Recommended Dietary Guidelines for Sleeve Gastrectomy

Similar to any weight loss operation, patients undergoing sleeve gastrectomy should undergo a thorough preoperative nutrition assessment and instruction conducted by a registered dietitian. Surgical candidates should be assessed for the following:

1. **Understanding of basic nutrition and food principles.** Patient should have a general understanding of food and nutrition. For example, knowledge of which foods are sources of protein, fat, and carbohydrate; understanding how baking, boiling, frying, pureeing, etc., affect food value and consistency.

2. **Ability to make dietary changes.** Patients who have made changes to their eating in the past by following some type of dietary program are likely to be better prepared to make the necessary changes for surgery. Patients who have never followed any eating guidelines which made them think about what they are putting in their mouths, or who have never kept and written records of their intakes, will likely benefit from additional preoperative nutrition visits to begin practicing certain behaviors and to learn how to become more mindful of their eating.

3. **Anticipated compliance with postoperative regime.** Patients should verbalize motivation “do what it takes” to lose weight and demonstrate a willingness to comply with the guidelines set by the surgical program professionals.

Additionally, patients should be taught the post-operative regime on the following pages and be encouraged to follow up regularly to ensure that they are on track to forming habits that will be appropriate for maintaining a healthy weight lifelong.

We recommend that patients begin to make certain changes in their eating patterns before undergoing surgery. The best examples of this are:

1. Eating slowly and chewing thoroughly
2. Learning how to eat and drink separately
3. Taking vitamins daily
4. Eating 3 meals daily
5. Keeping a food journal to increase mindfulness of their eating

Beginning to make these changes prior to their operation will minimize the sometimes overwhelming thoughts that occur to patients immediately post-op such as, “What did I just do to myself?” It will also allow patients to embark on surgery more confident in knowing how they will conduct their eating, both soon after surgery and for the rest of their lives. The mind-body connection: a confident, well-instructed patient preoperatively turns into a compliant, successful post-op patient with a better chance of obtaining a favorable surgical outcome.

Patients will have individual tolerances. The information on the following pages serves as recommendations to help guide the patients’ nutrition and supplementation through the postoperative period.
Sleeve Gastrectomy Basics

Patients should:

- Learn to eat slowly and chew thoroughly
- Avoid concentrated sugars, especially in liquid form
- Limit fats and fried foods, they are a concentrated source of calories
- Be aware of how it feels to be comfortably satisfied and stop eating. If ignored, vomiting will follow.
- Be taught to drink at least 6 – 8 cups (8 oz) of non-calorie / low calorie fluids per day to prevent dehydration. All fluids should be consumed between meals: up until 15 minutes before a meal and then 45 minutes after.
- Introduce new foods one at a time in order to identify problematic foods. If something does not agree with them initially, if should be reintroduced 1-2 weeks later. The top 7 most problematic foods:
  1. Fresh bread / rolls / bagels
  2. Breast meat chicken and turkey
  3. Eggs
  4. Rice
  5. Pasta
  6. Carbonated drinks
  7. Fried foods
- Be encouraged from the very beginning to pattern their days and meals as follows:
  - 3 discrete meals + 1 high protein snack + 1 Protein Supplement Shake (shake for the first 4-6 weeks only)
  - Protein foods first, then fruits and vegetables, and lastly whole grains.
- Remember that the stomach can only hold about 4-6 oz after surgery. Depending on the food, patients will initially feel satisfied after consuming anywhere from 2 tablespoons to ½ cup of food. The denser the food, the earlier the felling of fullness will be recognized (patients can eat more yogurt than tuna salad). Typically, over 6-9 months the stomach pouch will mature and the capacity will increase.
- Learn that their protein requirements are between 50-70 grams of protein/day. Patients reach this during the first 4-6 weeks via a combination of diet and supplement shakes.
- Learn the importance of exercise as the key to long-term weight loss and maintenance. Walking should be the main exercise for the first 6 weeks. After 4-6 weeks, more strenuous exercise should be added.
Diet During Hospitalization (Duration: 1 – 3 Days)

2-4 Meals: Bariatric Surgery Clears
- Low / no calorie liquids such as water, tea, broth, sugar free jello, and Gatorade are served during hospitalization.
- Sip fluids at the rate of 1 to 3 oz per hour
- Avoid straws and bottles with small openings

1-2 Meals: Bariatric Surgery Puree
- Low fat, low sugar pureed foods, for example: blended fish, meat or poultry served with blended vegetable and / or mashed potato
- Patients should eat slowly and chew well, eating a few tablespoons of food at a time to re-learn how to recognize how to stop when feeling ‘satisfied’.

