

Post Weight Loss Surgery Dietary Information

Stages 1 - 6

Columbia University Center for Metabolic
and Weight Loss Surgery

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Start now: Multi-vitamin/mineral and calcium supplements every day.

Stage 1 – Pre-Surgery Diet

DURATION: Usually 2 weeks prior to surgery but if your BMI is 50 or greater, we recommend that you lose 5%-10% of your body weight before surgery.

FOOD/BEVERAGES: High protein, low fat and low carb
See separate handout given to you by your dietitian.

Stage 2

DURATION: Day before surgery.

FOOD/BEVERAGES: High protein shakes and non-sugared liquids. ***No food!***

Stage 3

DURATION: **Gastric Bypass and Sleeve Gastrectomy:** Day of surgery and about 24 hours after surgery.
Adjustable Band: Day of surgery till after surgery.

FOOD/BEVERAGES: None.

Stage 4

DURATION: **Gastric Bypass and Sleeve Gastrectomy:** Day after surgery, if well tolerated, and for rest of hospital stay.
Adjustable Band: After recovery and for rest of hospital stay.

FOOD/BEVERAGES: Clear liquids and water – **1 to 2 ounces every 20 minutes while awake** (G2®, chicken broth, diet gelatin, decaffeinated tea)

SUGGESTIONS:

- 1) Sip slowly.
- 2) Stop sipping as soon as you feel full. Never force yourself to finish. “When in doubt, wait it out!”
- 3) Ask the nurse for 1 oz medicine cups and use these to measure your liquids.

Stage 5

DURATION: Starting when you get home from the hospital and for one week.

FOOD/BEVERAGES: Full liquids including **2 high protein shakes daily**.
Each high protein shake should provide at least 25g of protein.
Consume 1 to 2 ounces every 20 minutes while awake.

FULL LIQUIDS		
2 HIGH PROTEIN SHAKES DAILY, 25G PROTEIN PER DRINK		
Water	Broth	Coffee
Tea	Fat free or 1% milk	Crystal Light
Diet Snapple	G2	Powerade Zero
Vitaminwater Zero	Diet gelatin	Sugar free frozen fruit pops
No sugar added frozen fruit pops	Sugar free hot cocoa	<i>Fat free or light yogurt, smooth without bits of fruit</i>
<i>Sugar free pudding</i>	High protein pudding	Light soymilk
Rice milk	Almond milk	

- SUGGESTIONS:
- 1) Sip slowly.
 - 2) Stop sipping as soon as you feel full. Never force yourself to finish. "When in doubt, wait it out!"

Stage 6

DURATION: The 2nd and 3rd week after discharge.

FOOD/BEVERAGES: Pureed foods and liquids ***with an emphasis on those high in protein*** (see below).

One high protein shake daily.

No more than 2 ounces of food every 3 hours, except for yogurt and soup.

You can consume up to 4 ounces of yogurt or ½ cup soup at one time.

SUGGESTIONS: Eat slowly. Use a baby spoon or an espresso spoon to eat.

FOOD /BEVERAGE	PORTION	AMOUNT OF PROTEIN (GRAMS)
HIGH PROTEIN SHAKE -MUST HAVE DAILY-	8-14 OUNCES	25
<i>Fat free or light yogurt</i>	4 ounces	4
<i>Fat free Greek yogurt</i>	4 ounces	9
Fat free or 1% milk	1 ounce	1
Skim Plus or Smart Balance milk	1 ounce	1.4
Soy milk	1 ounce	0.75
Beef: sirloin, loin, round	1 ounce	7
Veal: loin, leg	1 ounce	7
Pork: tenderloin, loin, ham cuts	1 ounce	7
Lamb: loin, sirloin or leg cuts	1 ounce	7
Chicken/turkey without skin	1 ounce	7
Fish, fin or shellfish	1 ounce	7
Eggs	1 whole	7
Egg whites	2	6
Egg substitutes	¼ cup	5-7
<i>Cottage cheese: fat free, 1%, 2%</i>	¼ cup	7
<i>Ricotta cheese: fat free, lite, part skim</i>	¼ cup	7
<i>Cheese, sliced: no more than 3g of fat</i>	¾-1 ounce	6-7
<i>Cheese, string: no more than 3g of fat</i>	1 piece	6
<i>Cheese, shredded: fat free, lite, part skim</i>	2 TBSP's	4
Beans	¼ cup	4-5
<i>Split pea soup</i> and other bean soups	½ cup	4-5
Tofu	¼ cup or 2 ounces	4-5
Edamame	¼ cup	5
<i>Peanut, almond, cashew and soy nut butter: creamy without sugar</i>	2 TBSP's	7
<i>Baby food: Stage 1 or 2, meat or poultry only</i>	2 ounces	6-7
<i>High protein pudding</i>	1 ounce	3.4

