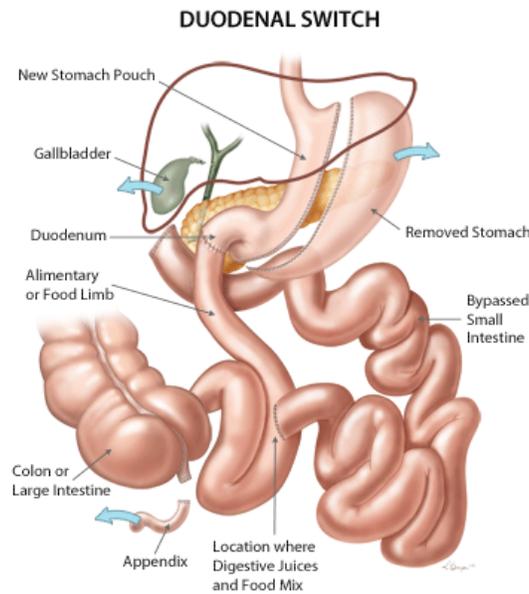


## Biliopancreatic Diversion with Duodenal Switch Nutritional Guidelines



### Nutrition Staff:

Dietitian	Phone Number	Email Address	Fax Number
Despina Hyde, RD	212-263-8495	<a href="mailto:Despina.hyde@nyumc.org">Despina.hyde@nyumc.org</a>	212-263-3757
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## Pre-Op Liquid Diet Instructions- Start 2 weeks before surgery

Product	Brand Name	Nutrition per Serving	Available	Drinks/Day
 2 scoops + 8 oz water	<b>Bariatric Advantage</b> High Protein Meal Replacement	150-160 calories 27gms protein 7gms total carbs 5gms fiber	Online Product  Please see order attached order form.	6 per day
 1 packet + 9oz water	<b>New Direction</b> protein powder (kosher – dairy)	200 calories 27gms protein 10gms total carbs 0-5gms fiber	Medical Product (can only be purchased in our office)	5 per day
 11oz bottle	<b>Carnation Instant Breakfast</b> (kosher – dairy)	150 calories 12gms protein 16gms total carbs 2gms fiber	Supermarkets Drugstores Online	6 per day
 11 oz can	<b>Slim Fast High Protein</b> (kosher – dairy)	190 calories 15gms protein 24gms total carbs 5gms fiber	Supermarkets Drugstores Online	5 per day
 11oz can	<b>Slim Fast Lower Carb</b> (kosher – dairy)	180 calories 20gms protein 4gms total carbs 2gms fiber	Supermarkets Drugstores Online	5 per day
 14oz bottle	<b>Muscle Milk Light</b> (kosher – dairy) <i>Lactose Free</i>	160 calories 20gms protein 12gms total carbs 5gms fiber	Supermarkets Drugstores Online	5 per day
 8oz bottle	<b>Glucerna Shake</b> (kosher – dairy) <i>Lactose Free</i>	200 calories 10gms protein 27gms carbs 5gms fiber	Supermarkets Drugstores Online	5 per day
 1 scoop + 8oz fat free milk	<b>Challenge Whey</b> Kosher Protein Powder (Kof K) Cholov Yisroel Dairy	185 calories 16gms protein 14gms total carbs (with milk) 0gms fiber	Health Food Store Online	5 per day
 1 scoop + 8oz fat free milk	<b>Naturemax Plus</b> Soy Protein Power (kosher – soy)	190 calories 28gms protein 14gms total carbs (with milk) 0.5gms fiber	Health Food Store Online	5 per day

### OTHER OPTIONS (to be used for protein supplementation or to help meet protein needs)

Product	Brand Name	Nutrition per Serving	Available	Comments
 1 scoop + 8oz fat free milk	<b>Unjury</b> (not kosher)	180 calories 28gms protein 15gms total carbs (with milk)	<a href="http://www.unjury.com">www.unjury.com</a> (800)517-5111	*Chicken soup flavor available
	<b>Isopure Plus</b> (not kosher) <i>Lactose Free</i>	60 calories 15gms protein 0gms total carbs	GNC	*Clear, fruit flavored drink

## More Pre-op Diet Instructions

You will have 1000 calories per day and at least 50 grams of protein. No more than 35 grams of fat daily. Most of the calories, protein and fat in your diet will come from the shakes.

