

Preoperative Nutrition Education Class

Center for Weight Management

Dr. Haroon Anwar, Dr. Lily Chang, Dr. Kevin Clive,
Dr. Shanley Deal, Dr. Troy Houseworth, Dr. Mohan
K. Mallidpeddi, Dr. Angel Reyes-Villanueva



Pre-Surgery Modules

Welcome to the pre-surgical nutrition education course. Preparing for bariatric surgery involves many steps, and each of them is necessary for a successful procedure.

Carefully review the nutrition section in your Patient Guide, along with this Nutrition Module PDF. Once you've finished your review, you will take a short quiz to show that you understand the information provided.

When you have finished the module, including the quiz, complete the information required in the form and submit.

The entire course should take about 45 minutes. Please allow enough time to complete in one sitting. This module does NOT have any audio.

- If you have trouble with the modules, please call your care team for assistance

Diet Progression

Diet Progression

- **In the days leading up to your surgery, be sure to eat lightly.**
- **If your surgeon has prescribed a liver shrinking diet, please follow the directions in [Liver Shrinking Diet Instructions PDF](#)**
- We recommend consuming only hydrating fluids and protein shakes at least 2 days before your procedure.
- This will help prepare your body for surgery, and make your transition to the postoperative diet much easier.
- This will also help reduce intestinal cramping right after surgery.
- Examples of hydrating fluids include broth, sugar-free Jell-O, sugar-free beverages, decaf coffee and tea.

Diet Progression

- **Stage 1 Diet – Clear liquids**
 - Duration: Day 0-1 (the first day post-surgery: this stage could continue to 5 days if you are unable to tolerate 48-64oz of clear fluids daily)
- **Stage 2 Diet – Full liquids & liquid protein**
 - Duration: 2 weeks (begins on day 1 or 2 at the earliest)
- **Stage 3 Diet – Pureed/blended foods**
 - Duration: 1 week (begins week 3 after surgery)
- **Stage 4 Diet - Soft foods**
 - Duration: 1 week (begins week 4 after surgery)
- **Stage 5 - Regular-textured foods**
 - Duration: Lifelong (begins week 5 at the earliest)

Stage 1 Diet - Liquids

Turn to page 22 in patient binder

Postoperative diet (immediately after surgery):

- **Duration: 0-1 day**
- Liquids will be provided to you in the hospital
- From this point on you must measure all fluid intake
- Consume at least 48 oz of liquids while in the hospital
 - Sip, don't gulp: take 4-5 sips to finish 1 oz
 - Stop sipping as soon as you feel full
 - Room temperature water usually feels best
 - Avoid using a straw if it causes gas and bloating

Stage 1 Diet - Liquids

- Continue same diet you began in the hospital
- **Hydration is the priority**
- Drink an adequate amount of hydrating liquids:
 - Water
 - Sugar-free juices
 - Sugar-free water enhancers
 - Sugar-free Jell-O
 - Sugar-free Popsicles
 - Fat-free chicken, beef or vegetable broth
 - Shaved ice (try adding sugar free flavoring or lemon juice)
 - See list on page **22** for additional hydration ideas
 - If constipated, add a fiber powder to fluids (e.g. Benefiber)



Stage 2 Diet - Full Liquids

Turn to page 24 in patient binder

- **Duration 2 weeks (begins day 1 or 2 at the earliest)**
- Consume 60-80+ grams of protein daily (2-3 protein shakes)
- Aim for a minimum of 48 oz of hydrating fluids
- Examples of full liquids include:
 - Yogurt
 - Sugar free pudding
 - Strained cream soups (cream of chicken & tomato soup)
 - Cream of wheat or rice cereal

Stage 2 Diet - Protein Shakes

Continued on pages 24 and 25 in patient binder

- Your protein shake should contain:
 - Less than 200 calories
 - Between 20-30 grams protein
 - Less than 5 grams sugar
- If you become lactose intolerant, look for whey protein isolate or a plant-based supplement (e.g. pea protein)
- Choosing a protein that is less sweet can be desirable:
 - Unjury brand chicken broth or unflavored protein powder
 - Celebrate brand tomato soup protein powder