All food should be the consistency of baby food or applesauce except for the food items that are bold and italicized in the previous table. They do not need to be pureed.

GOAL: 60-80 grams of protein daily.

SWEETENERS AND SUGAR

You should **not** consume any foods or beverages made with sugar. The following artificial sweeteners /sugar substitutes are acceptable:

- ***Aspartame (Equal[®], NatraTaste[®]),***
- ***Acesulfame-K (Sweet One[®]),***
- ***Saccharin (Sweet 'N Low[®], Sugar Twin[®]),***
- ***Sucralose (Splenda[®]),***
- ***Stevia (Truvia[™], Pure Via[™], SweetLeaf[®]), and***
- ***Monk fruit (nectresse[™]).***

The following is a list of **sugar alcohols** that manufacturers use instead of sugar. Note that most of them end in “ol” but not all do. These sugar alcohols could cause stomach pain, gas and diarrhea. **If you see any sugar alcohol listed among the first three ingredients, test that product at home. If you experience any discomfort, you should eliminate that product from your diet.**

lactitol	sorbitol	erythritol	mannitol
hydrogenated starch (hydrolysate)	maltitol	xylitol	isomalt

The following are some foods/beverages that are high in added sugar and must be eliminated from your diet for life:

Baked goods, cakes, cookies, pies, donuts, pastries, etc.	Gelatin (sugared)	Sherbet
Canned fruit in syrup	Gelato	Soft drinks (sugared)
Cereal (sugar coated)	Honey	Sorbet
Chewing gum (sugared)	Ice cream (sugared)	Sweetened condensed milk
Chocolate milk	Italian ice	Syrup (e.g. pancake)
Custard	Jam and jelly (sugared)	Tapioca pudding
Dried fruits	Maple syrup	Yogurt, sugared
Drink mixes (sugared)	Marmalade (sugared)	Yogurt, fruit on the bottom
Frozen yogurt (sugared)	Mystic [®] beverages	
Fruit drinks (sugared)	Popsicles (sugared)	
Gatorade [®] /POWERADE [®]	Pudding (sugared)	

SAMPLE MENUS

SAMPLE DAY FOR PUREED FOOD

		PROTEIN GRAMS
7am	½ cup fat-free milk blended with ½ scoop Isopure [®] powder	4 12.5
10am	¼ cup fat free refried beans with 2 TBSP fat free shredded cheese	3 4
1pm	1 oz cooked, ground turkey, blended	7
4pm	½ cup fat-free milk blended with ½ scoop Isopure [®] powder	4 12.5
7pm	2 oz Stage 1 chicken baby food	6
10pm	4 ozs Total 0% Greek Yogurt	12

65g

SAMPLE DAY FOR PUREED FOOD FOR OVO-LACTO VEGETARIANS

		PROTEIN GRAMS
7am	½ cup fat-free milk blended with ½ scoop Isopure [®] powder	4 12.5
10am	¼ cup tofu, blended with 2 tsp soy sauce	3.5
1pm	¼ cup cooked chick peas blended with lemon juice and cumin	3.5
4pm	¼ cup lite ricotta cheese	7
7pm	½ cup fat-free milk blended with ½ scoop Isopure [®] powder	4 12.5
10pm	1 oz cheese, melted	7
10:30pm	1 cup Skim Plus [®] milk	11

65g

Beverages

The following are acceptable beverages:

