Surgical Weight Loss Program
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A General Plan to Prevent
Low Blood Sugars
This book has been developed to provide some general guidance to meal planning and basic education to those who have had surgical weight loss and are having low blood sugars. Meeting with your Bariatric dietitian will be an essential part of your plan as they can make individual suggestions to improve your health.

Generally speaking, how and what you eat are the first line of defense in order to prevent episodes of low blood sugars (commonly known as HYPOGLYCEMIA). There are rare cases in which low blood sugars after surgical weight loss will need further medical attention. Your surgical weight loss team will help to assess this need.

**Key Points:**

1. What are symptoms of Low Blood Sugar (Hypoglycemia).
   - Feeling nervous or jittery
   - Cold, clammy, wet skin and/or excessive sweating not caused by exercise
   - A rapid heartbeat
   - Numbness or tingling of the fingertips or lips
   - Trembling
   - Mood changes, such as irritability, anxiety, restlessness, or anger
   - Confusion, difficulty in thinking, or inability to concentrate
   - Blurred vision, dizziness, or headache
   - Weakness
   - Lack of energy
   - Poor coordination
   - Difficulty walking or talking, such as staggering or slurred speech
   - Fatigue, lethargy, or drowsiness
2. Before treating or acting on of the above symptoms, it is important to test your blood sugar to verify a low. Some of the above symptoms can be related to a number of other conditions including (but not limited to) low blood pressure, anxiety, depression, high blood sugars. Therefore treating these symptoms with food without verifying that your blood sugar is low can cause weight gain if the symptoms are not related to a low blood sugar. It will be important to get a blood sugar meter to test your blood sugar. Many times your surgical weight loss dietitian can provide you with a meter, show you how to use it, and make recommendations when to test your blood sugar. You will have to connect with your primary care provider to get a prescription for test strips and lancets.

3. Treatment of a low blood sugar: Although simple sugars such as candy, candy bars, glucose gel, and juice are common treatments for low blood sugars, these should be used as a LAST RESORT. These types of food will raise blood sugar but in a patient who has had surgical weight loss these foods can create issues with “rebound low blood sugar.” That means, these foods will raise the blood sugar but could result in another low 1-2 hours later. This can create a viscous cycle of WEIGHT GAIN! If possible, treat lows with the following items:
   - Handful of pretzels
   - Plain graham cracker
   - Whole grain cereal
   - 1 cup skim or 1% milk
   - Light yogurt

4. What is happening:
   A. After gastric bypass surgery your body is sensitive to the carbohydrate (sugar) you put into your body. If your blood sugar rises too quickly your body will work very hard to prevent a rapid rise by secreting insulin to lower your blood sugar. The re-routing of the anatomy after gastric bypass creates some imbalances in the regulation in the amount of insulin secreted (ie too much) as a result causing low blood sugars.

   B. Many times people may feel like they are having a low blood sugar after consuming foods with a lot of carbohydrate but their blood sugar will be normal. It is possible that they are feeling a “transitional effect” of the blood sugar quickly rising and falling. This rapid rise and fall can make people feel like they are experiencing a low but the blood sugar is normal. **The goal is to prevent the quick rise in blood sugar**, by making dietary modifications.
What Should I Eat?

Carbohydrates break down into sugar. Carbohydrates are found in 4 food groups:

- Starch (pasta, rice, bread, crackers)
- Fruit (dried, juice, fresh or canned)
- Dairy (milk, yogurt)
- Sweets

You need to have carbohydrates to fuel your body (brain and muscles), however too much of healthy carbohydrates (complex-whole grain bread/pasta, oatmeal, fruit) or just a small amount of unhealthy carbohydrates (simple-cake, cookie, pie) can create issues with low blood sugars after gastric bypass surgery. The primary goal is to eat a reasonable amount of healthy (high fiber) carbohydrate at a meal. Both protein and fiber will slow the digestion of the carbohydrate thus the blood sugars will not rise as high or as fast. It is best to consume a source of protein at most meals. Simply put, a healthy balanced diet will be the best treatment to manage low blood sugars after surgery. Occasionally you will find a specific food that may cause a low blood sugar for you when you follow a healthy plan.

WARNING: If you not adhere to a balanced diet you should plan to have a low blood sugars. Low blood sugars are dangerous and can have very serious consequences including but not limited to problems with operating motorized equipment.