Stage 3 Diet - Pureed Foods

Turn to page 27 in patient binder

- **Duration: 1 week (begins week 3 after surgery)**
- Diet consists of liquids and pureed solids:
 - Pureed foods are similar to an applesauce texture
 - Appropriate to use stage 1 and 2 baby foods
- Aim for a minimum of 48 oz of hydrating fluids
- Consume at least 60 grams of protein daily
- Start vitamins/minerals at this time
- Read labels for protein content and use tracking resources:
 - Baritastic app myfitnesspal.com calorieking.com



Stage 4 Diet - Soft Foods

Turn to page 34 in patient binder

- **Duration: 1 week (begins week 4 after surgery)**
- Liquids, pureed foods, very soft solids
 - In this phase, progress to foods that can be finely mashed with a fork
 - Whole-grain toast and crackers are included
- Aim for a minimum of 48 oz of hydrating fluids
- Consume at least 60 grams of protein daily
- It's not uncommon to lengthen any of the diet stages as needed. For example, some patients may choose to follow the soft diet for up to 3 months.



Regular Diet

Turn to page 41 in patient binder

- **Duration: Lifelong**
 - Includes a variety of nutritious foods that are tolerated by your digestive system
- Think protein and produce as your main foods!
- Many people eat solid food at meal times and drink high-protein beverages as snacks
- Refer to sample menus in binder
 - See *The World According to Eggface* website for a variety of meal planning ideas and shopping lists



Nutritional Supplements

Possible Food Intolerances

Some foods may cause problems throughout all phases of the post-surgical diet:

- Milk or lactose-containing products
- Sugar
- Tough meats
- Fibrous raw vegetables and fruits
- Nuts, seeds
- Untoasted breads
- Carbonated and caffeinated beverages
- High-fat, greasy, fried and spicy food



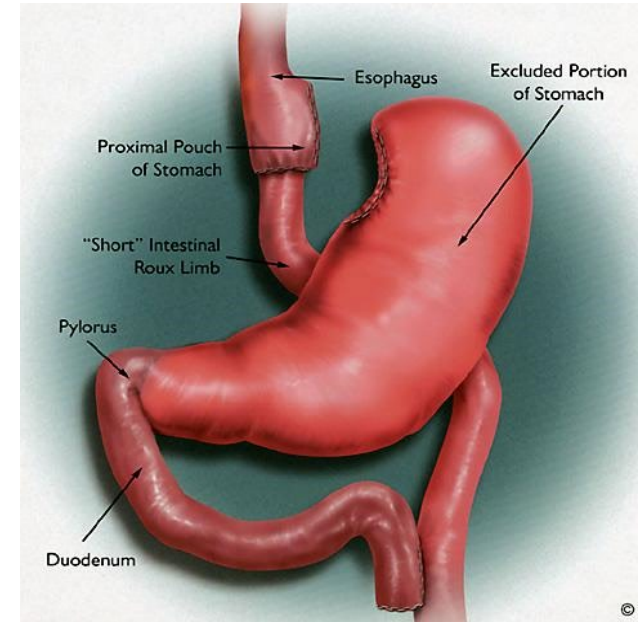
Helpful Tools

- High-powered blender
- Sippy cup (to slow drinking)
- Bariatric plate model (order online)
- Insulated lunch bag or cooler
- Water bottle
- Smaller plates/utensils
- Food journal



Why are Supplements Important?

- Impossible to get the nutrients your body needs through diet alone
- Promote healing of incision
- Prevent vitamin and mineral deficiencies
- Prevent protein deficiencies
- Reduce loss of muscle mass
- Reduce complications



Vitamin/Mineral Supplements

Turn to page 49-50 in patient binder

- Take a multivitamin daily
 - Must contain iron, selenium, zinc, folic acid and copper
 - Dosage amounts vary depending on brand
- Take calcium citrate with vitamin D daily
 - Unjury Take 1,000-1,500 mg daily
 - Take only 500-600 mg at one time for better absorption
 - Take doses at least 4 hours apart
- Vitamin B12 supplement may be needed if multivitamin doesn't already contain 350-500 mcg



Vitamin/Mineral Supplements

Potential supplement/medication interactions:

- Patients taking thyroid medication should separate calcium supplements by at least 4 hours.
- There are a number of medications that may interact with calcium supplements. This can cause either a decrease or increase of the medication within your body so please check with your pharmacist about your specific regimen.

