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**Nutritional Guidelines for Roux-en-Y and Duodenal Switch  
Gastric Restrictive Procedures**

**Phase I -- Pureed Foods**

**Weeks 1-3**



**The University of Chicago Hospitals  
Center for the Surgical Treatment of Obesity**

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After surgery, the functioning part of your stomach will be significantly reduced. Because of this small size, you will have to make several important dietary changes. This handout provides specific dietary restrictions that need to be followed for the first two to three weeks after surgery unless otherwise advised by your physician, dietitian or nurse. After two or three weeks, we will instruct you on a Phase II diet (Soft Consistency, Low Fiber Diet). *You will need to keep detailed food diaries to help us better help you adapt to your new diet.*

## Phase I Diet – Pureed Foods

### A. Consistency/Serving Size

1. For approximately three weeks, the connection or “staple line” between your stomach pouch/sleeve and the intestine will be swollen because of the surgery. You will need to eat a pureed diet with a consistency of small curd cottage cheese, baby food or applesauce. ***“Mashing” certain foods or “chewing very well” does not produce the correct consistency; your food must be pureed.*** This diet will allow your staple line to heal and minimize the chances of food particles lodging in your stomach opening. \*Note: Many patients choose not to puree their food but instead eat foods that are already a pureed consistency or considered acceptable by The Surgical Treatment for Obesity staff:

*Plain yogurt, drinkable yogurt, small curd cottage cheese, melted cheese, refried beans, plain quick/instant oatmeal, cream of wheat, grits, farina, plain scrambled egg, creamy peanut butter, liver sausage, hummus, sugar-free pudding, stage I baby foods*

**Tip:** To save time and to avoid wasting food, many people puree food and then pour it into ice cube trays, let it freeze, and then place it into plastic bags. When it is time to eat, simply microwave a few cubes and you have a quick meal.

2. Each meal should contain no more than 4 oz. (1/2 cup) of food. Most people tolerate between 2-4 oz. (1/4 – 1/2 cup) of food per meal during the first few weeks following surgery.
3. Because your stomach is reduced in size, you will need to eat 4-6 small meals each day. You will need to spend ~30-45 minutes eating each meal.

### B. Key Nutrition Components

#### 1. Carbohydrates

**Do not consume food products containing more than 15-30 grams of total carbohydrates per serving.** Use food labels to determine the amount of total carbohydrate per serving. Read food labels for key words such as: sugar, brown sugar, sucrose, glucose, maple syrup, high fructose corn syrup, corn syrup, honey, molasses, mannitol, xylitol, and sweetened condensed milk. The closer they are to the beginning of the ingredients list, the more sugar the product contains. *Avoid products that have sugar listed among the first three ingredients.*

Eating excessive carbohydrates may cause lightheadedness, sweating, diarrhea, and a rapid heart rate within 15 minutes after eating (aka, Dumping syndrome). Even if you do not have these symptoms after eating sweets, these foods should still be limited because they are generally high in calories and have poor nutritional quality.

### Sources of Concentrated Sweets to Avoid

- Desserts (cakes, cookies, pies, candy and candy bars)
- Ice Cream, Sherbet, Frozen Yogurt, Frozen Ice
- Sweetened breads and cereals
- Sweetened canned, frozen, and dried fruit
- Carbonated beverages
- Sweetened fruit drinks and punches (dark juices have more sugar)
- Sweetened milk such as chocolate milk and milkshakes
- Jelly, Jam, Honey, Marmalade, Syrup
- Gelatin
- Sweetened gum



Sugar substitutes such as Equal, Sweet-n-Low, Splenda, and Stevia are allowed after surgery. Seasonings (herbs and spices) may also be used to enhance flavor.

## 2. Protein

**You need to consume a minimum of 60 (Roux-en-Y) to 75 (duodenal switch) grams of protein daily.** You must eat enough protein every day in order to heal your wounds, stay healthy, and lose weight. A common misconception is that if you eat protein you will gain weight. In reality, however, you will not maintain weight loss unless you consume adequate protein. Your body needs protein for brain functioning and energy. When you do not eat enough protein, your body will use its muscles for energy and retain its fat. Therefore, you will not lose weight and you may feel sluggish.

