Nutrition Guidelines and Requirements

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Table of Contents

Choosing a Procedure -----------------------------------------------3
Gastric Bypass ---------------------------------------------------------------4
Sleeve Gastrectomy---------------------------------------------------------------6
Lap Band -----------------------------------------------------------------------8
Loop DS-----------------------------------------------------------------------10
Common Post-op Issues for ALL Surgeries -------------------------------------12
What to Watch in Your Diet ---------------------------------------------------15
Vitamin Prescriptions----------------------------------------------------------17
Protein Requirements-----------------------------------------------------------20
Diet Progression Guidelines---------------------------------------------------23
Resources---------------------------------------------------------------------24
Top Things to Know------------------------------------------------------------25

Introduction

We, as individual human beings, all have unique hobbies, taste preferences, genetics, etc; Bariatric surgery is similar to these differences since everyone can respond differently to the surgery even if the type of procedure (Bypass, Sleeve, or Lap Band) is the same. The guidelines in this booklet outline the common things experienced with surgery that may or MAY NOT happen with you following surgery. You will put yourself in the best position to experience negative effects (leaks, dumping syndrome, dehydration, nausea/vomiting, constipation, hair loss, etc) as LEAST as possible (if any) by following the Post-Op Diet Progression and eating habit guidelines 100%.
Choosing a Procedure

Choosing the “right” surgery can be a challenge. Your respective surgeon can help you weigh the pros and cons of each procedure and help you feel confident in moving forward with the one that is the best fit for you.

Procedure Options Available:
- Gastric Bypass (AKA: Roux-en-Y or RYGBP)
- Sleeve Gastrectomy (AKA: Vertical Sleeve Gastrectomy or VSG)
- Lap-Band (AKA: Laparoscopic Gastric Band or LAGB)
- Loop DS (AKA: Loop Duodenal Switch)

Surgery Classifications:
- **Restrictive**
  1. Stomach is altered to reduce the total amount of food that it can comfortably hold at one time.
  2. **Weight loss is achieved by only being able to consume a small amount of food at one time.**
- **Malabsorptive**
  1. Digestive tract (stomach or intestine) is modified in a manner which limits the absorption of nutrients such as vitamins, minerals, and calories from carbohydrates, proteins and fats.
  2. **Weight loss is achieved by the body absorbing fewer calories from foods eaten.**
- **Combination (Restrictive and Malabsorptive)**
  1. These types of surgeries utilize BOTH components of Restriction and Malabsorption to aid in meeting weight loss goals.

***ALL Bariatric surgeries **REQUIRE vitamin and mineral supplements LIFE-LONG to prevent life-threatening conditions caused by nutrient deficiencies***
Gastric Bypass
AKA:
“Roux-en-Y” or “RNY”
What to Expect – Bypass

Procedure Classification:
- Restrictive
- Malabsorptive

Procedure Process:
- ~1 oz pouch is created (equal to about the size of a ping-pong ball or golf ball)
- “Remnant Stomach” remains in the body to continue to produce gastric juices which aid digestion in the small intestine
- The 2nd part of the intestine (the “Jejunum”) is attached directly to the pouch
- Pyloric sphincter is bypassed (higher risk of dumping syndrome when compared to other surgeries which do not bypass the pyloric sphincter)

Resources/Visuals:

Dumping Syndrome – the rapid emptying of foods into the small intestine
- “Early Dumping” – 30-60 mins after eating: sweating, facial flushing, light headedness, nausea, abdominal cramps/pain, rapid heartbeat, desire to lie down, and eventual diarrhea.
- Main cause of dumping syndrome = poor food choices:
  - Refined sugars (including high fructose corn syrup)
  - High fat foods
  - Fried foods/greasy foods
  - Dairy products (Lactose Intolerance)
  - Spicy foods
- Other causes of dumping syndrome include:
  - Eating too fast
  - Not chewing food well
  - Eating too much
  - Drinking liquids with meals
- “Late Dumping” (aka: Reactive Hypoglycemia) – 1-3 hrs after eating: *in addition to Early Dumping symptoms – shakiness, dizziness, fainting, confusion (symptoms of low blood sugar)
Sleeve Gastrectomy
AKA:
“Vertical Sleeve Gastrectomy” or “VSG”
What to Expect – Sleeve

Procedure Classification:
• Restrictive
• Malabsorptive (some)

Procedure Process:
• ~1-2 oz tube-like sleeve is created (the rest of the stomach, about 70%) is removed from the body – this significantly reduces the appetite hormone “Ghrelin” that stimulates the hunger response
• No alterations are made to the intestines
• Pyloric sphincter is NOT bypassed (less risk of dumping syndrome when compared to the Gastric Bypass)

Resources/Visuals:
• www.ethicon.com/healthcare-professionals/specialties/bariatric/patient-education#!sleeve-gastrectomy (general video of surgery included)

