- Promote weight loss
- Prevent hair loss
- Preserve lean body mass (muscle)

Since protein shakes are prepared in a liquid drink, this makes it easy for the body to digest to help you reach your protein goal. Protein shakes will be your primary source of protein during stage 3 until you are able to tolerate more protein-rich foods in stage 4. **You will be required to purchase and begin using protein supplements as you prepare for surgery.** You may purchase them in a powder or a ready-to-drink/premixed form.

Powder protein supplements should be mixed with 8 ounces of water, skim milk, 1% milk, or unsweetened non-dairy milk (i.e. almond, cashew, soy, etc.). They can be mixed using a blender or protein shaker bottle.

**It is important to read labels to choose the safest supplement for surgery.** For example, choosing a

Your supplement should contain (per serving):

- 200 calories or less
- 20 grams of protein or more
- No more than 10 grams of sugar
- No more than 10 grams of fat

protein supplement too high in sugar could cause dumping syndrome. Choosing a supplement too high in calories could lead to weight gain.

Choose/prioritize protein supplements that have **whey protein isolate**, soy protein isolate, or egg white protein listed as the first ingredient. They also contribute comparable protein for less calories.

**Protein bars** may be used to increase protein intake once you begin the stage 5 diet. Check the nutrition facts label for sugar alcohols. If present, it will be listed below sugar as either: sugar alcohol, mannitol, sorbitol, maltitol, xylitol, lactitol, or erythritol. These may cause bloating, gas, and/or diarrhea in excess. Aim for less than 10 grams per bar.

## Ready-to-drink shakes:

- Premier Protein
- Ensure Max Protein
- Fairlife Core Power
- Fairlife Nutrition Plan
- Pure Protein
- Orgain Grass-Fed Protein Shake
- Equate High Performance Shake
- Quest Protein Shake

## Protein powders:

- Unjury
- Isopure Protein Powder
- Quest Protein Powder
- Equate
- Body Fortress
- ISO100 Hydrolyzed Protein Powder
- ON Gold Standard
- Bariatric Fusion Protein Powder

# Protein Shake Recipes

## Ways to Spice Up Your Shakes

- ¼ to ½ cup fruit
- 1 tsp vanilla or other flavor extracts
- 1-2 tbsp sugar free coffee flavor syrups
- 1 tbsp peanut or any nut butter
- 1-2 tbsp powdered peanut butter
- 8 oz decaf brewed cold coffee or chai tea
- 1-2 tsp decaffeinated instant coffee
- 1-2 tsp unsweetened baking cocoa powder
- 1 tbsp sugar & fat free instant pudding mix
- 1-2 tsp cinnamon, pumpkin pie spice, etc.
- ¼ cup light or Greek yogurt or Kefir
- Drink them hot, like hot chocolate! Do not heat above 140°F to avoid clumping.
- Pour into popsicle molds and freeze
- 1-2 tbsp sugar free drink mixes with vanilla or unflavored protein powder

**Directions:** For each recipe below, add all ingredients to blender, and blend until smooth. These can be used before surgery and after surgery only when advanced to stage 4 diet.

### Wild Berry Boost

- 1 scoop vanilla protein powder
- ½ cup frozen mixed berries
- 8 ounces skim or 1% milk
- 2-3 ice cubes

### Mocha or Vanilla Cream Cappuccino

- 1 scoop chocolate or vanilla protein powder
- 8 ounces skim or 1% milk
- 1-2 teaspoons decaffeinated instant coffee



**Apple Cinnamon**

- 1 scoop vanilla protein powder
- ½ cup unsweetened applesauce
- 8 ounces skim or 1% milk
- ½ teaspoon cinnamon

**Pumpkin Pie Shake**

- 1 scoop vanilla protein powder
- 2-4 tablespoon canned pumpkin puree
- ½ teaspoon pumpkin pie spice
- 8 ounces skim or 1% milk
- ¼ cup low-fat light vanilla yogurt
- 2-3 ice cubes