### **Additional Permitted Beverages:**

- You may also drink sugar free beverages throughout the day. Water, diet soda, diet ice tea, crystal light, diet lemonade, diet Snapple and the like are unlimited. Limit caffeinated beverages as they will make it more difficult to stay hydrated. **Limit coffee and diet soda to 2 cups daily.** Caffeine free is OK. You may have skim milk and artificial sweetener in coffee.
- **NO ALCOHOLIC BEVERAGES ALLOWED** during this time as it also impacts your liver adversely.

### **Additional Permitted Snacks:**

- Sugar Free Gum, Sugar Free Popsicles and Sugar Free gelatin are permitted. **Limit to 30 calories per day.**
- Low sodium broth (i.e. Herb Ox or bouillon cubes).
- Vegetables (raw or cooked) steamed, boiled, grilled or in a soup. **Limit 2 cups daily.**
- Permitted vegetables include lettuce, spinach, cucumber, onion, tomato, broccoli, cauliflower, carrots, mushroom, zucchini, string beans, okra, cabbage, asparagus, Brussels sprouts and peppers.
- **No corn, peas, potatoes, or beans-too many calories.**
  - Mustard, salsa, vinegar are permitted in small amounts.
  - Limit fat free dressing to 2 tablespoons daily.
  - **NO** added fats, oils, butter, margarine, mayonnaise, etc.

**Compliance to this pre-op diet is mandatory.** This is to help shrink or “de-fat” your liver. Shrinkage of the liver makes the surgery significantly safer and easier.

## Week 1 after Surgery – Thin Liquid Diet

♥ **For the first 10 days after the surgery you will be on a thin liquid diet.** Anything that is thin enough to be sipped through a straw is fine. However, do not use a straw to drink as it may cause gas and discomfort. Choose **caffeine-free** beverages like *Wylers Light*, diet ice tea, *Crystal Light*, broth, skim milk, sugar free hot chocolate, tomato juice, tomato soup, water, *V8* vegetable juice, *Vitamin Water*, decaf coffee/tea, ices, *Propel*, diluted juice, *V8 Splash*. Avoid carbonated drinks for at least one month, as they may cause vomiting or gas. \*After 10 days you will switch to sugar free/no calorie beverages.

♥ **Include AT LEAST, but not limited to, 2 protein shakes per day.** You may have a pre-made shake such as *Slim Fast*, *Carnation Instant Breakfast*, *Muscle Milk Light*, *Naturemax Plus*, *Isopure* or prepare your own. To prepare your own, blend one scoop of a protein powder such as *Unjury* or *Isopure* into 4 oz of liquid (preferably milk) with some ice. *Carnation Instant Breakfast*, *ALBA mix*, *Weight Watcher* shake mix can be used as well. Protein drinks may need to be diluted with ice, water or milk.

♥ **Limit fluid intake to sips at a time.** Sip your fluids slowly all day long. Do not gulp. HINT: Drink fluid as if you were drinking hot tea. This will prevent your pouch from stretching, and prevent nausea/vomiting. It may take 1 hour to drink 8 ounces of fluid.

♥ **Adequate hydration prevents dehydration and constipation.** Have a goal of consuming 6-8, eight oz glasses of fluid per day.

♥ **All large medications must be crushed or in liquid form from this point forward.** You are advised to take a chewable or liquid multivitamin supplement daily due to your low caloric and nutrient intake. Examples: *Centrum Adult Multivitamin*, *Flintstones Children Multivitamin* (take two), *Maxi Health* chewable multivitamins (kosher) or *Freeda Monocaps* multivitamin (kosher and vegetarian) in chewable or liquid form. It is also recommended that you take a chewable calcium with vitamin D supplement daily (i.e. *Twin Labs Calcium Citrate Wafers*, *Calcet*, *Maxi Health* Chewable Calcium (*kosher*)).

\* YOU WILL COME BACK IN 7-10 DAYS AFTER SURGERY FOR A CHECK UP.

## Sample Liquid Diet – Week 1 after Surgery

DRINK THROUGHOUT THE DAY! STAY HYDRATED! Goal is 6-8 cups fluids daily.

### MORNING IDEAS

1 cup protein shake  
1 cup *Propel* or tea or coffee

### AFTERNOON IDEAS

½ cup protein shake  
1 cup vegetable juice or water  
1 cup of tomato soup

### EVENING IDEAS

½ cup protein shake  
1 cup *Crystal Light* or *Wylers' Light*  
1 cup broth  
1 diet ice pop

### REMINDER!

- Try to consume at least 2 protein shakes (*Slim Fast*, *Muscle Milk Light*, *Carnation Instant Breakfast* etc.) every day! They will help give you energy and protein. It will help promote wound healing and help preserve muscle.
- Shake idea: take 4 oz milk, crushed ice, and blend with 1 scoop protein powder (i.e. *Unjury Whey Protein Powder*) to make a protein smoothie.