- Water, plain or flavored without sugar
- Fat free or 1% milk
- Skim Plus[®], Smart Balance[®] or other high protein milk
- Fat free, 1% or Soy Lactaid[®] milk
- Fat free or reduced fat soy milk
- Crystal Light[®]
- Sugar-Free Kool-Aid[®]
- Coffee or tea (preferably decaffeinated)

- Bouillon or broth (preferably low sodium)
- Diet Snapple®
- G2® by Gatorade®
- POWERADE ZERO™
- vitaminwater zero®
- Diet Jell-O®
- Sugar-free or “No Sugar Added” popsicles
- Sugar free, fat free hot chocolate (preferably made with fat free or 1% milk)

Keep the following in mind when consuming beverages:

- 1) DRINK FLUIDS SLOWLY (I.E. SIP, NOT GULP) AND DO NOT USE A STRAW.
- 2) STOP DRINKING **15 MINUTES** BEFORE EATING AND DO NOT DRINK TILL **30 MINUTES** AFTER YOU HAVE FINISHED EATING.
- 3) **WHEN YOU START STAGE 6 OF YOUR DIET PROGRESSION, STOP USING THE ONE OUNCE MEDICINE CUPS TO DRINK FLUIDS.** Use regular glasses and cups to drink
- 4) **TRY TO DRINK AT LEAST SIX 8-OZ. CUPS (48 OZS.) OF BEVERAGES EVERY DAY.** Drink 2 to 3 ozs. every 30 minutes between your meals.
- 5) DO NOT FILL UP ON FLUIDS. You need to eat!
- 6) DO NOT DRINK ALCOHOLIC BEVERAGES (beer, wine and liquor) FOR **ONE MONTH** AFTER SURGERY.
- 7) **DO NOT ANY DRINK JUICE** after surgery.
- 8) **NO CARBONATED BEVERAGES** after surgery.
- 9) **For Gastric Bypass patients only:** No more than 16 ounces of a caffeinated beverage daily.

REMEMBER! YOU SHOULD EAT YOUR CALORIES; DO NOT DRINK THEM!!

Swallowing Pills

For the first week after surgery, you can’t swallow pills or capsules. Internal swelling could cause the pill or capsule to get stuck. You will need to crush your pills or open capsules into food or beverages or obtain liquid forms of your medications, if available. After the first week, you can swallow pills and capsules **if they are no bigger than the tip of your little finger.** Otherwise, continue to crush your pills or open capsules into food or beverages or continue with your liquid medications for **the next three weeks.**

Vitamins/Minerals

When you get home from the hospital, start taking the following supplements in non-pill form (see suggestions on page 10):

1. A multi-vitamin with minerals.
2. Calcium with vitamin D.
 - Should be taken with food in **divided** doses, no more than 600 mg/dose.
 - Gastric bypass patients should take the calcium citrate form of calcium.
 - Doses recommended:

<u>Women/Men</u>	AMOUNT OF CALCIUM	
	<u>Sleeve Gastrectomy And Adjustable Band</u>	<u>Gastric Bypass</u>
18 yrs and younger	500 mg 2X/day plus an additional 300 mg	500 mg 4X/day
19-50 yrs	500 mg 2X/day	500 mg 3X/day
51 yrs and older	600 mg 2X/day	600 mg 3X/day

DO NOT CRUSH YOUR VITAMINS AND MINERALS!!!! There are plenty supplements available that are in chewable, liquid or water-soluble powder form.

DO NOT BUY ANY GUMMY MULTI-VITAMINS OR CENTRUM FLAVOR BURST MULTI-VITAMIN!! Most do not have minerals and all are missing some of the B vitamins.

Tips to maximize absorption of vitamins and minerals:

- For better absorption and avoidance of nausea/vomiting, **do NOT take supplements on an empty stomach.**
- **Take your supplements with plain water.** Caffeinated beverages like tea and coffee interfere with the absorption of some vitamins and minerals. Also, the ingredients in other types of beverages may cause unwanted interactions with the nutrients in the supplements.
- **Do NOT take more than 500-600mg of calcium** as your body will not absorb more than this amount at one time.
- **Do NOT take calcium and iron at the same time;** take them at least 2 hours apart. Calcium and iron interfere with the absorption of each other.
- **Calcium and iron may decrease the absorption of thyroid hormones (e.g. Synthroid®).** Take calcium supplements separately from your thyroid hormone pill by 2 hours and iron separately by 4 hours.
- **Iron should be taken on an empty stomach,** if tolerated, to increase absorption. Vitamin C also helps the absorption of iron.
- **Wait at least one hour between taking any of your supplements and taking prescription medications** as they could decrease the efficacy of each other.