At least four out of your six meals daily must contain protein. Although fruits and vegetables are important for good nutrition, during the first few weeks after surgery it is more important to eat the higher protein-containing foods. Use this chart to select foods that will help you meet your protein goals.

### Amounts of Protein in Common Foods (grams per serving)

Pureed Poultry/Beef/Fish/Pork	7	1 oz. (cooked)
Plain scrambled egg	7	1 egg
Melted Cheese	4-8	1 oz. (1 slice)
Milk (2%, 1% or nonfat)	8	8 oz. (1 cup)
Cottage Cheese (small curd)	8	¼ cup
Yogurt (without seeds or skins)	8	8 oz. (1 cup)
Nonfat powdered milk	8	2.5 Tablespoons
Creamy Peanut Butter	7	2 Tablespoons
Refried Beans	6	½ cup (cooked)
Tofu	3	¼ cup
Pureed Vegetables	2	½ cup (cooked)

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Pureed Fruit/Fruit Juice	0	½ - ¾ cup juice
Cream Soup	3	½ cup
Tomato Soup	2	½ cup
Sugar-Free Pudding	3	½ cup
Sugar-Free Gelatin	2	½ cup
Sugar Free Popsicles	0	1 svg
Sugar Free Fudgsicles	2	1 svg
Farina	2.5	¾ cup
Grits	3.5	1 cup
Oatmeal	3	½ cup

To help you monitor the amount of protein you eat, it is important for you to keep precise daily food records. Use food labels and the handouts we have provided to calculate the amount of protein (grams) per serving.

### Tips to Increase Your Protein Intake\*

- ❑ Double strengthen your milk (add 2.5 tablespoons of non-fat powdered milk per 1 cup milk).
- ❑ If you have lactose intolerance, try Lactaid® or Dairy Ease®, which contain enzymes to help digest your milk. You may also try plain soy or rice milk.
- ❑ Add non-fat powdered milk or a protein supplement of your choice to any liquid or pureed food (cottage cheese, soup, yogurt, hot cereal, Sugar Free Carnation Instant Breakfast® (4g protein per packet).
- ❑ Not all protein supplements found in health food stores or convenience stores are appropriate. Some contain too many carbohydrates.
  - ✓ Iso-Pure contains 40g of protein per bottle (liquid)
  - ✓ Atkins Ready-to-Drink Shake: 20 g protein/can (11 oz)
  - ✓ Atkins Diet Shake: 24 g protein/ 2 scoops
  - ✓ Curves Protein Shakes: ~38 g protein/ 2 scoops
  - ✓ Carb Solutions contains ~20g protein/2 rounded scoops
  - ✓ GNC Pro Performance 50 g Slam: 50 g protein/15oz can
  - ✓ Nonfat Dry Milk Powder contains 8g protein in 2.5 Tablespoons
  - ✓ Designer Protein® contains 17.5g protein/scoop, 41 scoops per container at ~\$30 and is an appropriate, popular supplement to use.
  - ✓ Healthsource® is a soy supplement that contains 10g protein/scoop and is lactose free.
  - ✓ Spiru-tene is soy based and contains ~15g protein/packet
  - ✓ Met-RX contains ~35g protein/packet
  - ✓ APM 60 contains 60 grams of protein/packet
  - ✓ IronMan Protein Shake contains 15g protein/scoop
  - ✓ Pure Protein contains ~ 35g protein/can (liquid)
  - ✓ Nitro-Tech contains 40g protein/carton (liquid)
  - ✓ Zone Perfect Drinks: 19g whey protein/can
  - ✓ Optimum Nutrition 100% Whey Protein: 23 g protein/scoop

If you wish to use a protein supplement other than powdered milk and you are unsure if a particular supplement is suitable, please call a dietitian or bring the nutrition information to your next appointment.

\*Please see the sample menus on page 7 for more protein ideas.

### 3. FATS

A moderate fat diet is recommended after surgery. Avoiding greasy, fried, high-fat foods is important for your health and to achieve your weight loss goals. Fat also delays gastric emptying and may contribute to feeling full for a prolonged period of time, and potentially lead to vomiting.