***Additional Risk:
• The longer staple line with the sleeve increases risk for staple line leaks
• FOLLOW DIET PROGRESSION AND PROPER EATING HABITS AND YOU WILL NOT HAVE TO WORRY!
Lap-Band
AKA:
“Laparoscopic Adjustable Gastric Band” or “LAGB”
What to Expect – Band

Procedure Classification:
- Restrictive

Procedure Process:
- The band is inserted to the abdominal cavity
- The band is placed on the upper portion of the stomach and the lower part of the esophagus

Resources/Visuals:
- [www.ethicon.com/healthcare-professionals/specialties/bariatric/patient-education#!gastric-banding](www.ethicon.com/healthcare-professionals/specialties/bariatric/patient-education#!gastric-banding) (general video of surgery included)

***Additional Risk:
- The Lap-Band is a procedure which has not shown a lot of long-term success in a significant percentage of patients
- The common Lap-Band-failures are related to:
  - Band Erosion (~2-9.5% of patients)
  - Band Infection (~1.5-5% of patients)
  - Band Slippage (~2-18% of patients)
  - Band Intolerance (see Difficulty Swallowing below)
- Patient who experience band-failures either resort to 1) Removing the band and seeking other not surgical weight loss options or 2) Removing the band and undergoing surgical conversion to another Bariatric Procedure
- ***Although the majority of Lap-Band patients avoid band-failures through following dietary guidelines and keeping up on regular band adjustments, the significance of band-failures should be taken into consideration.

Difficulty Swallowing (Dysphagia) – feeling of food getting stuck in your throat
- The restrictiveness of the band can cause dysphagia
- Ways to prevent dysphagia:
  - Chew your food extremely well, eat/drink slowly, and avoid doughy starches (bread, rice, pasta, waffles, etc) and tough or dry meats (steak, pork chops, etc)
  - Stay up on your band adjustments (expect 6-8 adjustments in the 1st year)
- ***Bypass patients may experience dysphagia early on after surgery (within 4-6 weeks); be patient!... The pouch will stretch slightly and the issue with resolve.
Duodenal Switch Loop  
AKA:  
“Loop DS”
What to Expect – Loop DS

Procedure Classification:
- Restrictive
- Malabsorptive

Procedure Process:
- ~1-2 oz tube-like sleeve is created (the rest of the stomach, about 70%) is removed from the body – this significantly reduces the appetite hormone “Ghrelin” that stimulates the hunger response
- The small intestine is detached from the area just below the pyloric sphincter
- The surgeon identifies the third segment of the small intestine (the “Ileum”)
- The area of intestine just before the Ileum is attached directly to the bottom of the newly made gastric sleeve
- Pyloric sphincter is NOT bypassed (less risk of dumping syndrome when compared to the Gastric Bypass)

Resources/Visuals:
- ***Currently unavailable due to relatively new introduction of this procedure into Bariatric Surgery practice.

***Additional Risk:
- Loop DS patients have an increased risk of developing protein deficiency (*increased protein needs to be discussed later in class)
- The increased malabsorption of the Loop DS may cause patients to have some loose stools after surgery
Common Post-Op Issues for ALL Procedures

Lactose Intolerance – *Inability to digest lactose, a sugar in milk/dairy products*

- **Symptoms:**
  1. Bloating, cramps, abdominal pain, flatulence, diarrhea, nausea/vomiting, and “borborygmi” (rumbling stomach)
- **Relief/Prevention:**
  1. Switch to dairy substitutes (Soy Milk, Lactaid Milk, Kefir, etc) or use Lactiad Chewables with dairy product consumption.

Diarrhea – *Loose/Liquid/Runny Stools*

- Some level/extent of diarrhea can be expected after surgery due to alterations in the gastric system and the undergoing of a liquid/puree diet early on in the post-op diet progression.
- **Relief/Prevention:**
  1. Drink plenty of fluids
    - Diarrhea can lead to dehydration quickly and can deplete electrolytes (sodium/potassium) – Drinking a sports beverage (G2, Powerade Zero, Vitamin Water Zero, etc) will help to replenish lost electrolytes
  2. Include fiber in your diet
    - Sources:
      - Benefiber, etc if in liquid stage of diet progression
      - Fruits, vegetables, sweet potatoes, Nutrigrain bars, etc... for later stages of diet progression
    - ***Too much fiber (~40+ grams/day) may lead to diarrhea aim for about 25-35g daily.
  3. Activity – aim for a goal of at least 30 mins 4-5x/week
- **Other possible causes of diarrhea:**
  1. Bacterial infections, allergies to certain foods, medication reactions, radiation therapy, diseases of the intestines (Crohn's disease, ulcerative colitis), intestinal malabsorption, hyperthyroidism, some cancers, laxative abuse, alcohol abuse, Diabetes, etc...