HINT: The first 10 days are the most challenging! It is suggested that you avoid watching TV during this time due to the large number of food commercials. Choose other activities such as reading books, knitting, writing, using the Internet, talking on the telephone, etc., to help keep your mind off of food.

## Week 2 and 3 after Surgery – Puree Diet

\*You can begin eating pureed foods after your 10 days of liquids is completed.

\* From this point on you should begin to avoid drinking with meals as this may predispose you to vomiting. Continue with this for the first few months - ultimately you will be allowed to drink and eat at the same time.

\*Focus on a balanced healthy diet with an emphasis on protein and nutrient rich foods. Sample food ideas are below.

\*To puree food, cut food into small pieces (size of a pencil eraser) and then cook. Drain the fluid and set it aside. Blend the food and liquid (can be juice or broth, too) in a blender/food processor. Blend until applesauce consistency. Strain any lumps or pieces. Use spices to flavor food. Final consistency should be smooth. **Baby food works too.**

### EASY PUREED IDEAS

<p><b>HIGH PROTEIN CHOICES</b>→ Fish, Chicken, Meat, Beans, Soy</p>	<p>Cooked pureed protein such as: flakey, fork mashed fish (tilapia, flounder). Tuna fish or egg salad fork mashed or blended well with low fat mayo (no added vegetables.) Silken tofu, non fat refried beans, hummus, split pea soup. Blended chicken or blended meatballs.</p>
<p><b>HIGH PROTEIN CHOICES</b>→ Milk, Cheese, Yogurt <i>Choose 1% or non-fat dairy</i></p>	<p>Low fat milk, low fat/sugar free yogurt. Ricotta cheese, cottage cheese. Sugar free pudding.</p>
<p>Fruits &amp; Vegetables</p>	<p>Baby food fruits and vegetables, pureed canned fruits and vegetables, low fat creamed spinach, applesauce, pureed squash.</p>
<p>Grains, Cereal</p>	<p>Cream of wheat or farina, mashed potatoes (limit). Runny oatmeal.</p>
<p>Fats and Oils <i>limit 2-4 tsp.</i></p>	<p>Use sparingly. Use low fat mayo. Use olive oil and canola oil.</p>
<p>Beverages 8 (8oz) cups/day</p>	<p>Low or no calories drinks like <i>diet Snapple, crystal lite</i>, water, broth, sugar free ice pops, sugar free Jell-O, tea, sugar free <i>Kool Aid, Fruit 2<sub>o</sub>, Propel</i>. Avoid carbonation!</p>

- ❖ Shakes (i.e. Slim Fast) may be used as a meal replacement.
- ❖ Blended soups can also be a meal. Blend any soup in blender/food processor and serve. May wish to add broth to thin out soup.

## **Sample Puree Diet – Week 2 and 3 after Surgery**

**(No crunchy raw fruits or vegetables. Food should be fork mashed or blended.) Pick ONE item from each suggested meal.**

### **Breakfast ideas:**

1. scrambled eggs (1-2 eggs)
2. yogurt (6 ounces)
3. cottage cheese (1/2 cup)
4. farina, cream of wheat (made with milk- 1/2 cup)
5. applesauce (1/2 cup)
6. protein shake (10 ounces)

**Note: All serving sizes are estimated at 1/2 cup to 1 cup per meal. Stop as soon as you feel full or uncomfortable in any way.**

### **Lunch and Dinner ideas:**

1. tuna fish (fork mashed with mayo, no celery)
2. cottage cheese or yogurt and pureed fruit
3. soft white fish with mashed potato
4. eggs with or without cheese
5. egg salad with low fat mayo
6. pureed chicken with mashed potato
7. soup (lentil, pureed vegetable soup, creamed soup)
8. tofu with pureed or soft mashed veggies
9. baby food

## **“BPD/DS BASICS”**

### **THE POST-OP DIET:**

- ❖ Avoid concentrated sugars: they are filled with non-nutrient calories and will slow down weight loss.
- ❖ Meals should always include foods high in protein. Protein is required to preserve muscle mass and promote wound healing. Aim for 50 – 60 grams per day for the first few weeks after surgery. Protein rich foods include poultry, fish, red meat, milk, eggs, yogurt, cheese, beans, tofu and protein shakes.
- ❖ Avoid snacking, which will slow down weight loss.
- ❖ You will be supplementing your diet with vitamin supplements to ensure adequate nutrition (as outlined in this packet). Your labs will be tested every 3 months after your surgery and other supplements may be prescribed as needed.