The Meal Plan:
• 3 meals each day
• Snacks are not a requirement but can be incorporated if they are healthy, high in fiber and calorie controlled in order to prevent weight gain. Some criteria to consider when making a snack choice:
  o Ideally no more than 15 grams of complex carbohydrate
  o When possible incorporate a source of protein
  o Choose foods that offer fiber
  o Limit snack to less than 120 calories

• Snack Examples:
  2 brown rice cakes
  1 Tablespoon peanut butter

  4 whole wheat crackers (Triscuts)
  2 Tablespoons Hummus or 1 ounce of cheese

  1 small apple, sliced
  1 Tablespoon peanut butter

  ½ cup cottage cheese
  ¼ cup blueberries

Breakfast:
30 grams of whole grain carbohydrate
1-2 ounce of protein (if possible)
*Add Benefiber to meals to increase Fiber

Lunch & Dinner:
30 grams of whole grain carbohydrate/meal
2-3 ounces of protein (at lunch and dinner)
½ cup – 1 cup of non-starchy vegetable
*Add Benefiber to meals to increase Fiber

Other Dietary Considerations:
AVOID
• Unbalanced carbohydrate meals (meals that lack protein and have a number of simple carbohydrates) like stirfry with white rice, white bagels, jelly, fruit salad, yogurt for a meal.
• Simple Sugars: Soda, juice, candy, ice cream, cake
• Non-decaffeinated coffee, tea, soda
• Alcohol
Example 1

**Breakfast:**
½ cup oatmeal
1 small apple cut up into oatmeal
1/4c-1/2 cup skim or 1% milk
1-2 ounce(s) nuts

**Lunch:**
1 whole wheat mini pita pocket
2 ounces lean deli ham
1 ounce low fat cheese
1 Tablespoon low fat mayo
½ -1 cup salad greens
1-2 Tablespoons light salad dressing

**Dinner:**
3/4 cup Turkey Chili*
½ -1 cup mixed salad greens
1-2 Tablespoon low fat salad dressing
Turkey Chili

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>1 tablespoon olive oil</td>
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<tr>
<td>1 large onion finely chopped</td>
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<tr>
<td>1 each green pepper, chopped</td>
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<tr>
<td>1/2 stick celery, chopped</td>
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<tr>
<td>2 each garlic cloves, minced</td>
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<tr>
<td>3/4 pound 99% fat-free ground turkey</td>
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<tr>
<td>2 tablespoons chili powder</td>
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<tr>
<td>2 teaspoon ground cumin</td>
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<tr>
<td>1/2 teaspoon oregano</td>
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<tr>
<td>1/2 teaspoon ground coriander</td>
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<tr>
<td>1 14½-ounce can crushed tomatoes</td>
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<tr>
<td>1 8-ounce can tomato sauce, no salt added</td>
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<tr>
<td>1 15-ounce can black beans, rinsed and drained</td>
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Heat oil in a large pot. Add onion, celery, chopped pepper and garlic. Cook for 5 minutes or until onions are translucent. Crumble the turkey into the pan, breaking it apart with a wooden spoon.

Cook for about 5 minutes or until no longer pink. Stir in chili powder, cumin, coriander and oregano. Add in tomatoes and tomato sauce, and simmer for 10 minutes, stirring occasionally. Add beans, mix well and cook on low heat for a further 5-10 minutes.

Example 2
Breakfast:
1 medium egg (hard boiled, scrambled, over easy)
½ medium banana
1 slice whole wheat toast (2 grams of fiber or more)

Lunch:
1 cup Light and Healthy Pasta Salad*
2-3 sliced tomato and cucumber

Dinner:
3-4oz Lemon Herb Haddock*
½ - 1 cup green beans
½ cup mashed potato

Light and Healthy Pasta Salad
Serves 4

Ingredients:
- 4 cups Whole wheat rotini pasta
- ¼ cup Shredded carrots
- 1/2 cup Green pepper, diced
- ½ cup Plum tomato, diced
- 4 ounces Turkey or ham, diced
- 4 ounces Reduced fat provolone cheese, diced
- 1 cup Broccoli, chopped
- 2 ounces Sliced black olives, drained
- ¼ cup Red wine vinegar
- 2 Tablespoon Lemon juice
- 1 Tablespoon Yellow mustard
- 2 Tablespoon Fresh parsley, chopped
- 1 teaspoon Black pepper, ground
- 1 teaspoon Salt

Directions:
1. Cook the pasta drain and cool. Add pasta to large bowl
2. Add cut up vegetables to the pasta and toss
3. In separate bowl add the olive oil, vinegar, lemon juice, mustard, pepper and salt, whisk together and pour over the pasta salad. Toss well before serving.
4. Sprinkle the pasta salad with chopped parsley and serve chilled