Constipation – *Hardened feces; difficulty passing fecal matter*

- **Relief/Prevention:**
  1. (same as above for diarrhea – emphasis on adequate fluid)
  2. Laxative (under surgeon supervision only!); Example: Miralax
Common Post-Op Issues for ALL Procedures

Gas, Flatulence
- Relief/Prevention:
  1. Stay active
     - Get up and walk at least once every hour
     - Keep up on more strenuous exercise after your surgeon gives you exercise clearance aside from walking (around 4 weeks post-op usually)
  2. Try Gas-X Chewables if gas persists for 3+ days

Gastroesophageal reflux disease (GERD), Heartburn, Indigestion, Bloating, etc...
- Relief/Prevention:
  1. Pepcid (Famotidine) – 20mg, 2x/daily (recommended for all patients after surgery for the first 3-months post-op)

Dehydration – body lacking sufficient internal fluid
- Dehydration occurs when not taking in adequate fluids. Caffeine is a diuretic which causes fluid to be expelled from the body more than without caffeine ingestion. Not meeting fluid needs and drinking caffeine can lead to severe dehydration.
- Symptoms:
  1. Dry mouth, extreme thirst, dark urine, dry skin, poor skin turgor, constipation, dizziness, confusion, headache, lack of tears/sweat, and/or lack of energy.
- Relief/Prevention:
  1. Consume at least 60oz of clear fluids per day (**fluid is not just water!... Examples: popsicles, ice, jello, soups, decaf tea, diluted juices, and 50% of protein shake ounces will count toward your minimum 60oz per day)

Vomiting
- Vomiting after surgery is most commonly related to either 1) Eating too fast, 2) not chewing foods well, 3) eating certain foods earlier than the diet progression states, 4) drinking liquids with meals, and/or 5) eating while not being completely relaxed.
- Relief/Prevention:
  1. Following the diet progression 100% and eat foods in the proper manner (slowly, chewed well – 15-30 chews per bite, and no liquids with meals)
Common Post-Op Issues for ALL Procedures

Weight Loss Stalls/Plateaus
- Weight loss occurs most dramatically early on after surgery (first 1-2 months post-op). Most patients see rapid weight loss
- Relief/Prevention:
  1. FIRST – do not get discouraged!... This is normal and expected!
  2. Attend post-op follow-up appointments with your dietitian(s) to determine areas of improvement in diet, exercise, etc.

Examples for Weight Loss Expectations

<table>
<thead>
<tr>
<th>Post-op</th>
<th>%EWL</th>
<th>Lbs Lost</th>
<th>Weight</th>
<th>Avg Wt Loss/Wk</th>
</tr>
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<tbody>
<tr>
<td>1 week</td>
<td>5%</td>
<td>11</td>
<td>369</td>
<td>11</td>
</tr>
<tr>
<td>1 month</td>
<td>10%</td>
<td>22</td>
<td>358</td>
<td>4</td>
</tr>
<tr>
<td>3 months</td>
<td>20%</td>
<td>44</td>
<td>336</td>
<td>3</td>
</tr>
<tr>
<td>6 months</td>
<td>30%</td>
<td>66</td>
<td>314</td>
<td>3</td>
</tr>
<tr>
<td>9 months</td>
<td>40%</td>
<td>88</td>
<td>292</td>
<td>3</td>
</tr>
<tr>
<td>1 year</td>
<td>50%</td>
<td>110</td>
<td>270</td>
<td>3</td>
</tr>
</tbody>
</table>

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<th>Weight</th>
<th>Avg Wt Loss/Wk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 week</td>
<td>5%</td>
<td>5</td>
<td>245</td>
<td>5</td>
</tr>
<tr>
<td>1 month</td>
<td>10%</td>
<td>9</td>
<td>241</td>
<td>2</td>
</tr>
<tr>
<td>3 months</td>
<td>20%</td>
<td>18</td>
<td>232</td>
<td>1</td>
</tr>
<tr>
<td>6 months</td>
<td>30%</td>
<td>27</td>
<td>223</td>
<td>1</td>
</tr>
<tr>
<td>9 months</td>
<td>40%</td>
<td>36</td>
<td>214</td>
<td>1</td>
</tr>
<tr>
<td>1 year</td>
<td>50%</td>
<td>45</td>
<td>205</td>
<td>1</td>
</tr>
</tbody>
</table>
What to Watch in Your Diet

Sugar/Empty Calories:
High sugar foods and beverages...
- Can cause dumping syndrome
- Can cause weight gain
- “Empty Calories” — Foods that typically do not provide important nutrients such as protein, vitamin, and minerals

Sugar Alcohols:
- The suffix, -itol, indicates a sugar alcohol. It is not actually alcohol. It is a form of artificial sweetener. These have been known to cause excessive gas, bloating, and/or diarrhea. Examples: sorbitol, xylitol, and maltitol.

Sugar Substitutes:
- Splenda (sucralose), Equal (aspartame), Sweet ‘N’ Low (saccharin) and Stevia are OK to use in moderation. Stevia is a natural herbal supplement. You may find that large amounts of these products may cause nausea after surgery due to a heightened sensitivity to sweet tastes.

