Bariatric Surgery Education Syllabus

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YOUR ROLE
You play a critical role in the long-term success of your surgery. You will need to:

- Commit to improving your health. This starts today! Depending on your weight, your surgeon will set an individualized goal of 3-5% total weight loss. This will be done prior to your surgery.

- Discuss your health history with your surgeon and your Bariatric team.

- Attend all pre-operative appointments with your Bariatric team. Some insurances require 3-6 consecutive months of nutritional counseling. We will assist you in finding out what your insurance requires.

- Commit to scheduled post-operative follow-up with your Bariatric team.

- Learn all you can about your surgery before making a decision. Discuss any questions or concerns you have with your surgeon/bariatric team.

- Follow all instructions described in the Weight Loss Surgery Guide on nutrition, activity, and other care after surgery, which will be provided to you by the Bariatric team.

- Complete a comprehensive preoperative work-up your surgeon.

In order to be successful with your new tool, we want you to understand the necessary lifestyle and emotional changes that occur after surgery to prevent complications. This includes taking and passing a preoperative readiness exam. If you are not ready for this commitment, you are not obligated to proceed with surgery and can pursue alternative treatment(s) for weight loss.

MORBID OBESITY AND MEDICAL IMPACT

Morbid obesity is a chronic condition that is difficult to manage on your own. Obesity affects many aspects of your health and is a danger to your health. Obesity is defined as having a BMI greater than 30, morbid obesity is defined as BMI greater than 35 or weighing 100 pounds in excess of the Ideal Body Weight (IBW). Individuals with BMI>30 have a 50-100% increased risk of premature death compared to healthy weight individuals. People with BMI>30 have increased risk of developing more than 40 diseases.
Medical conditions that are commonly caused or exacerbated by obesity are outlined by organ systems:

- **Pulmonary** – Obstructive sleep apnea, obesity hypoventilation syndrome, asthma/reactive airway disease
- **Cardiac** – High blood pressure, heart failure caused by pulmonary hypertension, higher risk of coronary artery disease (atherosclerosis)
- **Gastrointestinal, Abdominal** – Gallbladder disease, GERD (recurrent heartburn), recurrent ventral hernias, fatty liver
- **Endocrine** – Diabetes, hirsutism, hyperlipidemia, hypercholesterolemia
- **Genitourinary, Reproductive** – frequent urinary tract infections (UTIs), stress urinary incontinence, menstrual irregularity or infertility
- **Musculoskeletal** – degeneration of knees and hips, disc herniation, chronic non-surgical low back pain
- **Skin** – multiple disorders, most related to diabetes and yeast infections between skin folds
- **Cancer risk** – breast, uterine, prostate, renal, colon, pancreatic, gastric, gallbladder and endometrium

You can calculate your BMI by using the following formula:

\[
\text{BMI} = \frac{\text{weight (kg)}}{\text{height (m)}^2}
\]

or by finding your height and weight on the following chart:

<table>
<thead>
<tr>
<th>Height (m)</th>
<th>Weight (kg)</th>
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<tbody>
<tr>
<td>1.30</td>
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<td>3.80</td>
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<tr>
<td>3.90</td>
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<table>
<thead>
<tr>
<th>Underweight</th>
<th>Healthy</th>
<th>Overweight</th>
<th>Obese</th>
<th>Morbidly Obese</th>
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<td>Underweight</td>
<td>Healthy</td>
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<td>Obese</td>
<td>Morbidly Obese</td>
</tr>
</tbody>
</table>
If your BMI is at least 30 and you have an obesity-related condition, you may be eligible for Adjustable Gastric banding (ex. Lap Band ®, Realize ®).

If your BMI is at least 35 and you have an obesity-related condition, you may be eligible for Gastric Bypass, Sleeve Gastrectomy or Adjustable gastric banding.

If your BMI is at least 40, you may qualify for weight loss surgery -- even if you have not developed an obesity-related condition yet.

Call to schedule an appointment to discuss your health concerns and see which surgery is right for you.