Vitamin/Mineral Supplements

Vitamins and minerals are a lifelong commitment

- Bariatric formulas are desirable. Some examples include:
 - Bariatric Advantage, Celebrate, Bariatric Fusion, ProCare Health
- Nutrients are better absorbed into the body (avoid time-release)
- Cost is comparable to generic supplements (see shopping guide)
- Bariatric products can provide streamlined regimens to reduce the overall number of supplements.
- Non-compliance with the supplement regimen can lead to deficiencies or aid in the development of future medical conditions.

Diet and Exercise

Your Stomach Before and After Surgery



Lifelong Diet & Exercise Goals

The following diet and exercise goals are meant to be practiced before your surgery as much as possible.

By practicing these recommendations ahead of time, you will find it much easier to transition to life after surgery.

Lifelong Diet & Exercise Goals

- **5 - 6 small meals per day**
 - Protein shakes and protein bars count as a small meal
- **Always have lean protein with each meal**
 - Minimum daily goal of 60 grams protein
- **Eat a variety of foods for a balanced diet**
 - Make sure your diet is rich in protein, fruits and vegetables

Lifelong Diet & Exercise Goals

- **Take 20-30 minutes to eat each meal and snack**
- **Chew all bites to a pureed consistency**
 - 20-30 times per bite
 - Helps with digestion and reduces potential for food blockage
- **Measure your food**
 - ½ cup portions for visual practice
 - 1 cup of food should be maximum amount



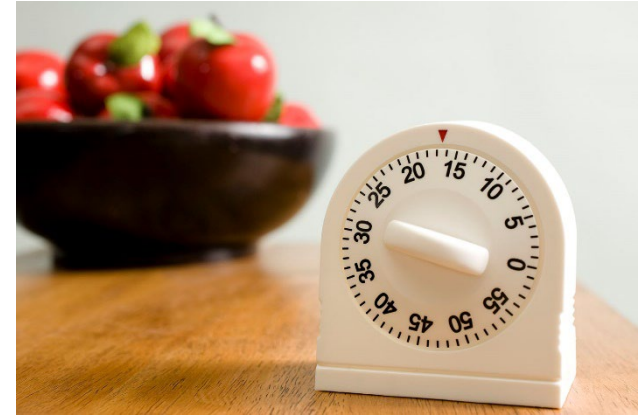
Lifelong Diet & Exercise Goals

- **Drink at least 64 oz fluid daily**
 - Calorie-free/sugar-free/carbonation-free options
- **Sip your liquids**
 - Practice 6-8 oz per hour
- **Avoid all carbonated drinks**
 - This includes sparkling water and beer



Lifelong Diet & Exercise Goals

- **Avoid liquids during meals and for 30 minutes after meals**
 - May drink liquids directly before eating your meal
 - Some prefer waiting 15-30 minutes after drinking before eating
- **Practice meal planning**
 - Avoid fast foods
 - Have healthy foods/snacks available at all times



Lifelong Diet & Exercise Goals

- **Adults need at least 2 hours and 30 minutes of moderate intensity aerobic activity per week (see pages 55-56 in patient binder):**
 - Brisk walking
 - Water aerobics
 - Bicycling under 10 mph
- **Plus muscle-strengthening activities 2 or more days per week**
- **May perform exercises 10 minutes at a time**

Exercising 60-90 minutes per day, most days of the week, is most effective for keeping weight off in the long run.



Weight Loss Plateau

The term plateau refers to either a temporary stall in weight loss or a termination of weight loss. A temporary stall is often due to redistribution of body weight and fluid balance.

- It's not uncommon to experience a weight loss plateau very soon after surgery.
- When body fat is decreasing, body weight may be unchanged for up to 3 or 4 weeks.
- Assess whether you have experienced changes in body shape and composition. For example, clothes may fit more loosely or your measurements may have decreased.
- Make sure you're getting the right amount of calories and protein.
- Early weight loss plateaus will resolve on their own once the body adjusts to all of the changes.