Carbonation:
- Carbonated beverages may stretch your pouch over time. Your pouch will stretch naturally over time; however, you do not want to overstretch it.
- Carbonation can also cause gas.
- Carbonated beverages do not provide nutrients. You will need to maximize your nutrition intake after surgery. Avoid even flat soda.

Caffeine:
- Stimulates cravings by stimulating insulin production and lowering the blood sugar. This can increase your appetite, thus leading to weight gain.
- Excessive intake of caffeine can contribute to dehydration and can inhibit calcium absorption.
What to Watch in Your Diet

Alcohol:
- With any procedure it is recommended to limit or avoid alcohol. It does not provide nutrients and could contribute to weight gain.
- For RYGBP patients, the metabolism of alcohol is altered. Alcohol is absorbed more quickly, raising your blood alcohol level more quickly. Basically, your liver will have to work harder, thus, excessive alcohol intake after the RYGBP could cause severe liver damage.
- The LAGB and LSG are not malabsorptive procedures; however, it is not a recommended choice due to the empty calories.

Liquid/30-minute Rule - Do NOT drink liquids with meals!
- Liquids can NOT be taken with food at any stage of the diet progression for all the surgeries.
  - Wait 30 minutes AFTER you eat before you drink anything.
- If you drink liquids with your meals it can:
  - Stretch your pouch over time
  - Cause GI discomfort
  - If you are full on liquids you may not be able eat enough nutrient rich food
<table>
<thead>
<tr>
<th>Vitamin/Mineral</th>
<th>Total Daily Dose</th>
<th>% DV</th>
<th>Additional Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>36 mg</td>
<td>200%</td>
<td>*Menstruating women may need higher dose of 45-60 mg if lab values are low (***per Doctor only)</td>
</tr>
<tr>
<td>Calcium Citrate</td>
<td>1000-1500 mg</td>
<td>100-150%</td>
<td>*Split into 500-600 mg doses; *DO NOT take &quot;Tums&quot; or other calcium carbonate</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>10000 IU</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Vitamin D3</td>
<td>3000 IU</td>
<td>750%</td>
<td>*Account for Vitamin D in calcium supplement for this total</td>
</tr>
<tr>
<td>Vitamin E</td>
<td>60 IU</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Vitamin K1</td>
<td>160 mcg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Vitamin C</td>
<td>120 mg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Thiamin (B1)</td>
<td>2.4 mg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Riboflavin (B2)</td>
<td>3.4 mg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Niacin (B3)</td>
<td>20 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Pantothenic Acid (B5)</td>
<td>20 mg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Pyridoxine (B6)</td>
<td>4 mg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Biotin (B7/Vit H)</td>
<td>60 mcg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Folic Acid (B9)</td>
<td>800 mcg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>1000 mcg</td>
<td>16667%</td>
<td>*Oral, sublingual, or nasal form; OR 1000 mcg/month intramuscularly</td>
</tr>
<tr>
<td>Copper</td>
<td>2 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>15 mg</td>
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<tr>
<td>Selenium</td>
<td>70 mcg</td>
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</tr>
<tr>
<td>Manganese</td>
<td>2 mg</td>
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<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>2 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
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<td>100%</td>
<td></td>
</tr>
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<td>1000 mg</td>
<td>200%</td>
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Above doses represent TOTAL, daily amounts. Intakes may need to be adjusted per individual based on personal lab results.

Percent Daily Values (% DV) are based on a 2,000 calorie diet.

*Calcium supplement should be taken at least 2 hrs apart from Iron supplement for maximal absorption of each mineral.

*Refer to Post-op Nutrition packet for approved protein supplements (packet provided by Dietitian during your nutrition class).

*Calcium supplement will meet the above Vitamin/Mineral needs.

Additional Needs:

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<tr>
<th>Protein</th>
<th>Clear Liquids</th>
<th>n/a</th>
<th>40 oz</th>
<th>60-80 oz</th>
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<tr>
<td>60-80 oz</td>
<td>64 oz</td>
<td>n/a</td>
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<td>40 mg</td>
<td>n/a</td>
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*Supplements that will meet the above Vitamin/Mineral needs:

1) Walgreen's Bariatric Liquid Compound **Available ONLY through DeKalb Medical's Walgreen's - Phone: (404) 299-5411
2) Bariatric Advantage - Advanced Multi EA plus Calcium Chews **Available at DeKalb Medical's Health and Wellness Store - Phone: (404) 501-2222
3) Strativa's BariActiv Multi Vitamin package w/Nascobal B12 Spray **Available through ProCare PharmacyCare - Phone: (855) 828-1488 (ProCare PharmacyCare)

Additional Needs:

Supplements Needed After Bariatric Surgery

**Above dosages represent TOTAL, daily amounts. Intakes may need to be adjusted per individual based on personal lab results.