Serious problems can occur if you do not take your vitamins and minerals every day:

<u>Vitamins/Minerals</u>	<u>Deficiency Problems</u>
Multi – vitamin/mineral	Eye problems, depression, anxiety, mental confusion, diarrhea, mouth sores, skin problems, difficulty eating and swallowing, fatigue, anemia, easy bruising, slow healing, teeth and gum problems, peripheral neuropathy, abnormal bleeding, etc.
Calcium	Weak & broken bones, collapsed spine, muscle spasms
Iron	Anemia, bleeding problems, fatigue, dizziness, memory loss, insomnia
Vitamin B ₁₂	Tingling in hands & feet, nerve damage, paralysis, trouble walking
Vitamin D	Weak & broken bones, collapsed spine, impaired immune system

CHANGES IN BOWEL HABITS

For constipation:

- Take 2 tablespoons of Milk of Magnesia twice in one day.
- Drink at least 48 ounces of fluids.
- Walk every day.
- Take a daily stool softener (e.g. Colace) or a fiber supplement (e.g. LiquaFiber or Benefiber when it is available again).

For gas:

- Take over-the-counter chewable Gas-X tablets.
- Take liquid bean-O[®] if specific foods cause gas (e.g. beans)
- Walk every day.
- Eat and drink slowly.
- Do not skip meals.

For vomiting:

- Eat slowly. Put your spoon down after taking a bite. Wait 30 seconds after swallowing to take another bite.
- Do not eat more than 1-2 ounces of the high protein foods or 4 ounces of yogurt
- Make sure that your pureed food is the consistency of baby food or applesauce.
- Stop drinking 15 minutes before you eat and wait 30 minutes after eating to drink again.

If vomiting persists, call your surgeon's office. If you also have abdominal pain, go to an emergency room.

EXERCISE

Exercise is extremely important for your weight loss and subsequent weight management program.

Start a **walking** program after discharge from the hospital unless a member of your medical team recommends against your walking. You should start **SLOWLY**, even as little as a 10 minute walk. Increase the time that you walk by five minutes per week. You should walk for as long as you feel comfortable, ***both inside and outside of the house***, but **DO NOT OVERLY EXERT YOURSELF**. **YOUR GOAL IS TO WALK FOR 30 CONSECUTIVE MINUTES WITH ELEVATED HEART RATE PER DAY BY THE END OF THE FIRST MONTH.**

Also, do not sit longer than one hour without getting up and moving, e.g. walk into another room.

FOLLOW-UP APPOINTMENTS

After surgery, you will meet with your surgeon/nurse practitioner and dietitian at regularly scheduled time intervals.

Gastric Bypass and ***Sleeve Gastrectomy*** patients:

Appointment Schedule After Surgery	
2-3 weeks	1 year
5-6 weeks	18 months
3 months	2 years
6 months	Yearly after 2 years
9 months	

Adjustable Band patients:

- 2-3 weeks and 5-6 weeks after surgery.
- Every 3-4 weeks until the Band is appropriately adjusted for you after the 5-6 week appointment.

Then:

- Monthly for the remainder of the first year
- Quarterly for the second year
- Yearly thereafter.

Please be aware that there may be some variation in the follow-up schedule depending on the preferences of your surgery team members and your needs.

Follow-up is for life after this surgery. You will need to take blood tests on a regular basis to check for vitamin/mineral deficiencies and other abnormalities.

REMEMBER! YOU HAVE TO EAT (PROTEIN FOODS) TO LOSE WEIGHT --- EVEN IF YOU ARE NOT HUNGRY!!!