### **IMPORTANT EATING BEHAVIORS:**

- ❖ Eat slowly and chew thoroughly, 20 minutes per meal!!
- ❖ Remember the stomach can only hold 4 – 6 oz after surgery. You will probably feel full after ½ cup of food. Do Not Overeat! Over time your stomach will stretch. It takes 6 – 9 months (possibly longer) for your stomach size to stabilize and allow you to determine your normal meal amount. (After 6 months a ½ sandwich could be a meal and a lean cuisine sized meal after 1 year)
- ❖ Stop eating when you feel full – if ignored, vomiting will follow and you can stretch the size of the stomach. If you are unable to keep anything down and are having extreme difficulty staying hydrated, sip on *Propel, Isopure or Vitamin Water Zero*.

## **“MORE BPD/DS BASICS”**

### **FLUIDS:**

- ❖ 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-you should be urinating 2-3 times a day*)
- ❖ For the first few months, don't drink and eat at the same time. Ultimately you will be allowed to.

### **PREVENT FOOD INTOLERANCES:**

- ❖ Introduce new foods one at a time in order to rule out intolerance. If a food is not tolerated, take it out of your diet for one week and reintroduce it 1 week later.
- ❖ If you cannot tolerate dairy, substitute *Lactaid* for milk. You may need to take Lactase pills with dairy to help digest the lactose.

### **PHYSICAL ACTIVITY:**

- ❖ *Exercise!* This is the key to long term weight loss and maintenance. Walking should be the main exercise for the first 6 weeks. After 6 weeks, more strenuous exercises can be added.
- ❖ After 6 weeks, weight lifting or using weights in your aerobic exercise is encouraged as it helps build muscle.

### **Nutritional Quiz:**

You must complete the nutritional quiz provided to you in this packet and return it to the office prior to or on the day of your pre-surgical testing.

You may drop off the quiz at the front desk or you can fax it to the office at:  
(212) 263 – 3757

## 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 the 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 from your diet.

### **Foods to Avoid**

Sugar free and artificial sweeteners are ok

Ice cream	Regular soft drinks
Chocolate milk	Lemonade
Pudding	Kool aid
Sweetened, fruited or frozen yogurt	Sugared ice tea
Dried fruits	Snapple
Canned or frozen fruits in syrup	Table sugar
Fruit juice	Honey
Sugar coated cereal	Candy
Doughnut	Regular Jell – O
Popsicles	Sugar gum
Cakes	Molasses
Pies	Syrups
Cookies	Sherbet/Sorbet
Jellies	Jams

# Nutritional Supplements

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, supplemental vitamins, minerals and protein are required.

## First 3 Weeks After Surgery: All medications are chewed/crushed.

- Chewable Multi – Vitamin (chewable children’s): *Flinstone Complete* or *Centrum Jr.* with iron (chew 1 in the AM and 1 in the PM) - 2 a day
- Chewable Calcium: *Tums* four times a day, or take *Calcet Creamy Bites* four times a day. (Take throughout the day, not all at once). Total 1800-2000 mg calcium daily.
- ADEK’s (By ScandaPharm) to order call 1-800-472-2634 ext. 242 (Chew 3 daily – best if taken with food). MUST be chewed!! Not swallowed whole. Chew 1 at breakfast, lunch and at dinner.
- Protein Shake: Make protein shake by choosing a protein powder (i.e.: *Designer Protein*, *GNC Challenge 95*, *Unjury Whey Protein*). \*1 scoop powder should equal about 20g protein + 100 calories. Blend 1 scoop of protein powder with ½ cup milk, ice and 2 tsp fruit. Have 1 to 2 shakes per day. You can also drink a pre-made shake like *Isopure* or *Ultra Pure Protein* or *Myoplex Lite*. You can always replace a meal with a protein shake.

## 3 Weeks After Surgery: You may start swallowing pills.

- Adult Multi – Vitamin: *Centrum with Iron*, *Geritol Complete*, or *GNC Ultra Mega* once daily. Stop taking the chewable multivitamins at this time.
- Calcium: Take a total of 1800mg Calcium Citrate (i.e.: *Citrical with Vitamin D* or [www.Vitalady.com](http://www.Vitalady.com) or [www.wlssuccess.com](http://www.wlssuccess.com) brands) every day. You can only absorb 500mg of calcium at a time. Take about 500 mg with each meal and the remaining amount with a drink or snack. If on Thyroid medication-take separately. Do NOT take with iron.
- ADEK’s (By ScandaPharm) to order call 1-800-472-2634 ext. 242 (Chew 3 daily – best if taken with food) MUST be chewed!
- Iron: *Niferex Forte* -Only if prescribed by MD. Take twice daily on an empty stomach or as prescribed by the doctor. Do not take with milk, calcium supplements, coffee, tea or antacids. Take with Vitamin C to enhance absorption.
- Protein: *GNC Challenge 95*, *Designer Protein*, *Whey Supreme*, *Unjury*. Only if unable to meet protein needs (60 – 80gm / day) from food.