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<td>1000 mcg</td>
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<td>3.4 mg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Niacin (Vit B3)</td>
<td>20 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Pantothenic Acid (B5)</td>
<td>20 mg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Pyridoxine (Vit B6)</td>
<td>2 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Biotin (Vit B7/Vit H)</td>
<td>60 mcg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Folic Acid (Vit B9)</td>
<td>800 mcg</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>2 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>2 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>15 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Manganese</td>
<td>2 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>120 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Iodine</td>
<td>150 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td>1667.4 mg</td>
<td>667%</td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td>50 mg</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>1000 mg</td>
<td>400%</td>
<td></td>
</tr>
</tbody>
</table>

Additional Needs:

<table>
<thead>
<tr>
<th>Vitamin/Mineral</th>
<th>Total Daily Dose</th>
<th>% DV</th>
<th>Additional Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin C</td>
<td>100 mg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Vitamin D</td>
<td>100 mg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Vitamin E</td>
<td>750 mcg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Vitamin K1</td>
<td>200 mcg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Vitamin A</td>
<td>1000 mcg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>15 mcg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>2 mg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>15 mg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Manganese</td>
<td>2 mg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>500 mg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td>3 mcg</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>80-100 g</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Clear Liquids</td>
<td>64 oz</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

Percent Daily Values (% DV) are based on a 2,000 calorie diet.

Additional Details:

No other supplement will provide sufficient vitamin/mineral needs to prevent deficiencies.

1) Bariatric Advantage - Advanced Multi EA Plus Calcium Chews Available at DeKalb Medical's Health and Wellness Store - Phone (404) 501-2222

The ONLY Supplements that will meet the above Vitamin/Mineral needs:

1) Bariatric Advantage - Advanced Multi EA plus Calcium Chews **Available at DeKalb Medical's Health and Wellness Store - Phone (404) 501-2222

**No other supplement will provide sufficient vitamin/mineral needs to prevent deficiencies.

**Intakes may need to be adjusted per individual based off personal lab results.

**Calcium supplement should be taken at least 2 hrs apart from Iron supplement for maximal absorption of each mineral.

%Above doses represent TOTAL, daily amounts; **Intakes may need to be adjusted per individual based off personal lab results.

*Calcium supplement should be taken at least 2 hrs apart from Iron supplement for maximal absorption of each mineral.

Refer to Post-op Nutrition packet for approved protein supplements (Packet provided by Dietitian during your nutrition class).

Additional Needs:

Supplements Needed After Bariatric Surgery
### Supplements Needed After Bariatric Surgery

<table>
<thead>
<tr>
<th>Vitamin/Mineral</th>
<th>Total Daily Dose</th>
<th>% DV</th>
<th>Additional Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Iron</strong></td>
<td>18mg</td>
<td>100%</td>
<td>*Menstruating women may need higher dose of 36+ mg if lab values are low (**<em>per Doctor only)</em></td>
</tr>
<tr>
<td><strong>Calcium Citrate</strong></td>
<td>1000-1500 mg</td>
<td>100-150%</td>
<td>*Split into 500-600 mg doses; *DO NOT take &quot;Tums&quot; or other calcium carbonate</td>
</tr>
<tr>
<td><strong>Vitamin A</strong></td>
<td>5000IU</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Vitamin D3</strong></td>
<td>3000 IU</td>
<td>750%</td>
<td><em>Account for Vitamin D in calcium supplement for this total</em></td>
</tr>
<tr>
<td><strong>Vitamin E</strong></td>
<td>30 IU</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Vitamin K1</strong></td>
<td>80 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Vitamin C</strong></td>
<td>60 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Thiamin (Vit B1)</strong></td>
<td>1.2 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Riboflavin (Vit B2)</strong></td>
<td>1.7 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Niacin (Vit B3)</strong></td>
<td>20 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Pantothenic Acid (B5)</strong></td>
<td>10 mg</td>
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<td></td>
</tr>
<tr>
<td><strong>Pyridoxine (Vit B6)</strong></td>
<td>2 mg</td>
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<td>30 mcg</td>
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<td></td>
</tr>
<tr>
<td><strong>Folic Acid (Vit B9)</strong></td>
<td>400 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Vitamin B12</strong></td>
<td>6 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Copper</strong></td>
<td>2 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Zinc</strong></td>
<td>15 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Selenium</strong></td>
<td>70 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Manganese</strong></td>
<td>2 mg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Chromium</strong></td>
<td>120 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Iodine</strong></td>
<td>150 mcg</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Magnesium</strong></td>
<td>40 mg</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

**Additional Needs:**

- **Clear Liquids:** water, clear soups, broth, jello, popsicles, Crystal Light, low-calorie sport beverages, etc.
- **Protein:** 60-80 g for females, 80-100 g for males and all Loop DS patients.