Diet after D/C Home (Duration: 3 Weeks)

Home Bariatric Surgery Soft / Puree
- Continue low fat, low sugar pureed diet as above
- Protein food sources should be eaten first due to limited stomach capacity
- Dense food protein foods such as meat and poultry should be blended; softer food such as fish, eggs should be mashed with a fork and served moist
- Vegetables and fruits should be over-cooked or canned and mashed with a fork
- Patients should consume either:
  - 1 high protein low sugar protein drink or
  - 12 oz of skim or skim plus milk daily

Diet Beyond 3 Weeks Post-Op

Bariatric Surgery Solids
- Diet is progressed to solids as tolerated
- Emphasis is on lean protein, fruits / vegetables, and whole grains
- Avoidance of high fat and high sugar foods
- In the long term denser more filling foods are encouraged over foods which require little chewing e.g. fruit vs. pudding; sandwich vs. soup
- Diet is very individualized; see above for common food intolerances.
- By 3 months post op most patients will be able to tolerate a variety of foods from each of the good groups and be able to consume a meal similar to the following:
  - 3 oz animal protein (chicken, fish, meat, etc)
  - ½ cup vegetable (salad or cooked broccoli, carrots, green beans, etc)
  - A few bites up to ¼ cup of starch (white / brown rice, past, baked potato, etc)
# 2 Days of Sample Menus

## Home Bariatric Surgery Soft / Puree

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
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</thead>
<tbody>
<tr>
<td><strong>Breakfast</strong></td>
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</tr>
<tr>
<td>• ¼ cup unsweetened applesauce</td>
<td>• 1 Tbs creamy peanut butter</td>
</tr>
<tr>
<td>• ¼ - ½ cup non-fat cottage cheese</td>
<td>• ¼ cup unsweetened applesauce</td>
</tr>
<tr>
<td><strong>Supplement</strong></td>
<td><strong>Supplement</strong></td>
</tr>
<tr>
<td>• 8 oz Protein Supplement Shake</td>
<td>• 8 oz Protein Supplement Shake</td>
</tr>
<tr>
<td><strong>Lunch</strong></td>
<td><strong>Lunch</strong></td>
</tr>
<tr>
<td>• ¼ - ½ cup blended soup; ¼ cup egg salad with low fat mayo</td>
<td>¼ - ½ cup blended soup; ¼ cup tuna salad with low fat mayo</td>
</tr>
<tr>
<td><strong>Snack</strong></td>
<td><strong>Snack</strong></td>
</tr>
<tr>
<td>• ½ cup cottage cheese</td>
<td>• ¼ - ½ cup low fat ricotta cheese with cinnamon</td>
</tr>
<tr>
<td><strong>Dinner</strong></td>
<td><strong>Dinner</strong></td>
</tr>
<tr>
<td>• ¼ - ½ cup mashed kidney beans and tomato sauce</td>
<td>• 1 – 2 oz flaked fish</td>
</tr>
<tr>
<td>• ¼ cup mashed potato</td>
<td>• ¼ cup pureed vegetable</td>
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</tbody>
</table>
Supplementation

There are currently very little data available on the incidence of nutrient deficiency after Sleeve Gastrectomy. Taking into account apparent deficiencies present in obese patients preoperatively, and on the experience of this practice, we present the following recommendations for supplementation:

The First 3 Weeks After Surgery:

<table>
<thead>
<tr>
<th>Vitamin / Mineral / Supplement</th>
<th>Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chewable Multi-Vitamins with Minerals (chew 1 in the AM and 1 in the PM)</td>
<td>• Centrum Jr. with Iron, Centrum Silver Chewables, Flinstones Complete</td>
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<tr>
<td>• Chewable Calcium (best taken in 2 doses with food)</td>
<td>• Tums, Viactiv, Caltrate Chewables, Twinlab Chewable Calcium Citrate, Bariatric Advantage Chewable Calcium Citrate</td>
</tr>
<tr>
<td>• Liquid Vitamin D2 50,000 IU/wk (if preoperative levels were &lt; 20)</td>
<td>• Rx</td>
</tr>
<tr>
<td>• Protein Supplement Shake daily (at least 15 to 25 grams pro/serving, &lt; 6 grams sugar/serving)</td>
<td>• Atkins, Myoplex, Low Carb, Slimfast Low Carb, Designer Protein, Revival Soy</td>
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Supplements after 3 Weeks:

<table>
<thead>
<tr>
<th>Vitamin / Mineral / Supplement</th>
<th>Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1 Adult Multi-Vitamin with minerals</td>
<td>• Centrum, Centrum Silver, Geritol Complete</td>
</tr>
<tr>
<td>• 1200 mg of Calcium Citrate / day (Best taken in 2 doses with food)</td>
<td>• Citracel with D, Twinlabs Chewable Calcium, Solgar Calcium Citrate with D.</td>
</tr>
<tr>
<td>• Vitamin D2 50,000 IU / wk OR Vitamin D3 1200 IU / day (if preoperative levels were &lt; 20)</td>
<td>• Rx liquid or pill, Carlson, Nature’s Life, Vitamin Shoppe, Store brands</td>
</tr>
<tr>
<td>• Iron (Women: 1 pill QD or QOD; Men: await first set of lab work)</td>
<td>• Rx Niferex Gold or Niferex 150 Forte</td>
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<tr>
<td>• Protein Supplement Shake (if dietary intake from food still inadequate: 50-70 grams daily)</td>
<td>• See above</td>
</tr>
</tbody>
</table>

Special Nutrition Considerations:

• We recommend labs be checked postoperatively at 3 months, 6 months, 1 year, and then annually.
• A handful of patients experience significant nausea, vomiting and food intolerances during the first 1 to 3 months postoperatively. In our experience, further work-up does not elucidate the etiology of the problem and medications to treat nausea and dysmotility rarely help. The difficulties usually resolve on their own.