Lemon Herbed Haddock

Serves 4 (3 ounce servings)

Ingredients:
- 12 ounces Haddock Filet
- 1 each Lemon, juice of
- ½ each Lime, juice of
- 1 Tablespoon Olive oil
- 1 teaspoon Salt
- 1 Tablespoon Fresh dill, minced
- 1 teaspoon Garlic, minced
- 1 teaspoon Black pepper

Directions:
1. Rinse haddock and pat dry with paper towels
2. Pre-heat oven to 400F
3. Mix remaining ingredients in a small casserole dish or pan
4. Place haddock face down in the marinade and let sit for 10-20 minutes while refrigerating
5. Place the fish on a sheet pan and pour remaining marinade over the haddock.
6. Cook at 400F for 20 minutes. The fish can also be grilled, about 10-12 minutes or until fish is cooked. If additional browning is desired, broil for the final 3-4 minutes of cooking.

Example 3
**Breakfast:**
8oz light yogurt
1/2c all bran cereal
2TB Walnuts

**Lunch:**
Chef salad made with:
½ cup romaine lettuce, mixed fresh vegetables
1oz lean sliced ham
1oz lowfat cheese
1oz lean turkey
1-2 Tablespoon low fat dressing
1/3 cup beans

1 small fruit

**Dinner:**
3 ounces Turkey meatloaf*
½ cup - 1 cup steamed broccoli
1 small baked potato

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*Turkey Meatloaf
Serves 4-6

**Ingredients**

16 ounces  Ground Turkey, lean
1 cup  Bread crumbs, plain
2 each  Egg whites
1 Tablespoon  Parmesan cheese
1 teaspoon  Garlic, minced
1 Tablespoon  Italian seasoning
½ teaspoon  Salt
1 teaspoon  Pepper
1 teaspoon  Chili powder

**Directions:**
1. Preheat oven to 400F
2. Combine all ingredients in a large bowl and mix well
3. Lightly spray a loaf pan with PAM spray. Add the meatloaf mixture to the loaf pan, smooth out the top.
4. Cover the meatloaf with aluminum foil and bake for 45 minutes. Remove foil and continue baking 15 minutes or until an internal temperature is reached of 165 F.
5. Remove from oven and let rest for 5-10 minutes, serve 3 ounce slices, top with gravy if desired.

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**Light Gravy Recipe**

Serves 4-6

**Ingredients**

6 ounces  Chicken stock, lowfat, low sodium
½ cup  Half and half, fat free
½ teaspoon  Rosemary
½ teaspoon  Thyme
½ teaspoon  Pepper
To taste  Salt
2 Tablespoons  Cornstarch
2 Tablespoons  Cold water

**Directions:**
1. Add the chicken stock, half and half, rosemary, pepper and thyme to a small pot, bring to a simmer.
2. Mix the cornstarch and cold water in a small bowl to make a slurry.
3. Slowly whisk in the cornstarch slurry, stop when desired thickness is reached. Let simmer for 3 minutes and remove from heat, stir occasionally. Do not let the gravy come to a full boil.
4. Season with salt to taste and serve.

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**Example 4**
Breakfast:
1 small whole wheat bagel
1 ounce light cheese or 1-2 Tablespoon peanut butter

Lunch:
Grilled Cheese made with:
1-2 pieces whole wheat bread
2 oz lowfat cheese
1 tsp margarine

½ cup carrot sticks with
1 TB low fat ranch dressing

Dinner:
Chicken Vegetable Quesadillas*
Small salad

Chicken Vegetable Quesadillas
Serves 4
Ingredients
4 each   Large whole wheat tortillas
1 each   4 ounce chicken breast, sliced thin
1/3 each  Green pepper, diced
1/3 each   Red pepper, diced
1/3 each  White onion, sliced thin
1 teaspoon  garlic, minced
8 ounces  Low fat shredded cheese
2 teaspoon  Olive oil
1 Tablespoon  Cilantro, chopped
1 teaspoon  Pepper
Optional   Salt
2 teaspoon  Chili powder

Directions:
1.  Preheat oven to 400F
2.  Toss the raw chicken with the chili powder and half of the salt and pepper, sauté using 1 teaspoon of olive oil on medium high until cooked. About 6 minutes
3.  Toss the cut veggies with remaining pepper and salt and sauté in the remaining olive oil for about 5-8 minutes until tender.
4.  Place 2 tortillas on sheet pan. Cover the tortilla with shredded cheese, equally divide the sautéed chicken, vegetables and cilantro and spread on each tortilla.
5.  Top the four tortillas with the remaining cheese and place the last 2 tortillas on top of the bottom four.
6.  lightly press down on the top of the tortilla and bake for 8-10 minutes or until cheese is melted and tortillas are crispy
7.  Cut the quesadilla in half and serve, reminder: ½ quesadilla per portion. Serve with salsa and/or low fat sour cream if desired.
Breakfast
½ cup low fat granola
2 Tablespoons chopped walnuts
¼ cup light yogurt

