

The Cornell Weight Loss Surgery Program:

Dietary Guidelines for Duodenal Switch Surgery

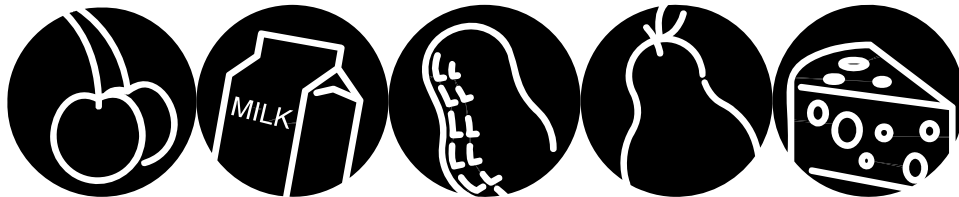
Liz Goldenberg MPH, RD, CDN

Theresa Kinsella MS, RD

Jaimie Sherry MS, RD, CDN

212-746-5294

www.CornellWLS.com



“BPD/DS Basics”

- * Consume only the foods allowed on the soft diet (approximately 3 weeks) until otherwise informed by RD/MD.**
- * Eat slowly and chew thoroughly!**
- * Avoid concentrated sugars; they are filled with non-nutrient calories and will slow down weight loss.**
- * Avoid high fat foods; they can lead to diarrhea, gas, and malaise.**
- * Do not drink large amounts of liquids with your meal or just before eating. If you fill up on liquid, you will not have room for the meal.**
- * Remember the stomach can only hold 4-6 oz after surgery. You will probably feel satisfied after 2-3 tablespoons of food. Do Not Overeat! Over time your stomach will stretch. It takes 6-9 months (possibly longer) for your new stomach size to stabilize and allow you to determine your normal meal amount.**
- * Stop eating when you feel comfortably satisfied- if ignored, vomiting will follow. Chronic vomiting does damage to the stomach and the esophagus and can cause dehydration as well as vitamin deficiency. If you are vomiting often: call our office and sip on Gatorade which also has electrolytes necessary for normal cell function**
- * Drink at least 6 - 8 cups (8oz) of fluid per day to prevent dehydration.
(Monitor for the following signs: headache, dizziness, nausea, lethargy, lower back pain, a white-ish coating on the tongue and dark urine.)**
- * Eat 3 high protein nutrient dense meals +1 high protein snack a day. Avoid frequent snacking which can eventually lead to weight gain.**
- * Meals and snacks should include foods high in protein. Protein is required to preserve muscle mass and promote wound healing. Aim for 60-80 gms per day for the first few weeks after surgery.**
- *Introduce new foods one at a time in order to rule out intolerance. If a food is not tolerated, reintroduce it in 1 week.**
- *If you cannot tolerate dairy, substitute Lactaid for milk. You may need to take Lactase pills with dairy to help digest the lactose.**
- *Exercise! This is the key to long term weight loss and maintenance. Walking should be the main exercise for the first 6 weeks. Between 6-8 weeks, more strenuous exercises can be added.**

Biliopancreatic Diversion / Duodenal Switch

Your diet progression during and after your hospital stay:

➤ ***Bariatric Surgery Clear Liquids*** – First 2-4 meals. *You are on this diet immediately after surgery. It is composed of clear, sugar free fluids.*

- You will be drinking water, tea, broth, and Gatorade (has ½ the sugar of juice).
- Try to sip fluids at the rate of ½ to 1 oz per 20 minutes (=1 ½ to 3 oz per hour).
- You will also receive sugar free jello.
- Sipping fluids out of bottles or straws may cause gas. Gas is already a problem after surgery so you will not want to make it worse.

*Gatorade is offered in the hospital and should be discontinued when you return home. If you experience diarrhea or vomiting, Gatorade can be used during that time to help re-hydrate.

➤ ***Bariatric Surgery Pureed*** – After you tolerate clear liquids you will progress to a diet composed of pureed foods low in fat and with no sugar. *You will remain on this diet until you get discharged.*

- You will be given foods like cottage cheese and unsweetened applesauce.
- You will only be able to eat a few tablespoons of food, but the hospital will give normal sized portions.
- It is up to you to control how much you eat.