## Diet Progression after BPD/DS

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.
- **Day 2 – Day 7 Post – Op:** Progress from Clears to No concentrated sweets liquid diet. Try to consume 4oz of fluid every hour.
- **Week 2 and 3 Post – Op:** Pureed diet (no raw fruits and vegetables). Try and 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). Consume 50 – 60 grams of protein.
- **3 Weeks Post – Op:** Firm tofu, and seafood, thinly sliced deli turkey or ham, boiled dark meat chicken (cut up into small pieces) in broth, crisp toast and crackers, beans and peas, well cooked pasta, veggie burgers, imitation crab, filet of sole and red snapper. The goal is 75 grams protein per day.
- **2 Months Post – Op:** White meat chicken (no skin), soft cooked vegetables, soft fruits (watermelon, honeydew, peaches, plums). Moist grounds meat in red sauce.
- **3 Months Post – Op:** Rice, soft bread, lean ground meat and turkey, duck.
- **4 Months Post – OP:** Veal, crunchy fruits and vegetables including salads.
- **6 Months Post – OP:** Beef and pork (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 5 food groups. Your stomach capacity should be about the size of an entrée per meal.

*\*\*\* The diet should always be high in protein and low in refined carbohydrates. Protein first, then vegetables, fruits and then preferably whole grains.*

## NYU LANGONE WEIGHT MANAGEMENT PROGRAM

**Patient Name:** \_\_\_\_\_ **Date Of Birth:** \_\_\_\_\_

**Surgery Date:** \_\_\_\_\_

### QUIZ - BPD/DS

1. This surgery for obesity will require me to have periodic follow up visits with my physician and nutritionist for the rest of my life. TRUE or FALSE
  
2. List 3 examples of foods that would be appropriate on the pureed phase after your surgery?
  - 1.
  - 2.
  - 3.
  
3. When can you eat solid food after surgery? \_\_\_\_\_
  
4. Why should concentrated sweets be avoided after your surgery? \_\_\_\_\_
  
5. How much food can your stomach hold at each meal immediately (first 3 weeks) after your surgery?
  - a. 1-3 tablespoons per sitting
  - b. ½ cup food per sitting
  - c. 2 cups per sitting
  
6. How much fluid should you consume daily?
  - a. 1-2 cups
  - b. 3-5 cups
  - c. 6-8 cup

7. List 2 important eating behaviors that will be important after surgery to prevent vomiting? 1.  
2.
8. How long should it take you to consume a meal? \_\_\_\_\_
9. If I continue to consume high calorie foods and or beverages (i.e. cookies, ice cream, juices) I will still lose weight easily after this surgery. TRUE or FALSE
10. List 3 foods that are high in protein.  
1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_
11. I will require vitamin and mineral supplementation every day for the rest of my life after the operation. TRUE or FALSE
12. List the supplements that you will be required to take for the first 3 weeks after surgery? 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
4. \_\_\_\_\_
13. List the supplements that you will be required to take for the after the first 3 weeks after surgery? 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
4. \_\_\_\_\_
14. How do you prepare a protein shake? \_\_\_\_\_
15. Your goal of protein after the first 3 weeks is :  
a. 40 grams  
b. 50 grams  
c. 75 grams

16. Why is it important to consume your protein first? \_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

17. After surgery you must avoid fat and purchase all low or reduced fat products.

TRUE or FALSE

18. What type of diet should be followed 1 week before your surgery? Why?

\_\_\_\_\_  
\_\_\_\_\_

19. I will have to have my blood tested regularly to prevent serious nutrient deficiencies. I may have to take additional supplements as instructed by my RD and/or MD if needed. TRUE or FALSE

20. If I do not take my calcium supplements I may develop osteoporosis.

TRUE or FALSE

21. If I do not take my Vitamin supplements I may develop: (circle all that apply)

- A. hair loss
- B. anemia
- C. blindness
- D. excessive bleeding
- E. bone fractures
- F. coma
- G. skin problems
- H. death

For Office Use Only

Reviewed by: \_\_\_\_\_ via: \_\_\_\_\_ date: \_\_\_\_\_