**High Protein Tropical Shake**

- 1 packet of powdered Vanilla “No Sugar Added” Carnation Instant Breakfast
- 1 scoop vanilla whey protein powder
- 8 ounces low-fat milk
- ½ cup sliced banana/ papaya/mango
- ¼ teaspoon coconut extract

**Creamy Orange Shake**

- 1 scoop vanilla protein powder
- 1-3 tsp sugar-free orange powder drink mix
- 8 ounces skim or 1% milk

**“The Hulk”**

- 1 scoop vanilla protein powder
- 1-2 tablespoons sugar free, fat free instant pistachio pudding mix
- 8 ounces skim or 1% milk
- 2-3 ice cubes

**Peppermint Patty**

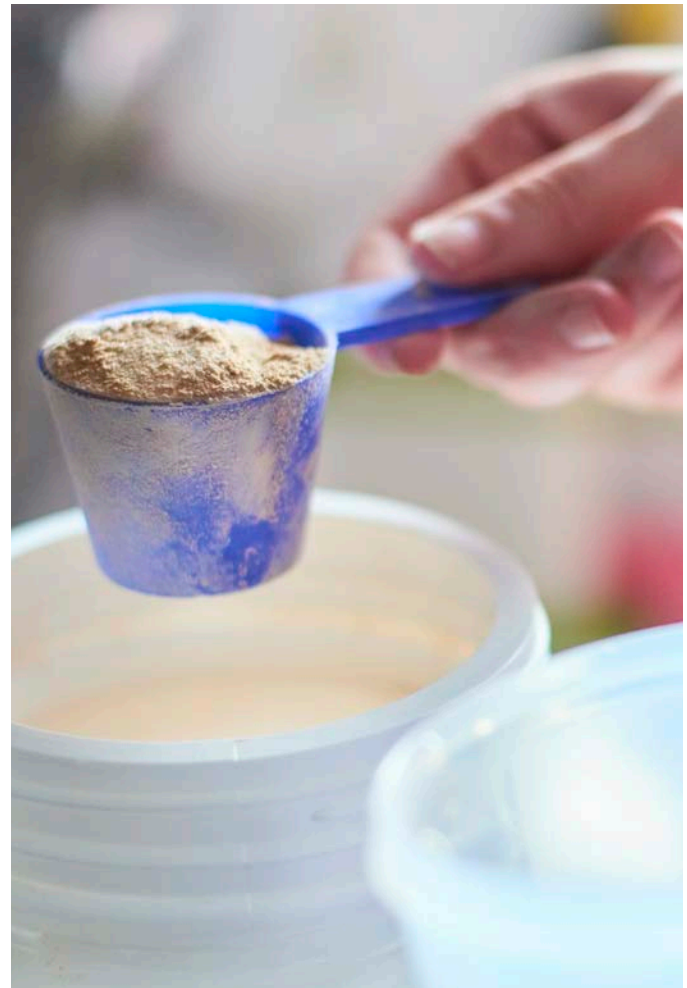
- 1 scoop chocolate protein powder
- 8 ounces skim or 1% milk
- ½ teaspoon peppermint extract
- 2-3 ice cubes

**Cinnamon Roll Protein Shake Recipe**

- 1 scoop vanilla protein powder
- 1-2 tablespoons sugar free, fat free instant vanilla pudding mix
- ¼ teaspoon cinnamon
- 8 ounces skim or 1% milk
- 2-3 ice cubes

**Peanut Butter Banana Chocolate Shake**

- 1 scoop chocolate protein powder
- ½ medium frozen banana
- 2 tablespoons powdered peanut butter
- 8 ounces skim or 1% milk
- Dash of cinnamon
- 2-3 ice cubes



# Pre-Surgery Healthy Meal Plan

Use this healthy meal plan as a guide to prepare for life after surgery and to help achieve or maintain your pre-op weight goal.