**Percent Daily Values (% DV)** are based on a 2,000 calorie diet.

*Above doses represent **TOTAL**, daily amounts; **Intakes may need to be adjusted per individual based off personal lab results.*

*Calcium supplement should be taken at least 2 hrs apart from iron supplement for maximal absorption of each mineral.*

*Refer to Post-op Nutrition packet for approved protein supplements (Packet provided by Dietitian during your nutrition class).*

**Supplements that will meet the above Vitamin/Mineral needs:**

1. **Walgreen's Bariatric Liquid Compound** **Available ONLY through DeKalb Medical's Walgreen's - Phone (404) 299-5411**
2. **Bariatric Advantage - Advanced Multi EA plus Calcium Chews** **Available at DeKalb Medical's Health and Wellness Store - Phone (404) 501-2222**
What vitamins should I purchase???

## Gastric Bypass/Vertical Sleeve Gastrectomy

<table>
<thead>
<tr>
<th>Brand</th>
<th>Product/Dosage</th>
<th>Price</th>
<th>Pro's</th>
<th>Con's</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bariatric Advantage – Innovations; “Advanced Multi EA”</strong></td>
<td>Multi Vitamin EA- 2 Daily</td>
<td>$67.70 Per month</td>
<td>*Purchase at your Dr.’s visit  *Only 4 tablets  *Calcium Chews taste great  *Designed for bariatric patients</td>
<td>*Some may not prefer chewables</td>
</tr>
<tr>
<td></td>
<td>Calcium Chews- 2 Daily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Walgreens Baritaryc Liquid Compound</strong></td>
<td>2 Tablespoons Per day</td>
<td>$47.00 Per month</td>
<td>*All vitamins in one solution  *Shipped directly to your house (FREE)  *No prescription</td>
<td>*Some do not like the taste  *Best flavors: Watermelon, Strawberry, Grape, Cherry</td>
</tr>
<tr>
<td></td>
<td>1 Tbsp AM 1 Tbsp PM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BariActiv – Strativa w/Nascobal</strong></td>
<td>Multi Vitamin- 2 Daily Iron- 2 Daily Calcium- 4 Daily B12 Nasal Spray- 1 puff weekly</td>
<td>$25.00 Per month</td>
<td>*Price  *Shipped directly to your house  *Designed for bariatric patients</td>
<td>*10 tablets daily  *Need a prescription from physician</td>
</tr>
<tr>
<td><strong>Over the Counter</strong></td>
<td>Multi Vitamin Calcium B Complex (if not enough B vitamins in Multi) Iron (if not in multi) Thiamin (if not in B complex) Vitamin D (if not in calcium)</td>
<td>$ 40.00 to $80.00+ Per month</td>
<td>*Able to purchase at local stores</td>
<td>*Unsure of ingredients and amounts  *Purchasing multiple vitamins at multiple stores  *8 – 10 tablets daily</td>
</tr>
</tbody>
</table>

**Pepcid AC: 20mg, twice a day for first 3 months following Surgery**
• Surgical Weight Loss Center – (404) 501-7818
• Central Registration – (404) 501-3700
• Wellness Center – (404) 501-2222
• Walgreens at DeKalb Medical – (404) 501-7025
• Health & Wellness Store – (404) 299-5411
• Bariatric Liquid Compound Vitamin
• Wellness Center – (404) 501-2222
• Personal Trainers available to set up personalized workout plans
• Bariatric Advantage Advanced Multi EA + Calcium Chews
• Wellness Center – (404) 501-7818
• Doctor’s/Surgeon’s Office
• Office which collects payments for Nutrition Visits
• Personal Trainers available to set up personalized workout plans
• Gift Shop – (404) 501-5220
• Able to see Central Registration inside entrance when standing outside this Gift Shop

DeKalb Medical Map

- Gift Shop – (404) 501-5220
- Central Registration – (404) 501-3700
- Wellness Center – (404) 501-2222
- Bariatric Liquid Compound Vitamin
- Wellness Center – (404) 501-2222
- Personal Trainers available to set up personalized workout plans
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- Doctor’s/Surgeon’s Office
- Office which collects payments for Nutrition Visits
- Gift Shop – (404) 501-5220
- Able to see Central Registration inside entrance when standing outside this Gift Shop
Protein Requirements

**DAILY Protein Quota:**
- **Women:** 60-80g
- **Men:** 80-100g
- **Loop DS Patients:** 80-100g

Why Protein is **SOO** Important After Bariatric Surgery:

1. **Healing**
   - Protein is the “building block” of nearly everything in our bodies. You will not be able to heal effectively or adequately after surgery by falling short of the above **DAILY** protein quota.

2. **Maintenance of Muscle Mass and Bone Mineral Density**
   - If you fall short of your protein quota from your diet, your body will look for other protein sources: 1) muscles and 2) bones.
   - Increased muscle mass = higher resting metabolism = more calories burned at rest (sitting, sleeping, etc) = more easily attainable weight loss = happier person.
   - Inadequate protein intake has been associated with low bone mineral density which could lead to bone fractures and bone pain.