➤ ***Home diet part 1*** - You will be discharged on this diet and follow it until your RD or MD says otherwise. *Approximately 3-4 weeks.*





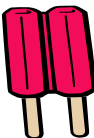
- Unsweetened applesauce, ripe bananas
- Meatloaf, moist fish, eggs
- Low fat cottage cheese, sugar free puddings
- Oatmeal, crackers
- Soft cooked vegetables (no corn)

➤ ***Home diet part 2***– If all foods above are tolerated, you will gradually advance to this stage. This is a modified diet which emphasizes lean protein, fruits/vegetables, and whole grains and de-emphasizes fat and sugar.

- This stage is very individualized. It is normal to experience an intolerance to food. Try to reintroduce that food a week later while focusing on eating slowly, chewing thoroughly, and not overeating.
- You will eventually be able to tolerate a variety of foods from each of the food groups.

Food Suggestions for Soft Diet

(Home diet part 1/first 3-4 weeks)

Food Group	Acceptable Food Choices
<p>Bread, Cereal, Pasta, and Rice 1-2 serving/d 1 = ¼- ½ cup</p>	Hot cereal (make with milk)– unsweetened oatmeal, cream of wheat, and grits. Crackers.
<p>Fruit  1-2 serving/d 1 = ¼- ½ cup</p>	Unsweetened applesauce, canned / jarred peaches and pears in their own juice (not syrup), any fruit pureed with out the skin, mashed ripe banana.
<p>Vegetable  1-2 serving/d 1 = ¼- ½ cup</p>	Any vegetable (except corn) cooked soft. Canned vegetables. Make sure broccoli and cauliflower are cooked very well. Baked and mashed potatoes are well tolerated with out skin.
<p>Meat, Poultry, Fish, Nuts, Beans and Eggs  2-3 serving/d 1 = ¼- ½ cup</p>	Chopped up soft poached eggs, scrambled eggs. Egg salad with low fat mayo, mashed boiled eggs. Mashed: moist fish or seafood, gefilte fish, tuna salad with low fat mayo, well-cooked or canned non fat beans (beware of gas), moist reduced fat meatloaf, and tofu.
<p>Milk, Cheese, and Yogurt  3-4 serving/d 1 = ¼- ½ cup</p>	Low fat or non fat cottage cheese or ricotta cheese, sugar free custards and puddings, non-fat unsweetened / sugar free yogurt (Dannon Light and Fit ®, Colombo Light ®, non-fat Total ®), sugar free frozen yogurt, and sugar free fat free ice cream.
<p>Fats and Oils</p>	Limit all
<p>Miscellaneous  2-3 servings/d 1 = ¼ - ½ cup</p>	Soups (no chunks of meat) - limit cream soups – Healthy choice ®, Progresso Lite ®, and Healthy Request ®, egg drop soup and miso soup. Sugar free jello, sugar free popsicles (Dole ®, Starburst ®), Pedialyte ® popsicles, sugar free/fat free ice cream. Artificial sweeteners which are acceptable: Nutrasweet/Equal ®, Sweet and Low ®/ Saccharine, Splenda ®/Sucralose.
<p>Liquids (sip as much liquid as you can tolerate. Do not drink during meals. Try to drink at least 6 to 8 8oz cups of fluid per day)</p>	Flat diet soda, Skim milk or Skim Plus ®, Crystal Light ®, Gatorade ®, decaf coffee and tea, all broths, any sugar free beverages (sugar free Kool Aid ®and sugar free Tang ®, Glaceau Vitamin Water ®, and water!)

- ✓ Always eat the protein first (milk, cheese, fish, eggs...)
- ✓ Avoid drinking fluids ½ hour before meals and snacks
- ✓ The goal is to drink at least 4 ounces (1/2 cup) of acceptable fluids every hour
- ✓ Do not overeat... when you are full, stop eating
- ✓ Meats and Chicken can be eaten if blended

Sample Menus (A)

(First 3-4 weeks)