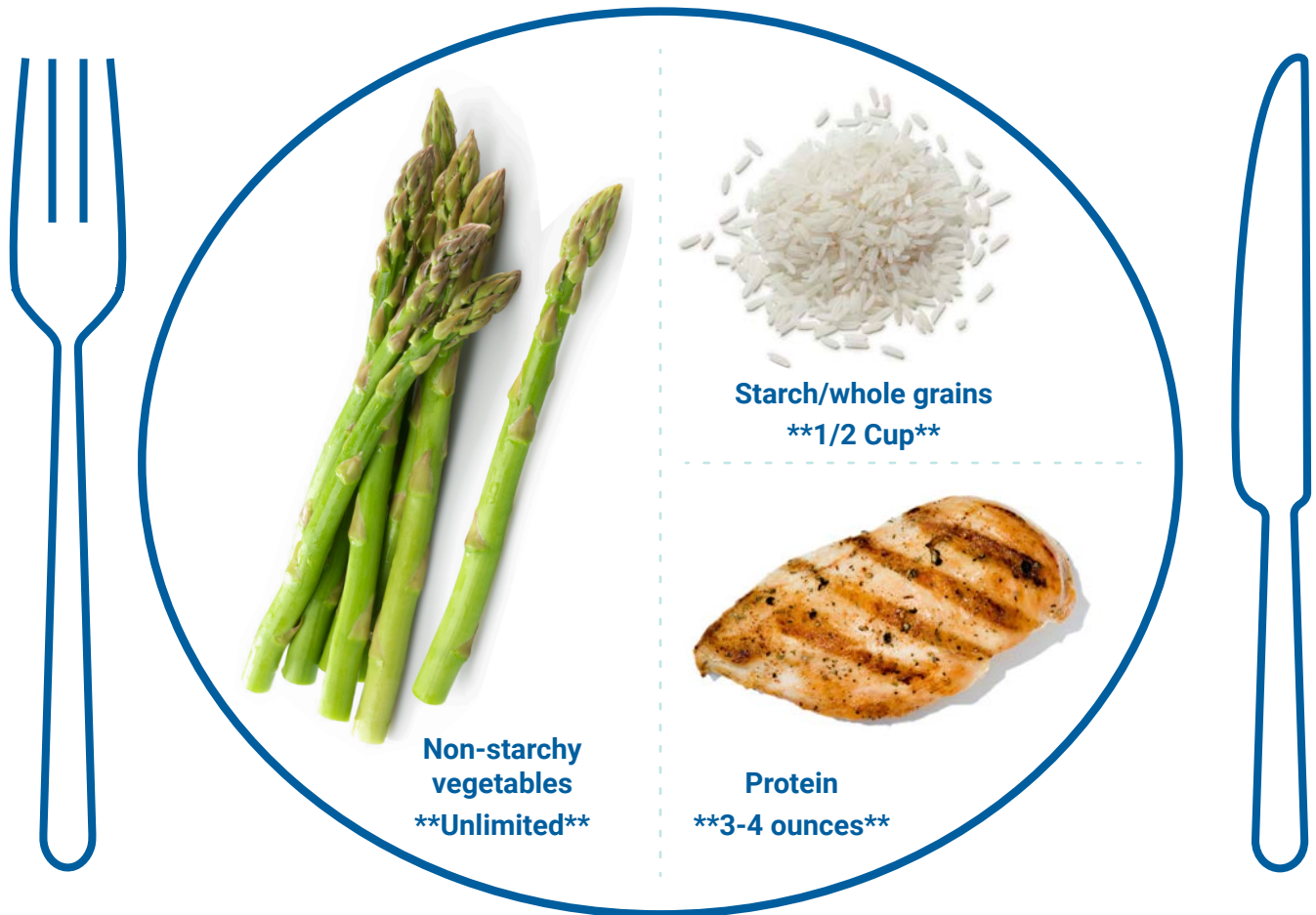
<b>Breakfast</b>	<b>Protein shake prepared with</b> • 8 oz skim milk • 1 serving protein powder • ½ cup fruit	
<b>Morning snack</b>	Choose 1 snack from healthy snacks list on the next page.	
<b>Lunch</b>	Select one choice from each group:	
	<b>Protein:</b>	• 3-4 ounces lean chicken, turkey, fish, shellfish, beef, or pork
	<b>Starch:</b>	• 2 slices of light (60 calories or less/slice) whole grain bread • ½ cup whole grain pasta • ½ cup brown rice or quinoa • ½ cup beans or lentils • ½ cup starchy vegetables (potato, sweet potato, corn, peas)
	<b>Non-starchy vegetables:</b>	• 1 cup or more, refer to list on next page
	<b>Healthy fat:</b>	• 1 slice avocado • 2 tbsp light or reduced fat dressing • 1 tbsp light mayonnaise • 1 tsp oil or light margarine
<b>Afternoon snack</b>	Choose 1 snack from healthy snacks list on the next page.	
<b>Dinner</b>	Select one choice from each group:	
	<b>Protein:</b>	• 3-4 ounces lean chicken, turkey, fish, beef, or pork
	<b>Starch:</b>	• 2 slices of light (60 calories or less/slice) whole grain bread • ½ large pita or 1 small pita • ½ cup whole grain pasta • ½ cup brown rice or quinoa • ½ cup beans or lentils • ½ cup starchy vegetables (potato, sweet potato, corn, peas)
	<b>Non-starchy vegetables:</b>	• 1 cup or more, refer to list on next page
	<b>Healthy fat:</b>	• 1 slice avocado • 2 tbsp light or reduced fat dressing • 1 tbsp light mayonnaise • 1 tsp oil or light margarine