It is recommended that you choose low-fat dairy products (milk, cheese, cottage cheese, yogurt), and when choosing foods, the majority of the fat should come from monounsaturated (canola, olive, and peanut oils, avocados) and polyunsaturated (corn, safflower, peanut, soybean and sunflower oils) vs. saturated (butter and other animal products) sources. Foods should be baked, broiled, or grilled. Remove the skin off poultry before eating it. Choose to eat fish at least three times per week, as recommended by the American Heart Association. Foods such as nuts and seeds are healthy snacks due to their healthy fat and protein content, but are also high in calories and should be eaten in small portions.

Trans fatty acids (TFA's) are formed during the process of hydrogenation, which turns liquid fats (oils) into a solid substance, such as margarine and shortening. Foods made from TFA's are abundant in the American diet because they allow foods to stay fresh on grocery shelves for a long time. Typical foods that contain TFA's are: doughnuts, French fries, cookies, crackers, snack chips, and many other commercially prepared snacks and baked good. TFA's should be avoided, as they result in unfavorable changes in your blood cholesterol levels. We do not require any trans fats in our diets; therefore, the goal for TFA consumption is *ZERO grams daily*.

### C. Fluids

1. Fluids are important to prevent dehydration. You should try to drink at the *minimum* (2) 8 oz. glasses of beverages throughout the entire day *between* meals. If you drink liquids with your meals, you will become full too quickly and possibly vomit. Sip on liquids very slowly. *Note: Wait 30 minutes before each meal and 30 minutes after each meal before drinking fluids again.*

Monitor the volume and color of your urine to evaluate if you are drinking enough fluids. Dark urine indicates that you may not be drinking enough liquids. Light colored urine is desired. Keep in mind that vitamins may discolor urine slightly. You will be able to increase fluid consumption to (6-8) 8 oz. glasses of fluid as the swelling of your stomach decreases.

#### Recommended Beverages:

- ◆ Water
- ◆ Milk
- ◆ Sugar-free Kool-Aid®, Crystal Light®, or iced tea *sweetened with Nutrasweet® or other sugar substitute.*
- ◆ Hot tea or coffee sweetened with a sugar substitute.
- ◆ Diet Snapple



◆ Diet Lipton Brisk Iced Tea

2. Carbonated beverages such as pop/soda and gingerale produce gas, which may cause stomach fullness, belching, and discomfort. Therefore it is recommended that you *do not* drink these beverages.
3. Limit juice intake to 4-6 oz (1/2-3/4 cup) per day. Juice and other sweet beverages are calorically dense and may slow your weight loss if you consume too much.

#### **D. Physical Activity**

An active lifestyle after surgery is essential to your weight loss success. Your size may make it hard for you to exercise as much as you should at first, but the more weight you lose, the easier it should get. You may begin a physical activity program, such as walking and swimming, approximately four weeks after surgery. Always check with your surgeon before starting any strenuous activities, such as weight training or running.

#### **E. Hospital Stay and Post-Surgery Care**

The staff at the hospital will be working diligently to provide you with appropriate care and nutrition during your hospital stay. Occasionally, however, incorrect trays may be brought to your room. It is important that you and your family are aware of the foods you should and should not receive so that you can ensure you receive the appropriate foods.

- Day #1 after surgery: You will receive only a small amount of water or clear liquids.
- Day #2 after surgery: You will receive a pureed diet, which is low in sugar.

Tips for the hospital stay:

- You will receive a white tray ticket, which should state “Gastric Bypass”. If this is not specified on your ticket, do not eat the food and ask someone to contact a dietitian.
- You should have only pink and blue sugar substitute packets rather than white sugar packets.
- Dilute dark juices (cranberry and grape juice) half and half with water to decrease the sugar concentration.
- When in doubt, ask to speak with a dietitian.

#### **Fullness**

Most patients experience an uncomfortable or “tight” feeling under their breastbone on the lower left rib cage after they have eaten. This is where your stomach is located, and you are just experiencing stomach fullness. Remember to eat very slowly and be observant of your body’s signal that it is full. If you feel a sense of fullness, stop eating.

## Healthy Eating

During the first 4-6 weeks after surgery, you will experience fullness after eating very small amounts of food. **You may not even feel hungry, but you must eat 4-6 small meals daily.** Because you will be eating such small amounts of food, it is crucial that you *select foods of the highest nutritional value.* Your diet should be well balanced, low in concentrated sweets, and contain 60-75 grams of protein per day. At least 4 of out the 6 meals you eat should contain good sources of protein.