Lunch
Lean roast beef sandwich made with:
1-2 slice whole wheat bread
1-2 ounces lean roast beef, 1 ounce light cheese
½ - 1 cup cooked spinach (easy to cook in microwave)

Dinner
Turkey and rice stuffed peppers*

Turkey and Rice Stuffed Peppers
Serves 4
Ingredients:
2 Tablespoons Olive oil
4 each Green peppers
2 ¾ cups Brown rice, cooked
8 ounces Ground turkey, lean
½ cup Onion, diced
1 clove Garlic
4 ounce can Tomatoes, diced with liquid
4 ounces Light cheddar, jack cheese mix, shredded
2 Tablespoons Chili powder
½ teaspoon Salt
½ teaspoon Tabasco sauce

Directions:
1. Coat the pan with olive oil, brown the ground turkey and cook the onion and garlic in a sauté pan over medium high heat.
2. Mix the cooked turkey, onion and garlic mixture with the cooked rice, canned tomatoes, chili powder, Tabasco sauce and salt.
3. Place the meat and rice mixture equally in each pepper half. Top each pepper with equal amounts of shredded cheese.
4. Bake at 350F for 25 minutes or until pepper begins to soften.
5. Serve 2 halve per portion

Example 6

Breakfast
Mix together:
1/2 cup low fat granola
2 Tablespoons chopped walnuts
1/4 cup low fat vanilla yogurt

**Lunch**
6 Whole wheat cracker delight*
1/2 - 1 cup salad greens
1-2 Tablespoons light dressing

**Dinner**
3 ounce lean steak
1/3 cup brown rice
1/2 cup steamed broccoli

Triscut Cracker Delight

Serves 1
**Ingredients:**
5-6 each  Triscut Crackers
3 ounces  Chicken, flavored and pre-packaged and cooked
¼ cup      Salsa
1 ounce    Cheese

Directions:
1. Place Triscut Cracker on microwaveable plate
2. Place chicken on Triscut Crackers
3. Top with a light layer of salsa
4. Sprinkle cheese on top
5. Microwave cracker until cheese melts
6. Enjoy!

Example 7

**Breakfast:**
1-2 piece whole wheat toast
1-2 ounce lowfat cheese (melted on toast)
7-8 small grapes

**Lunch:**
Ham sandwich, made with
1-2 slices whole wheat bread
2 ounces lean ham
1 teaspoon light mayonnaise
½ cup - 1 cup Small tossed salad
1 Tablespoon light dressing

**Dinner:**
¾ cup Homemade and Healthy Hamburger Helper*
½ cup asparagus

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**Homemade and Healthy Hamburger Helper**

Serves 4
Ingredients:
1 ½ cups   Elbow whole wheat macaroni, uncooked
10 ounces  Lean ground beef (90% lean)
2 ½ cups   Hot water
1 ½ cups   Fat free half and half
1 cup    Low fat shredded cheddar cheese
2 Tablespoon  Corn starch
1 Tablespoon  Water
½ Teaspoon  Salt
1 Teaspoon  Pepper
1 Teaspoon  Garlic Powder
½ cup   Green pepper, diced
½ cup   Onion, diced

Directions:
1. Brown the ground beef and cook the peppers and onions in a large skillet or 5 quart pot on medium high heat
2. Stir in the hot water, non fat half and half, salt, pepper, garlic powder, sugar and macaroni, Mix all ingredients well.
3. Reduce the heat and allow the liquid to simmer. Stir occasionally until pasta is tender, about 12 minutes. Add more water if needed during the cooking process.
4. Mix the cornstarch and the cold water together in small bowl, whisk in the cornstarch mixture and simmer for a few minutes until the sauce becomes thick.
5. Add the cheese and mix in until melted. Turn off the heat and allow it to cool 5 minutes before serving. It will begin to thicken. Serve with a salad or fresh vegetables.