Breakfast 8 AM	Breakfast 8 AM	Breakfast 8 AM
½ cup of hot cereal with ½ cup skim plus milk ¼ - ½ banana	1 scrambled eggs with 1 oz of cheese	½ cup of oatmeal with ½ cup skim plus milk ¼ - ½ banana
Supplement 10 AM	Supplement 10 AM	Supplement 10 AM
1 cup skim plus or skim Lactaid milk with 2 scoops of acceptable protein powder	1 cup skim plus or skim Lactaid milk with 2 scoops of acceptable protein powder	1 cup skim plus or skim Lactaid milk with 2 scoops of acceptable protein powder
Lunch 12 PM	Lunch 12 PM	Lunch 12 PM
¼ - ½ cup of soup 2 oz of tunafish with low fat mayo	½ cup of cottage cheese ¼ - ½ cup cut up melon	½ cup egg salad with low fat mayo ¼ - ½ cup of low fat yogurt
Snack 2 PM	Snack 2 PM	Snack 2 PM
½ cup of yogurt sugar free popsicle	½ cup of soup	1 oz of low fat cheese
Dinner 6:00 PM	Dinner 6:00 PM	Dinner 6:00 PM
2 oz of soft white fish ¼ - ½ cup Low fat cream of spinach	2 oz soft meatloaf ¼ - ½ cup pureed broccoli	2 oz soft white fish ¼ - ½ cup vegetable soufflé

Sample Menus (B)

(First 3-4 weeks)

Breakfast 8 AM	Breakfast 8 AM	Breakfast 8 AM
<p>½ cup low fat yogurt ¼ - ½ cup cut melons</p>	<p>1 egg omelet with 1 oz low fat cheese and ¼ cup well cooked spinach</p>	<p>½ cup cold cereal with ½ cup skim plus milk (let it sit to soften up) ¼ - ½ banana</p>
Supplement 10 AM	Supplement 10 AM	Supplement 10 AM
<p>1 cup skim plus or skim Lactaid milk with 2 scoops of acceptable protein powder</p>	<p>1 cup skim plus or skim Lactaid milk with 2 scoops of acceptable protein powder</p>	<p>1 cup skim plus or skim Lactaid milk with 2 scoops of acceptable protein powder</p>
Lunch 12 PM	Lunch 12 PM	Lunch 12 PM
<p>¼ cup well cooked vegetables ½ cup marinated tofu</p>	<p>2 oz canned salmon ¼ - ½ cup mashed potato</p>	<p>½ cup steamed tofu with brown sauce on the side ¼ cup beans</p>
Snack 2 PM	Snack 2 PM	Snack 2 PM
<p>½ cup sugarfree pudding</p>	<p>1 small sweet potato with out skin</p>	<p>1 small sweet potato with out skin</p>
Dinner 6:00 PM	Dinner 6:00 PM	Dinner 6:00 PM
<p>½ - 1 tofu/veggie burger ¼ - ½ cup low fat creamed spinach</p>	<p>½ cup mixed beans ½ - 1 small baked potato (no skin) with 2 tablespoons low fat sour cream</p>	<p>2 oz gefilte fish ¼ - ½ cup vegetable soufflé</p>

Concentrated Sweets

Most of these foods and beverages are filled with “empty” calories in the form of sugar. These products provide mainly calories with limited nutritional value (for ex. vitamins, minerals, protein and fiber.) Every bite counts after surgery. The above nutrients need to be adequately supplied through the diet in order to replace those lost from malabsorption. Filling up on these “concentrated sweets” can prevent weight loss and can replace healthier foods in your diet.

Artificial sweeteners such as nutrasweet/Equal ®, saccharine/Sweet & Low ®, or sucralose/Splenda ® are OK to use.

Foods to avoid

Ice cream

Chocolate milk

Pudding

Sweetened, fruited or frozen yogurt

Dried fruits

Canned or frozen fruits in syrup

Fruit juice

Sugar coated cereal

Doughnut

Popsicles

Cakes

Pies

Cookies

Jellies

Regular soft drinks

Lemonade

Kool aid

Sugared ice tea

Snapple or fruit drinks

Table sugar

Honey

Candy

Regular Jell-O

Sugar gum

Molasses

Syrups

Sherbet / Sorbet

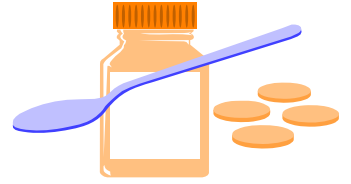
Jams

Diet Progression for Duodenal Switch

*This is a general guideline of when to introduce various foods. Everyone is different and may not progress at the same rate.