3. **Preventing surgery-related hair loss**
   - Hair is essentially dead protein; Inadequate protein can lead to hair loss/hair thinning.
   - **Telogen Effluvium (TE)** – Hair loss that can be caused emotional or physiological stress such as: major surgery, anemia, severe emotional disorders, crash diets, hypothyroidism, and rapid weight loss.
   - Regardless of the type of stress, the “shock” on the body takes hair from the growing phase and places it in the resting phase earlier than it would have been without the stress occurring. *About 10% of a person’s hair is normally in the resting phase at one time; TE increases this percentage.
   - **TE IS REVERSIBLE!!!... Correct protein intake, de-stress, and be patient!!!**
Additional Protein Information

Common Protein Sources:
- **Animal Meat** (Chicken, Turkey, Fish, Shellfish, Lean Beef, Pork/Ham, Venison, Lunch Meats, Etc)
- **Dairy** (Milk, Greek Yogurt, Pudding, Cheese, Cottage Cheese, etc)
- **Dairy Substitutes** (Soy Milk, Lactaid Milk, Kefir, etc)
- **Meat Substitutes – Animal Derived** (Eggs)
- **Meat Substitutes – Vegetarian** (Tofu, Soy Products, Tempeh, Lentils, Beans, Chickpeas, Creamy Nut Butters, etc)

Protein Sources Best Absorbed by the Human Body:
1. ***Whey Protein (Milk Derived – 20%)*** – **Whey Protein Isolate** - virtually lactose free, carbohydrate free, fat free, and cholesterol free
2. Casein Protein (Milk Derived – 80%) – Most common reason for milk allergy (aside from lactose intolerance)
3. Soy Protein
4. Egg Protein – Egg white protein powder

***Any other protein sources are not as efficiently absorbed by the body***

Top Protein Supplement “DO NOT’s”:
1. **DO NOT** over stock on any one protein supplement! – *taste preferences may change after surgery*
2. **DO NOT** forget the amount of protein you need per day!
3. **DO NOT** skip protein shakes/sources during your liquid stage and fail to meet daily protein quota
4. **DO NOT** choose a protein supplement that does not meet the approved criteria – *20g pro/8oz fluid or 10g pro/4oz minimum*
   - ***Calculation for premade shakes***:
     - Multiply 2.5 x ounces of respective beverage
     - If the **TOTAL grams** of protein in the bottle your answer is LESS THAN your answer, then the shake **DOES NOT** have enough protein per ounce
     - Example:
       1. Muscle Milk Shake – 25g pro per 14oz
          - 14oz x 2.5 = 35; 25 < 35 = **NOT APPROVED!!!**
       2. Premier Protein Shakes – 30g pro per 11oz
          - 11oz x 2.5 = 27.5; 30 > 27.5 = **APPROVED!!!**
Recommended Protein Supplements

There are endless brands of protein supplement available. The trick is to find the one that works best for your personal taste preference.

Products:

1. “Syntrax” Brand @ Vit Shoppe; Lucky Vit
   • Nectar (23-24g/scoop; ~100cal) – One of the best tasting powders available; low cal; works great for those who dislike milk-like powders

2. “Unjury” Brand @ www.Unjury.com (1-800-517-5111)
   • (21g/scoop; ~100cal) – very good unflavored protein

3. “Bariatric Advantage” Brand @ DeKalb Med. Health/Wellness Store and online
   • (27g/scoop; ~150cal)

4. “Nature’s Best” Brand @ Vit Shoppe; GNC; Lucky Vit
   • Isopure Clear (40g/20oz; 160cal) – Best flavors: Apple Melon, Black Tea, and many others to try
   • Isopure Powder (25g/scoop; ~100cal)

5. “Jay Robb” Brand @ Vit Shoppe, GNC
   • (25g/scoop; ~100cal) – All natural products (e.g. stevia is used for a sweetener).

6. “Abbott Nutrition” Brand @ Walmart
   • EAS Complete (25g pro/2 scoops; 150cal)

7. “Body Fortress” Brand @ Walmart
   • Super Advanced Whey Protein (20g/scoop; 130cal)

8. “MuscleTech – Six Star Pro Nutrition” Brand @ Walmart
   • Whey Protein Elite Series (26g/heaping scoop; 160cal)

9. “Premier Nutrition” Brand @ Sam’s Club; Costco; Some Walmart Stores
   • Premier Protein (30g/11oz; 160cal)
   • www.insurenutrition.com (Insurance may cover these post-op)

***Each Brand has its own respective website***
***Each can also be “Google’d” for competitive pricing***

www.LuckyVitamin.com (1-888-635-0474)
***Source for many supplements for cheap***
***Consider Shipping Costs***

Shake Criteria: MUST provide at least 20g pro/8oz fluid or 10g pro/4oz MINIMUM!!!
## Bariatric Post-Operative Diet Progression