## Example Menu:

Breakfast	Protein shake made with 1 scoop vanilla whey protein powder, 8 ounces skim milk, ½ cup frozen strawberries
Morning snack	1 apple with 1 tablespoon peanut butter
Lunch	1 can of tuna in water mixed with 2 tablespoons light mayonnaise on a small pita bread with lettuce and tomato with baby carrots on the side
Afternoon snack	1 Greek yogurt
Dinner	3 ounces grilled chicken with ½ cup brown rice, 1 cup steamed broccoli and 1 slice avocado

<b>High Protein Snacks</b>		
<p><b>Dairy: Milk &amp; Yogurt</b>  <b>Sugar:</b> 10 grams or less  <b>Total Fat:</b> 5 grams or less</p>	<ul style="list-style-type: none"> <li>• 1 5.3 oz Greek yogurt (i.e. Dannon Light &amp; Fit, Dannon Oikos Triple Zero, Chobani Less Sugar, Two Good, Siggis, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• 1 6 oz light yogurt</li> <li>• Drinkable yogurt (Dannon Light &amp; Fit, Dannon Oikos Triple Zero)</li> </ul>
<p><b>Cheese</b>  <b>Total Fat:</b> 6 grams or less</p>	<ul style="list-style-type: none"> <li>• 1 ounce low fat, light, 2%, or part-skim cheese</li> <li>• 1 string cheese</li> <li>• 1-2 Laughing Cow cheese wedges</li> <li>• 1 Babybel cheese</li> <li>• 1 Cottage Cheese Single Serve Cup</li> </ul>	<ul style="list-style-type: none"> <li>• ¼ cup part-skim ricotta cheese</li> <li>• ½ cup fat free or low fat cottage cheese</li> <li>• 1 Cabot Sharp Light Cheddar snack bar</li> </ul>
<p><b>Bars &amp; Cereals</b>  <b>Sugar:</b> Less than 10 grams  <b>Dietary Fiber:</b> 3 grams or more  <b>Protein:</b> 6 grams or more</p>	<ul style="list-style-type: none"> <li>• ¾ cup Special K Protein Cereal</li> <li>• ¾ cup Kashi Go Cereal</li> <li>• 1 Kashi granola bar</li> <li>• 1 Fiber One Protein bar</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Nature Valley Protein bar</li> <li>• 1 Think Protein &amp; Fiber bar</li> <li>• 1 Built Bar</li> </ul>
<p><b>Frozen Desserts</b>  <b>Sugar:</b> 15 grams or less  <b>Sugar Alcohols:</b> 6 grams or less  <b>Total Fat:</b> 5 grams or less</p>	<ul style="list-style-type: none"> <li>• 1 Yasso Frozen Greek Yogurt Bars</li> <li>• 1 Enlightened Ice Cream Bar</li> <li>• ½ cup Enlightened Light Ice Cream (avoid keto flavor)</li> </ul>	<ul style="list-style-type: none"> <li>• ½ cup Halo Top Light Ice Cream</li> <li>• ½ cup Breyers Delights Low Fat Ice Cream</li> <li>• 1 Clio Yogurt Bar</li> </ul>