- **Day 1 Post-op:** Nothing by Mouth.
- **2-3 Days Post-op:** Progress from Clears to No Concentrated Sweets, Low Fat Puree Diet. Try to consume 4oz of fluid every hour you are awake.
- **4 Days to 4 Weeks Post-op:** Modified Soft Diet (no beef or poultry unless ground, avoid raw fruits and vegetables except mashed banana, blended fruit, or canned fruit). Try to consume 4-6 oz of fluids every hour. You should be able to eat 4-6 oz of food per meal (size of baby food jar).
- **4-6 Weeks Post-op:** Poultry (no skin), soft fruits and vegetables, thinly sliced deli turkey or ham, boiled chicken in broth, canned chicken or chicken sausage, crisp toast, pastina (mini pasta), tempeh, veggie burgers, imitation crab, shrimp, fish filet such as sole, flounder, and red snapper.
- **6-8 Weeks Post-op:** Crunchy fruits and vegetables, bread, rice, pasta.
- **2-4 Months Post-op:** Lean and moist veal, beef, turkey, chicken, and duck. Choose poultry and fish more often- red meat is higher in fat and more difficult to digest).
- **1 Year Post-op:** You should be able to consume foods from all 6 food groups. **Your diet should always be high in protein and low in fat and refined carbohydrates. Protein first, then fruits and vegetables, and then whole grains.**

Supplement Rx



Biliopancreatic Diversion / Duodenal Switch Surgery

You will require vitamin and mineral supplements for the rest of your life in order to prevent deficiencies. You will not be absorbing all the nutrients you ingest from food, therefore extra vitamins, minerals and protein are required.

First 3 weeks after surgery:

- **Chewable Multi-Vitamin:** Flintstones Complete or Centrum Jr. with Iron (Chew 1 in the AM and 1 in the PM- best if taken with food)
- **Chewable Calcium with Vitamin D:** Viactiv calcium, Bariatric Advantage, Caltrate chewables w/D (Chew 1 with each meal = 3 per day)
- **ADEK's or Aquadeks:** (By AxcanPharma) To order call 1-800-472-2634 Ext: 2 or online: www.axcan.com (ADEKs: Chew 1 tablet 3 times/ day with food or take 1ml of the liquid 3 times/day with food)
- **Protein shakes:** These must be high protein (at least 15 grams/serving) AND low sugar (less than 6 grams/serving). You must read product labels to determine the nutritional value. There are 2 types of protein shakes 1) pre-mixed- Some brands are: Atkins, Myoplex Classic, Myoplex Lite, Myoplex Low Carb, Perfect Zero Carb Isopure. 2) powders that need to be mixed with milk- Some brands are: Designer Protein, GNC Challenge 95, Whey Supreme, Revival Soy, Lindora. Directions for powders: Add protein powder by the scoop/tablespoon to 8 oz Skim Plus Milk, Skim Milk, or Fat Free Lactaid daily.

3 Weeks after surgery:

- **Multi-Vitamin:** Centrum Silver (tablets/chewables), Geritol Complete (1-2 daily with food, chewables are best absorbed. Avoid time-released vitamins)
- **Calcium:** Citracal, Posture D, Cal Apatite, Chewable Calcium Citrates: Twinlabs / Bariatric Advantage / NSI. Calcium should be in the Citrate form, Carbonate is not absorbed as well. (Aim for at least 1200 mgs of calcium daily in 2 doses, best absorbed with food)
- **ADEK's (or Aquadeks: Swallow 1 capsule 2 times/day with food)** see above
- **Iron:** Repliva/PruVate/SeVate 21/7, Ferrex 150 forte plus or similar (iron will be prescribed by your surgeon) (1 per day on an empty stomach. Do not take with milk, calcium, coffee, tea, or antacids!)
- **Protein:** supplements as above (If unable to consume 80-120 gms of protein / day from food- the amount needed depends on size and gender, then protein supplements are indicated. Check with MD or RD)