Example 8

Breakfast:
1/2 cup All Bran Yogurt Breakfast Pudding*
**Lunch:**
Lean Cuisine
Add an extra ½ cup of vegetable

**Dinner:**
Chicken Stirfry*

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**All Bran Yogurt Breakfast Pudding**
*(From Feb. 2007, The Skinny)*

- 4 ounces Dannon light and fit, vanilla Yogurt
- ½ cup All-Bran with extra fiber
- ½ cup Blueberries
2 tablespoon Unflavored Unjury or dried skim milk powder
1 tablespoon Splenda
½ teaspoon vanilla extract
½ teaspoon almond extract

Directions:

Place All-bran in a sandwich bag, and crush with a rolling pin. Combine the yogurt, cereal, Unjury, Splenda, vanilla, and almond extract and mix well. Keep tightly covered in refrigerator.

**Chicken Stir Fry**

**Ingredients:**

- 2 each 6oz Chicken breasts, sliced thin
- 1 each Red pepper, chopped
- 1 cup Bok choy, chopped
- 1 8 oz can Baby corn, drained
- 2 oz Water chestnuts, drained
- ½ each Onion, diced
- 1 clove Garlic, minced
- 1/3 cup Low sodium soy sauce
- 1 cup Low sodium chicken stock
- ½ each Hot pepper, minced
- 1Tbs Sugar, granulated
- 1 Tbs Canola oil
- 2 Tbs Cornstarch

**Directions**

1. Add ½ of the soy sauce, garlic, and hot pepper to the uncooked chicken and marinate for 5 minutes.
2. Add the remaining soy sauce, sugar, and chicken stock to a sauce pan and simmer.
3. Sauté the chicken on high for 4 minutes stirring constantly, add the vegetables and cook for another 6-8 minutes until vegetables are tender. Remove from heat.
4. Put the cornstarch in a small bowl and add a ¼ cup of cold water. Whisk until a white liquid is formed.
5. Whisk the cornstarch liquid into the simmering chicken stock mixture and let simmer while stirring for about 2 minutes. The sauce will begin to thicken.
6. Add the sauce to the sautéed chicken and vegetables and toss well. Simmer for 2 minutes and serve over cooked rice.

**Example 9**

**Breakfast:**

½ cup whole grain cereal
2 Tablespoon chopped walnuts
8 ounce skim or 1 % milk
**Lunch:**
Sensational chicken salad wrap*
Whole wheat wrap
1/2 cup - 1 cup raw vegetables
1 Tablespoon light Ranch dressing

**Dinner:**
Lemon Herbed Haddock*
1/3 cup brown rice
1/2-1 cup broccoli

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**Sensational Chicken Salad**

**Ingredients:**

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<tr>
<th>Item</th>
<th>Quantity/Description</th>
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<tbody>
<tr>
<td>2 each</td>
<td>4 oz chicken breast, boiled or baked</td>
</tr>
<tr>
<td>2 Tbs</td>
<td>Chopped walnuts</td>
</tr>
<tr>
<td>4 Tbs</td>
<td>Light mayo</td>
</tr>
<tr>
<td>30 each</td>
<td>Red grapes, halved</td>
</tr>
<tr>
<td>¼ cup</td>
<td>Red onion, diced</td>
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Method of Preparation:
1. Bake or boil chicken breast, cool with cold water and chop fine, place in a mixing bowl.
2. Add diced onion, celery, walnuts, and grapes, mix well.
3. Add remaining ingredients and toss until all ingredients are incorporated.
4. Serve on a whole wheat tortilla, whole wheat roll or whole wheat bread.

Lemon Herb Haddock

Ingredients:
12 oz
1 each
½ each
1 Tbs
1 tsp
1 Tbs
1 tsp
1 tsp
Haddock filet
Lemon, juice of
Lime, juice of
Olive oil
Salt
Fresh dill, minced
Garlic, minced
Black pepper

Method of Preparation:
1. Rinse haddock and pat dry with paper towels.
2. Preheat oven to 400 F
3. Mix remaining ingredients in a small casserole dish or pan.
4. Place haddock face down in the marinade and let sit for 10-20 minutes and refrigerate.
5. Place the fish on a sheet pan and pour remaining marinade over the haddock.
6. Cook at 400 F for 20 minutes. The fish can also be grilled, about 10-12 minutes or until fish is cooked. If additional browning is desired broil for the final 3-4 minutes of the cooking time.

Contributors

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Dayna Emerson, MS, RD, CDE

Reviewed by:
Note: This book was developed as a guide. The meals were created to help meet your needs to prevent low blood sugars after weight loss surgery. Due to the individual healthcare needs of persons that have had surgical weight loss and low blood sugars with or without healthcare concerns, please consult your physician to determine whether the menus in this booklet are suitable for your individual needs. Eastern Maine Medical Center is not responsible for adverse effects caused by the improper use of the information provided in this booklet.