YOUR MAIN TASKS AFTER SURGERY ARE TO:

- 1) CONSUME AT LEAST 60G TO 80G OF PROTEIN DAILY.
- 2) DRINK AT LEAST 48 OUNCES OF NON-CAFFEINATED FLUIDS BETWEEN YOUR MEALS.
- 3) WALK EVERY DAY, AT LEAST 30 MINUTES IF POSSIBLE.

CALL YOUR DIETITIAN WITH ANY DIET-RELATED QUESTIONS!

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5/12, 12/12, 1/31/13

FOR GASTRIC BYPASS PATIENTS ONLY

Dumping Syndrome

- CAUSES: 1) Consumption of too much added sugar or natural sugar that is too concentrated (e.g. fruit juice).
2) Drinking fluids while eating or too soon after eating.
3) Eating foods or drinking beverages that are too hot or too cold.
- SYMPTOMS: Nausea, sweating, weakness, abdominal cramping, rapid heart rate, lightheadedness, and diarrhea characterize this syndrome.
- DURATION: The symptoms first appear about 10 to 20 minutes after eating. They can last for 20 minutes or several hours.
- PREVENTION: 1) You will have to scrutinize food/beverage labels for added sugars in the list of ingredients. If one is listed among the first three ingredients, you should not consume that product.
2) Stop drinking 15 minutes before eating and do not drink again until 30 minutes after you have finished eating.
3) Do not eat any food or drink any beverage that is very hot or very cold.

Consumption of Sugar

Sugar comes from many different sources and in many different forms. Any of the following can be found among the list of ingredients in foods and beverages:

apple sugar	confectioner's sugar	maple sugar	white sugar
Barbados sugar	date sugar	powdered sugar	
beet sugar	fruit sugar	raw sugar	
brown sugar	granulated sugar	turbinado sugar	
cane sugar	invert sugar	unrefined sugar	

The following is also a list of sugars used in foods and beverages:

amasake	dextrose	lactose	molasses
barley malt	fructose	levulose	rice syrup/malt
brown rice syrup	glucose	maltose	saccharides
cane juice	glycerides	maple syrup extract	sorghum
corn syrup	high fructose corn syrup	maltodextrin	sucrose
corn sweeteners	honey	maple syrup	

Note: if an ingredient ends in “ose”, it is usually a sugar. Two exceptions are cellulose and sucralose (Splenda®). Not all sugars end in “ose”, e.g. fructose and honey are both sugars, however.

SUGGESTIONS FOR SUPPLEMENTS FOR ALL SURGERIES

-Chewable, Liquid and Powder Forms-

MULTI-VITAMIN/MINERAL: Examples of the various ***forms*** of multi-vitamin/mineral supplements are as follows: children's chewable (e.g. Flintstones[®] Complete, Freeda[®] Vitalets, Maxi-Health[®] Children's Complete[®]), adult chewable (e.g. Centrum[®] Chewable, prescription tablets, Bariatric Advantage[®] chewable tablets, Celebrate[®] Multivitamin, Bariatric Fusion Multivitamin), adult liquid (e.g. Centrum[®] Liquid, Tropical Oasis[®]), children's liquid (e.g. Maxi-Health[®] Kiddievite[™]) and adult powder (e.g. Celebrate[®] ENS Multivitamin and Calcium Drink Mix, Isotonix[®], All One[®]).

CALCIUM: Examples of the various ***forms*** of calcium supplements are as follows: chewable (e.g. Caltrate[®] 600 Plus, Viactiv[®], Country Life[®] Cal-Snack[®], GNC WELLbeING beBALANCED[™], Nutrition Now[®] Calcium Soft Chews, TwinLab[®] Calcium Citrate Wafers, Bariatric Advantage[®] Chewy Bites and Lozenges, Maxi-Health CalciYum[™]), gummy (Caltrate[®] Gummy Bites, Citracal[®] Calcium Gummies, Vitafusion[®] Calcium), liquid (e.g. Just An Ounce[®], Tropical Oasis[®] Liquid Calcium & Magnesium, Bluebonnet's and LifeTIME[®]'s Liquid Calcium Magnesium Citrate) or water-soluble powders (e.g. Isotonix[®], Global Health UpCal-D[®], Kal Fizz C[™], Maxi-Health CalciFizz[™], Bariatric Advantage[®] Crystals).