**Labs will be followed and other supplements may be prescribed as needed.*

PROTEIN POWER

Food Name	Portion	Cals	Pro gm
Beans, Cnd, Baked	1/2 cup	123	7
Beans, Kidney, Cnd	1/2 cup	112	8
Beef Eye of Round	3oz.	143	21
Beef Top Loin	3oz.	176	21
Cheese, American Fat Free	1 oz.	40	6
Cheese, Cottage, 1% Fat	1/2 cup	82	14
Cheese, Cottage Creamed	1/2 cup	109	13
Cheese, Parmesan, Grated	1/4 cup	128	12
Cheese, Mozzarella, Part-skim	1 oz.	78	8
Cheese, Ricotta, Part skim	1/2 cup	170	14
Cheese, Part Skim Ricotta	1/4 cup	90	8
Chicken, White Breast Meat w/o skin	3 oz.	138	26
Chicken, Leg w/o skin	3 oz.	162	21
Cod, White, Baked	3 oz.	89	21
Crab, steamed	3 oz.	82	17
Egg, Hard Cooked	1	78	6
Flounder	3 oz.	62	21
Halibut	3 oz.	119	21
Ham, Lean, 5% Fat	3 oz.	133	21
Hamburger (90% lean ground beef)	3 oz.	169	21
Lobster, Steamed	3 oz.	77	16
Milk, Skim	1 cup	86	8
Milk, Skim Plus	1 cup	120	11

Food Name	Portion	Cals	Pro gm
Peas, Chick, Cnd	1/2 cup	134	7
Pork Tenderloin	3oz.	139	21
Pork Loin Chop	3oz.	172	21
Protein Powder (There are many different brands which vary in amount of protein. Read labels.)	1 scoop	110	16
Salmon, Baked	3 oz.	155	21
Shrimp, Steamed	3 oz. (15 large)	84	18
Soybeans (edemami)	1/2 cup	149	14.3
Soy Flour, defatted	1/4 cup	81.7	12.8
Soymilk, plain	1 cup	79	6.6
Soynuts	1/4 cup	202	15
Steak, Sirloin, trimmed	3 oz.	166	26
Swordfish, Baked	3 oz.	132	21
Tempeh	1/2 cup	165	15.7
Texturized Soy Protein	1/2cup	59	11
Tofu	1/2 cup	94	10
Tuna, Cnd, Water Packed	3 oz.	111	25
Turkey, White Meat	3 oz.	105	21
Veal Loin	3 oz.	149	21
Veal Leg (top round)	3 oz.	128	21
Yogurt (sugar free), Frozen, Vanilla	1/2 cup	80	5
Yogurt, Fruit, Fat Free, low sugar	1 cup	120	8
Yogurt, plain, w/o Fruit, Lowfat	1 cup	194	8

FOOD LOG SAMPLE

Date: 3/22/03

Name: Joyce Smith

Amount of time Post-op: 2 Months

Time	Amount (tsp, oz, Tbs, cups)	Food/Condiment/Supplement (be as detailed possible- brands, method of cooking, etc.)	Grams of Protein
Breakfast			
8:00 AM	1	Hard boiled egg	6
	½ piece	Whole wheat toast	1
Lunch			
12:30 PM	3 oz	Tuna, canned in water	25
	1 teaspoon	Light mayonnaise	0
	3	Low fat Triscuits ®	1
	1	Tomato, medium, sliced thin	0
Dinner			
6:00 PM	2 oz	Chicken thigh, roasted, in lemon sauce	14
	2 tablespoons	Carrots, steamed, cut up	0
	1 tablespoon	Peas, green, cooked	1
Snack(s)			
8:00 PM	1 cup	Greek-style non-fat yogurt	20
	2	Medium strawberries, sliced	0
Beverages			
7:00 AM	4 oz	Water	0
9:00 AM	16 oz	Skim Plus milk	22
2- 4 PM	20 oz	Crystal Light ®	0
7:00 PM	12 oz	Diet Snapple ®	0
9:00 PM	16 oz	Water	0

Total Grams of Protein = 83 (add 15 gram protein shake to get to **98** gms/day)

FOOD LOG (1) ONE PAGE PER DAY

Date:

Name:

Amount of time Post-op:

Time	Amount (tsp, oz, Tbs, cups)	Food/Condiment/Supplement (be as detailed possible- brands, method of cooking, etc.)	Grams of Protein
Breakfast			
Lunch			
Dinner			
Snack(s)			
Beverages			

Total Grams of Protein:

FOOD LOG (2) ONE PAGE PER DAY

Date:

Name:

Amount of time Post-op:

Time	Amount (tsp, oz, Tbs, cups)	Food/Condiment/Supplement (be as detailed possible- brands, method of cooking, etc.)	Grams of Protein
Breakfast			
Lunch			
Dinner			
Snack(s)			
Beverages			

Total Grams of Protein: