



**DUODENAL SWITCH
AND
DISTAL GASTRIC BYPASS
SURGERY
DIETARY INFORMATION**

STAGES 1-6

**COLUMBIA UNIVERSITY CENTER FOR
METABOLIC AND WEIGHT LOSS SURGERY**

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Stage 1 – Pre-Surgery Diet

DURATION: Usually 2 weeks prior to surgery but if your BMI is 50 or above, you may be asked to follow the pre-surgery diet for 4 weeks.

FOOD/BEVERAGES: High protein, low fat and low carb meal replacement protein shakes. Three servings of raw vegetables can be added each day after the first 3 days. See separate handout given to you by your dietitian.

Stage 2

DURATION: Day before surgery.

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

Stage 3

DURATION: Day of surgery and about 24 hours after surgery.

FOOD/BEVERAGES: None.

Stage 4

DURATION: Day after surgery, if well tolerated, and for rest of hospital stay.

FOOD/BEVERAGES: Clear liquids and water – **1 to 2 ounces every 20 minutes while awake** (G2®, chicken broth, 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: **For one week**, starting the day that you get home from the hospital.

FOOD/BEVERAGES: Full liquids including **3 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		
3 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	Watery Pureed soup	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>	<i>High protein pudding</i>	Light soymilk
Rice milk	Almond milk	Bai
CORE Organics		

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 the table on page 4).

To puree food:

1. Cook the food, if necessary.
2. Cut into small pieces.
3. Put into a food processor or blender with some liquid.
4. Puree to the consistency of applesauce or baby food.

The food is pureed to the proper consistency if it **quickly** falls off a spoon when the spoon is turned sideways. Would you be able to drink your food through a straw?

No more than 2 ounces of food every 2-3 hours, except for yogurt and soup. You can consume up to 4 ounces of yogurt or ½ cup soup at one time.

SUGGESTIONS:

- 1) Eat slowly.
- 2) Use a baby spoon or an espresso spoon to eat. Even better, purchase Godinger's Diet Tools (spoon, fork and knife).
- 3) If you don't already have these items, please purchase:
 - Measuring cups and spoons.
 - A scale to weigh your food and YOU.
 - A blender or food processor.

GOAL: 80-120 grams of protein daily.

Choose foods and beverages from the table on page 4 to achieve this goal.

REMEMBER! You need to eat every 2-3 hours even though you are not hungry!!!

Every day you must have two high protein shakes that will provide at least 25g of protein each. Drink half at one meal and half at a second meal.

FOOD / BEVERAGE	PORTION	AMOUNT OF PROTEIN (GRAMS)
THESE FOODS DO NOT NEED TO BE PUREED:		
<i>Fat free or light yogurt</i>	4 ounces	4
<i>Fat free Greek yogurt</i>	4 ounces	9
<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
<i>Split pea soup</i>	¼ cup	5
<i>Egg, scrambled until small curds are formed that are soft but not runny</i>	1	7
<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>	2 ounces	6.8
<i>Hummus</i>	¼ cup	4
THESE FOODS NEED TO BE PUREED:		
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
Egg, small (pureed except as cooked above)	1 whole	7
Egg whites	1-2	3-6
Egg substitutes	¼ cup	5-7
Beans	¼ cup	4-5
Bean soups	½ cup	4-5
Tofu	¼ cup or 2 ounces	4-5
Edamame	¼ cup	5
HIGH PROTEIN BEVERAGES:		
Fat free or 1% milk	1 ounce	1
Fairlife, Skim Plus or Smart Balance milk	1 ounce	1.6/1.4/1.3
Soy milk	1 ounce	0.75

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
1:30pm	4 ozs Greek yogurt	9
4pm	½ cup fat-free milk blended with ½ scoop Isopure® powder	4 12.5
7pm	2 tablespoons peanut butter	7
10pm	New Whey Liquid Protein Shot (3.4 fl. ozs.)	25

Total: 88g

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

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.**

arabitol	Glycerol (glycerin)	lactitol	ribitol
dulcitol	Hydrogenated starch (hydrolysate)	maltitol	sorbitol
erythritol	iditol	mannitol	threitol
glycol	isomalt	polyglycitol	xylitol

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

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Frozen yogurt (sugared)	Mystic® beverages
Fruit drinks (sugared)	Popsicles (sugared)
Gatorade®/POWERADE®	Pudding (sugared)

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% Lactaid® milk
- Fat free or reduced fat soy milk
- Almond milk
- Crystal Light®
- Sugar-Free Kool-Aid®
- Coffee or tea
- Bouillon or broth (preferably low sodium)
- Diet Snapple®
- G2® by Gatorade®
- POWERADE ZERO™
- Bai®5
- vitaminwater zero®
- Sugar-free gelatin
- 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) **DO NOT DRINK WHILE YOU ARE EATING** AND WAIT **30 MINUTES** AFTER YOU HAVE FINISHED EATING TO START DRINKING AGAIN. While the protein shake is considered a meal, it is still a liquid so you do **NOT** have to observe this drinking rule with the protein shake.
- 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 FIVE 8-OZ. CUPS (40 OZS.) OF BEVERAGES EVERY DAY.** Drink 4 ozs. every 30 minutes between your meals or just take small frequent sips between 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, SMOOTHIES OR COCONUT WATER** after surgery.
- 8) **NO CARBONATED BEVERAGES** after surgery.

9) NO MORE THAN **16 OUNCES** OF A CAFFEINATED BEVERAGE DAILY.

10) **NOTE**: Diet gelatin (Diet Jell-O®) and the frozen fruit pops are considered liquids and should not be consumed as a snack or meal. Treat them as liquids and consume them between your meals and snacks.

11) **NOTE**: Water may be difficult to drink after surgery as it may feel too heavy in your stomach. You can try squeezing fresh lemon or lime into your water to make it lighter or just drink other beverages until you can drink water again.

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 one to two weeks, until you can tolerate soft solid food**.

Vitamins/Minerals

When you get home from the hospital, start taking one of the multi-vitamins with minerals that are high in A, D, E, K that are listed below:

- a) Bariatric Advantage High ADEK Multivitamin (with minerals) – chewable tablets
 - Take one chewable tablet three times per day.
 - To purchase, go to www.BariatricAdvantage.com and click on “Multivitamins”.
- b) Celebrate Multi-ADEK chewable tablets.
 - Take one chewable tablet three times per day.
 - To purchase, go to www.CelebrateVitamins.com.

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.
- **Calcium may decrease the absorption of thyroid hormones (e.g. Synthroid®)**. Take calcium supplements separately from your thyroid hormone pill by 2 hours.
- **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.

CHANGES IN BOWEL HABITS

For gas:

- Take over-the-counter chewable Gas-X chewable tablets.
- Take beano[®] chewable tablets or Meltaways[®] if specific foods cause gas (e.g. beans)
- Walk every day.
- Eat and drink slowly.
- Do not skip meals.
- Cut back on your consumption of fats, sweets, dairy and starches.

For diarrhea:

- Cut back on the fats in your diet (e.g. butter, oils, regular mayo, full fat milk and cheese, high fat meats, cream soups, chips).
- Avoid milk and milk products.
- If diarrhea persists, try 2 TBSP's of Pepto Bismol[®] every hour as needed, up to a maximum of 16 TBSP's in an 8-hour period **OR** 2 TBSP's of Kaopectate[®] after each loose bowel movement.
- Drink plenty of fluids to prevent dehydration.

If diarrhea persists, call your surgeon's office for a prescription for medication to alleviate your diarrhea.

For vomiting:

If you vomit, you have probably eaten or drunk too quickly and/or too much or your pureed food may be too solid or you are drinking too soon after eating/while eating.

- Do not eat or drink for **four** hours and then try one ounce of a non-sugared liquid.
- If this liquid does not make you nauseous or vomit, then continue with liquids until the next day. Then you can try pureed foods again or just continue on liquids if you are not at the pureed food stage yet.

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

When you eat, make sure that you:

- Eat slowly. Put your spoon down after taking a bite. Wait 10-15 seconds after swallowing to take another bite.
- Do not eat more than 1-2 ounces of the pureed high protein foods, 4 ounces of yogurt or ½ cup of pureed soup at one meal.
- Make sure that your pureed food is the consistency of baby food or applesauce.
- Wait 30 minutes after eating to drink again.

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 CONSEQUITIVE MINUTES WITH ELEVATED HEART RATE PER DAY.**

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.

Surgeon/NP and RD: 2-3 weeks, 5-6 weeks, 3 months, 6 months, 1 year and then every 6 months after surgery

Follow-up is for life after surgery.

You will need to take blood tests at 3 and 6 months and 1 year after surgery and then every 6 months after the first year 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 WHEN YOU START PUREED FOOD ARE TO:

- 1) CONSUME AT LEAST 80G TO 120G OF PROTEIN DAILY.**
- 2) EAT EVERY 3 HOURS.**
- 3) DRINK AT LEAST 48 OUNCES OF FLUIDS BETWEEN YOUR MEALS.**
- 4) WALK EVERY DAY, AT LEAST 30 MINUTES IF POSSIBLE.**
- 5) SLEEP 7-9 HOURS A NIGHT AS RECOMMENDED BY THE NATIONAL SLEEP FOUNDATION.**

CALL YOUR DIETITIAN WITH ANY DIET-RELATED QUESTIONS!

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3/13, 9/14, 10/14, 2/15, 3/15, 3/16, 5/16,
8/16, 12/16, 11/17, 4/189

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 powder.
- 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 ⅛ cup. Freeze the food in the ice cube trays. When frozen, remove the cubes and store in a freezer bag in the freezer. Use 2 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 (¼ 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