CALCIUM CITRATE (for Gastric Bypass patients): Examples of the various ***forms*** of calcium citrate supplements are as follows: chewable (e.g. Twinlab[®] Calcium Citrate Wafers, Bariatric Advantage[®] Chewy Bites and Lozenges, Maxi-Health[®] CalciYum[™], Celebrate[®] Calcet[®] Creamy Bites, Calcium Plus 500, Calcium Plus and soft chews), liquid (e.g. Tropical Oasis[®] Liquid Calcium & Magnesium, Bluebonnet's and LifeTIME[®]'s Liquid Calcium Magnesium Citrate) or water-soluble powders (e.g. Global Health UpCal-D[®], Bariatric Advantage[®] Crystals, Isotonix[®]).

Purchase: Centrum[®], Flintstones[®] and Citracal[®] in a pharmacy, supermarket or retail store like Target; Twinlab[®], All One[®], Country Life[®], Kal[®] and Solgar[®] at www.VitaminShoppe.com or call 1-866-293-3367; Bariatric Advantage[®] and Tropical Oasis[®] at www.BariatricAdvantage.com or call 1-800-898-6888; Bluebonnet and LifeTIME[®] at www.HouseOfNutrition.com; Maxi-Health[®] at www.MaxiHealth.com or call 1-800-895-9555; Freeda[®] at www.KosherVitamins.com or call 1-800-895-9555; Puritan Pride[®] at www.Puritan.com or call 1-800-645-1030; Celebrate[®] at www.CelebrateVitamins.com or call 1-877-424-1953; Isotonix[®] at www.IsotonixSupplementStore.com and Global Health at www.GlobalHP.com

Creative Suggestions During Pureed Stage

- 1) Mix baby food fruit into cottage cheese (add sugar substitute to sweeten).
- 2) Low fat shredded cheese melted into ¼ cup of fat free refried beans.
- 3) Puree a 1 ounce meatball made from ground sirloin with pasta sauce.
- 4) Puree low fat chili. Wendy's makes a tasty, low fat, high protein chili.
- 5) Add protein powder into a pudding mix for a high protein pudding.
- 6) Make sugar-free, fat-free pudding with 2 cups of Skim Plus[®] or Smart Balance[®] milk (5.5 g of protein per ½ cup)
- 7) Make sugar-free cocoa with 1 cup of Skim Plus[®] milk (13-15 g of protein)
- 8) Make protein powder more interesting:
 - add flavored extracts to vanilla powder to create new flavors
 - add 1 tsp instant coffee to vanilla powder to make coffee flavor
 - add 1 tsp instant coffee to chocolate powder to make mocha flavor
 - blend powder with ice cubes to create low calorie frappe
 - add fruit, peanut butter and/or sugar-free, non-fat frozen yogurt to your favorite flavor of powder
- 9) Flavor plain, nonfat yogurt with extracts, sugar substitutes, diet Jell-O[®], Crystal Light[®], baby food fruit or sugar free hot cocoa powders.
- 10) Add unflavored protein powder to beverages and pureed food to increase the protein content.
- 11) Try using ice cube trays for storing pureed food portions. Each ice cube section holds about 1 ounce or ⅓ cup. Freeze the food in the ice cube trays. When frozen, remove the cubes and store in a freezer bag in the freezer. Use 3 cubes as one serving.
- 12) Use small glass custard cups for defrosting the cubes in the refrigerator, microwave or in a pot of water on the stove. If using the later method, the water in the pot should not be higher than ⅔'s of the height of the glass cup.
- 13) Baby warmer trays can be used to keep pureed food warm while you are slowly eating your meal.

Simple Eggnog Shake

6 ounces of Skim Plus[®] milk (83 Kcal, 8g protein)
2 ounces (⅓ cup) egg substitute (30 Kcal, 6g protein)
Artificial sweetener to taste
Rum or vanilla extract to taste
Several ice cubes

Put everything in a blender or food processor and blend until smooth.
Calories: 113 Protein 14 grams