Potential Dietary Issues

Potential Dietary Issues

Nausea and Spitting Up

- **Caused By:**
 - Eating too much food or too quickly
 - Drinking and eating at the same time, food intolerances, and not chewing food well
- **Prevent By:**
 - Eating slowly, measuring foods, and avoiding beverages with your meals
 - Chew well: at least 20-30 times per bite



Potential Dietary Issues

Mainly associated with gastric bypass, however, it can occur with the sleeve gastrectomy more mildly

Dumping Syndrome:

- Caused by lactose, high-sugar foods, or high-fat foods

Early Dumping

- Occurs 20-60 minutes after eating and can last up to 60 minutes
- Symptoms: Sweating, flushing, lightheadedness, heart palpitations, nausea, diarrhea, cramping and upper abdominal fullness

Late Dumping

- Occurs 1-3 hours after eating
- Symptoms are related to low blood sugar which include sweating, shakiness, loss of concentration, hunger and fainting



Potential Dietary Issues

To Prevent Dumping Syndrome:

- Avoid anything with >5 grams sugar per serving
 - Sugar synonyms: Sucrose, fructose, lactose, dextrose, high fructose corn syrup
- Avoid milk, cookies, cakes, honey, molasses, syrup, regular juice, Gatorade
- Eat at regular intervals and avoid going too long without eating meals, this will keep blood sugar from going too low
- Avoid greasy, fried foods and fatty meats because they can cause diarrhea



Potential Dietary Issues

Constipation

Usually due to:

- Insufficient water intake
- Diuretics such as caffeine
- Calcium and iron supplements
- Narcotics can slow bowel function
- Not enough dietary fiber
- Drinking and eating at the same time, food intolerances, and not chewing food well

Increase fruits, vegetables, beans, lentils and whole grains
Consider using a fiber supplement such as Benefiber or a non-stimulant laxative (e.g. MiraLAX)



Potential Dietary Issues

Stoma Blockage

- Stoma: The exit site of your pouch

To Prevent Blockage:

- Chew all foods 20-30 times per bite
- Caution with fibrous fruits and vegetables
- Caution with meats, nuts and protein bars
- No fresh bread: only small amounts of toasted bread



Other Issues

- **Alcohol**
 - One drink can have the effect of two or three
 - Alcoholic beverages have a high calorie content
 - Mixed drinks can cause dumping syndrome
 - Avoid alcohol for at least 3 months after surgery
- **Hair Loss**
 - Peaks at 3-6 months
 - Hair loss is usually in response to sudden change in calories and protein
 - Keeping up with protein is especially important
 - Avoid biotin supplements



Biotin

- Biotin, also known as vitamin B7, is present in many multivitamins. Some multivitamins and supplements are marketed for hair, skin and nail health or to persons having bariatric surgery and may contain 300-10,000 mcg.
- In patients with excess biotin in their blood, there is an increased risk of false lab values. Too much biotin can interfere with thyroid, hormone, cardiac, and a variety of other tests.
- It's important to limit biotin to less than 1,000 mcg per day, otherwise certain lab values may be affected.

Binge Eating and Grazing

- Both eating behaviors can lead to weight regain
- Binge eating may stretch the gastric bypass stoma
- Caution with high-calorie foods
- Grazing on unplanned snacks may be well-tolerated, but leads to excessive calorie consumption and weight regain
- Reminder: Bariatric surgery works on the stomach, not the head



Mourning the Loss of Food

- Be aware of emotional or psychological changes
- Talk to a counselor or psychologist, if needed
 - Refer to the Bariatric Resource Packet
- Attend a support group at least once a month
 - Refer to handout provided in today's materials
- Find a buddy!



Success Habits: Study of 100

- Maintenance of at least 74% of initial weight loss
- Patients ate 3 well-balanced meals and 2 snacks a day
- They drank water and did not drink carbonated beverages
- Vitamin and protein supplements were taken daily
- Exercised regularly (average 4 times/week for at least 40 minutes)
- Patients slept at least 7 hours per night
- They took personal responsibility of their weight & health care

Source: Colleen C, Edwards C. Success Habits of Long-Term Gastric Bypass Patients. Obesity Surgery 1999;9:80-82

Any Questions?

For future communications with your providers, please use **MyChart**, MyVirginiaMason or feel free to schedule an appointment.



Thank you.

Center for Weight Management