<p><b>Meat/Bean/Proteins</b></p>	<ul style="list-style-type: none"> <li>• 1 boiled egg</li> <li>• 1 100 calorie pack nuts</li> <li>• 2 tbsp of any nut or seed</li> <li>• 1 envelope of tuna, flavored or plain</li> <li>• 1 individual snack cup hummus or 2 tbsp hummus</li> </ul>	<ul style="list-style-type: none"> <li>• ½ Jif Peanut Butter To-Go</li> <li>• 1 tbsp peanut butter or other nut butter</li> <li>• ¼ cup roasted chickpea or edamame snacks</li> <li>• 2 slices lean deli turkey or ham</li> </ul>
<b>Low Protein, High Fiber Snacks</b>		
<b>Your intake of these may be more limited after surgery since eating protein will be your priority</b>		
<p><b>Fruits</b></p>	<ul style="list-style-type: none"> <li>• 1 piece of fruit (tennis ball-sized)</li> <li>• ½ cup sliced fruit</li> <li>• 1 4 oz fruit cup</li> </ul>	<ul style="list-style-type: none"> <li>• 1 cup berries (any type)</li> <li>• 1 cup diced melon (any type)</li> <li>• 2 tbsp dried fruit</li> </ul>
<p><b>Vegetables</b></p>	<ul style="list-style-type: none"> <li>• Baby carrots</li> <li>• Celery sticks</li> <li>• Cherry or grape tomatoes</li> </ul>	<ul style="list-style-type: none"> <li>• Sugar snap peas</li> <li>• Pepper strips</li> <li>• Sliced cucumber</li> </ul>
<p><b>Grains/Starches</b></p>	<ul style="list-style-type: none"> <li>• 16 Wheat Thins</li> <li>• 5 Triscuits</li> <li>• 20 mini pretzels</li> </ul>	<ul style="list-style-type: none"> <li>• 2 rice cakes</li> <li>• 2 Wasa crackers</li> <li>• 3 cups light popcorn</li> </ul>

# Pre-Surgery Bariatric Plate



## Non-starchy vegetables

- Salad greens
- Tomato
- Broccoli
- Cauliflower
- Eggplant
- Zucchini
- Celery
- Cabbage
- Brussels sprouts
- Green beans
- Onions
- Peppers

- Asparagus
- Mushrooms
- Beets
- Artichoke
- Sugar snap peas
- Kale and other greens
- Carrots

## Starch/whole grains

- Bread (whole grain)
- Brown rice quinoa
- Whole grain pasta
- Starchy vegetables (potato, corn, peas)

- Green banana
- Plantain

## Protein

- Chicken, turkey
- Fish, shellfish
- Lean beef or pork
- Beans
- Eggs
- Egg beaters
- Egg whites
- Cheese
- Nuts or seeds
- Nut butter

## Other helpful tips:

- Eat your protein first!
- Meals should be eaten every 5-6 hours
- Choose one snack 2-3 hours after a meal
- Use small amounts of oil, dressings, etc.
- Chew foods well, 20-30 times per bite
- Do not drink while you eat. Wait 30 minutes after a meal to drink
- Take vitamins 15 minutes before a meal