## Vitamins

After surgery it is important that you continue to take the vitamins recommended to you before surgery.

The following vitamins should be taken as directed:

1. Multivitamin daily: Centrum®, Centrum® Chewable, Costco Kirkland Signature™ or Bariatric Advantage®
2. Vitamin B-complex 50 daily
3. Citracal® Capsules + D or Bariatric Advantage® Calcium with D
4. Dry Vitamin D (cholecalciferol)
5. Dry Vitamin A – for DS patients only!



Additional supplements may be prescribed depending on your specific needs.

## Medical Problems

There are two medical problems that you may experience:

### 1. Vomiting

Vomiting usually occurs because:

- You have eaten too much.
- You have eaten too fast.
- Your food was not pureed well enough.

If vomiting occurs, you should drink soups and diluted juices at your next meal and avoid the above situations. You may tolerate a particular food one day and not the next. Always try food items again even if you have previously vomited when eating that item.

### 2. Constipation

Constipation may occur because you have decreased your food intake substantially. Also, Tylenol with codeine (often prescribed for pain control) may cause constipation. To help prevent constipation, drink plenty of liquids between meals. You may also use *Milk of Magnesia*. Follow the directions on the bottle.

## E. When to Seek Immediate Medical Help

Contact your appropriate surgeon: Dr. Alverdy (773) 702-4876, Dr. Prachand (773) 834-8360, or the General Surgery C resident on call (773) 702-1000 if you have the following problems:

- You are having uncontrollable vomiting.
- There is blood in the vomited beverage or food.
- No food will go down.
- You are experiencing sudden abdominal pain.

The dietitians may be reached for nutritional questions or concerns at (773) 702-6800 pager number 7528 (Kelly Gemmel), 7106 (Chrisy Stavros) or 7524 (Heather Reeves).

## **F. Summary**



After surgery:

- ✓ Eat 4-6 small meals daily.
- ✓ Eat a source of protein in at least 4 meals to equal **60** (Roux-en-Y) to **75** (duodenal switch) grams of protein daily.
- ✓ Eat slowly.
- ✓ Drink at least 16 ounces of fluid between meals throughout the day.
- ✓ Avoid high concentrated sweets.
- ✓ Bring protein drink to the hospital.
- ✓ Keep foods logs as you follow the phase 1 diet the week following surgery. Bring your completed food logs to your first clinic visit.
- ✓ Take chewable multivitamin.

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### *Useful Measurements:*

1 oz = 30 cc = 1/8 cup = 2 T  
2 oz = 60 cc = 1/4 cup = 4 T  
4 oz = 120 cc = 1/2 cup = 8 T  
8 oz = 240 cc = 1 cup = 16 T



Sample Menu\*

7:00 am – 7:45 am

Meal 2 oz. cream of wheat made with milk and powdered milk -or-

4-6 oz. skim milk with 1-3T powdered milk and 1 packet sugar-free  
Carnation Instant Breakfast®

8:15 am – 9:00 am

Beverage 4-6 oz. Light V-8®, sips of water, sips of protein drink

9:30 am – 9:45 am

Meal 4 oz. Light yogurt made with a sugar substitute with 1-2 T powdered milk -  
or-  
2 oz refried beans with melted cheese

10:15 am – 11:00 am

Beverage Sips of Iced Tea sweetened with a sugar substitute, sips of water, sips of  
protein drink

11:30 am – 12:15 pm

Meal 2 oz. pureed ham with melted cheese -or-  
2 oz. sugar-free pudding with 1-2 T powdered milk

12:45 pm – 1:30 pm

Beverage Sips of water, sips of protein drink

2:00 pm – 2:45 pm

Meal 1 oz. Baby food meat mixed with 1/3 c creamed soup and 1-2 T powdered  
milk; add powdered seasonings to taste

3:15 pm – 4:00 pm

Beverage Sips of Crystal Light®, sips of protein drink

4:30 pm – 5:45 pm

Meal 2 oz. pureed chicken

6:15 pm – 7:00 pm

Beverage Sips of water, sips of protein drink

7:30 pm – 8:15pm

Meal 2 oz. Small curd cottage cheese with 1-2 T powdered milk

8:45 – 9:30 +

Beverage Sips of water, sips of protein drink

\*Note: You may initially be able to eat only 1-2 oz. per 'meal'.