### Phase 1 - Liquids

- **Days 1 & 2:** Clear Liquids
- **Days 3-14:** Full Liquids

### Phase 2 - Puree

- **Days 15-28:** Puree
- **(During Liquid Phase)**

### Phase 3 - Soft Solids

- **Days 29-56:** Soft Solids

### Food Sources

- **Surgery Date:**
- **Enhancers/Flavorings:**
  - Crystal Light, etc.
  - No added fats - Butter/Marg.
  - No added sugar or sugar substitutes

### Protein

- Isopure (1g/oz)
- Protein Shakes (10-15g/4oz)
- Protein Shakes (15-20g/8oz)
- Greek Yogurt (1-2g/8oz)
- Tofu (15g/8oz)
- Greek Yogurt (1-2g/8oz)
- Pureed Meats (3g/8oz)
- Soft or Ground Meats (3g/8oz)

### Phase 1 - Liquids

- **Protein Powder**
  - Flavored/milk
  - Unflavored (1/8-1/4 tsp)
  - Plain water (1/8-1/4 tsp)

- **Fluids/Flavorings**
  - Low/no cal water (trace)
  - Water (1/8-1/4 tsp)
  - Low/no cal juice (trace)

- **Vegetables**
  - No chewing required
  - Corn, celery
  - Regular salad greens

- **Fruits**
  - Fresh, pureed
  - Diced (trace)

- **Other**
  - Couch potatoes
  - Bagels
  - Pureed soups (trace)

### Phase 2 - Puree

- **Protein Powder**
  - Flavored/milk
  - Unflavored (1/8-1/4 tsp)

- **Fats**
  - No added fats - Butter/Marg.

- **Vegetables**
  - No chewing required
  - Corn, celery
  - Regular salad greens

- **Fruits**
  - Fresh, pureed
  - Diced (trace)

- **Other**
  - Couch potatoes
  - Bagels
  - Pureed soups (trace)
Resources

Books:
2. *Recipes For Life After Weight Loss Surgery* – by Margaret Furtado
3. *Am I Hungry? Mindful Eating Program for Bariatric Surgery Companion Workbook & Journal* – by Michelle May, MD with Margaret Furtado, MS, RD
5. *Weight Loss Surgery For Dummies* – by Marina S. Kurian, MD, Barbara Thompson, Brian K. Davidson, and Al Roker

Websites:
3. [www.ChefDave.org](http://www.ChefDave.org) – Chef Dave had bariatric surgery. His website provides resources and recipes. He also has a cookbook for purchase.
4. [www.WH Foods.org](http://www.WH Foods.org) – “The World’s Healthiest Foods.” This website can help you learn more about healthy, nutrient dense foods. This website also contains healthy recipes.
5. [www.CalorieKing.com](http://www.CalorieKing.com) – Website allows you to search the majority of restaurants and fast food chains for nutrition information that usually is not listed on menus. PHONE APP AVAILABLE FOR FREE!
TOP THINGS TO KNOW!
(If you know nothing else, know these 😊)

1. PRIORITIZE PROTEIN!!!
   • At LEAST 60-80g/day (F); 80-100g (M); ***80-100g (Loop DS)

2. TAKE YOUR BARIATRIC SPECIFIC MULTIVITAMIN DAILY AFTER SURGERY!!!
   • Choose:
     • 1) Bariatric Advantage Advance EA + Calcium Chews (~70/mo)
     • or 2) Walgreen Bariatric Liquid Compound (~$50/mo)
     • ***Both available for purchase in DeKalb Medical’s Professional Building
     • ***DO NOT CHOOSE GROCERY STORE BRANDS!!! (Walmart, Kroger, Publix: Centrum, Irwin, One-A-Day, Gummies, etc)

3. DRINK FLUIDS THROUGHOUT THE DAY!!! (wait 30 mins AFTER meals)
   • At LEAST 60oz clear liquids per day
   • ***ABSOLUTELY NO CAFFEINE if not meeting 60oz+ daily

4. CHEW FOODS EXTREMELY WELL AND EAT/DRINK SLOWLY!!!

5. FOLLOW THE DIET PROGRESSION 100%!!! (Do not jump ahead)

6. EXERCISE!!!
   • Goal of 30 mins 4-5x per week (work up to goal slowly)
   • Nutrition alone with not get you to your ultimate weight loss goal!

7. ATTEND SUPPORT GROUP MEETING REGULARLY!!!

8. FOLLOW-UP WITH YOUR SURGEON AND DIETITIAN REGULARLY!!!
   • At least 1 mo, 3 mo, 6 mo, 12 mo, and once annually thereafter.

9. K.I.S.S PRINCIPLE!!!
   • Keep-It-Simple-$MARTY**!

10. BREATHE!!!
   • You can do this! We are on your side! We are always here to help!
   • Do not hesitate to contact us in time of need!
   • Doctor Office: (404) 501-7081; Dietitian(s): (404) 501-7818