**WHY BARIATRIC SURGERY?**

When other medically supervised methods have failed, bariatric surgery can be used as a powerful tool to make dieting and exercise more effective. Proper nutrition, routine exercise and weight loss surgery when used together, offer effective long-term weight control for those with morbid obesity.

While bariatric surgery has been around for decades, current advanced technology is safer, more effective, and decreases the risk of dying from obesity related diseases. Gastric bypass surgery is considered the "gold standard" in weight loss surgery. It has been endorsed by a 1991 consensus panel convened by the National Institute of Health (NIH), as the only effective means of inducing significant long-term weight loss for the vast majority of patients with clinically severe obesity. It is also accepted by the American Diabetes Association as an acceptable treatment for Type 2 Diabetes Mellitus as of the 2009 ADA Symposium. Newer techniques, such as the Sleeve gastrectomy have also gained popularity due to its powerful effect in weight loss and has slightly less risk associated with surgery.
SETTING REALISTIC EXPECTATIONS

The goal of surgery is to improve your overall health. By losing over half of your excess body weight, health problems are prevented or resolved. Keep in mind that:

- Other weight loss attempts must be tried first and documented. Surgery is only an option if other weight loss attempts have not been successful.

- Surgery, and the necessary lifestyle changes, are meant to be permanent.

- You must commit to these lifestyle changes, including diet and exercise after surgery to maximize your weight loss.

- You will not reach a healthy weight right away. Depending on the procedure and your commitment to necessary lifestyle changes, weight loss will vary.

- Bariatric surgery is not cosmetic surgery.

- Bariatric surgery is a tool, which will help you lose weight. However, by being diligent with your diet, exercise and attending support groups, your chances of losing more weight and preventing complications will dramatically increase.

We are here to help you make these lifestyle changes and successfully reach your weight loss goals!

TWO WAYS SURGICAL PROCEDURES PROMOTE WEIGHT LOSS

1. By decreasing food intake (restriction). Roux-en-Y Gastric bypass, the Sleeve Gastrectomy, and Adjustable Gastric Banding are surgeries that limit the amount of food the stomach can hold by closing off or removing parts of the stomach.
   → Note: The majority of patients report feeling full and satisfied after a small amount of food, and not feeling excessively hungry between meals.

2. By allowing food and digestive juices to effectively bypass a large portion of the intestine and thus have less time to be absorbed (malabsorption). In the gastric bypass procedure, a surgeon makes a direct connection from the stomach to a lower segment of the small intestine, bypassing the duodenum, and some of the jejunum.
   → Note: Vitamin and mineral supplements and a high protein intake will be required for life to prevent the problem of nutritional deficiencies.
THE NORMAL DIGESTIVE PROCESS

Normally, as food moves along the digestive tract, appropriate digestive juices and enzymes arrive at the right place at the right time to digest and absorb calories and nutrients. After chewing and swallowing, the food moves down the esophagus to the stomach where a strong acid continues the digestive process. The stomach can hold about three pints of food at one time. When the stomach contents move through the pylorus to the duodenum, the first segment of the intestine, bile and pancreatic juice speed up digestion. Most of the calcium and iron in the foods we eat are absorbed in the duodenum. The jejunum and ileum, the remaining two segments of the nearly 20 feet of small intestine, complete the absorption of almost all calories and nutrients. The food particles that cannot be digested in the small intestine are stored in the large intestine until eliminated.

COMBINATION PROCEDURE

The Roux-en-Y Gastric bypass can be regarded as both a restrictive and malabsorptive procedure. Restrictive, in that the stomach is reduced to the size of a walnut; Malabsorptive, in that the pouch is attached to the middle of the small intestine, bypassing part of the small intestines, thus limiting absorption of calories.

Studies have shown the reduction in the secretion of gastric hormones, such as ghrelin, decrease hunger in patients who have had a Gastric bypass. However bypassing the duodenum, where most iron and calcium are absorbed, increases the risks for nutritional deficiencies. Risks include anemia from malabsorption of vitamin B12 and iron. Risks also include osteoporosis and metabolic bone disease from decreased absorption of calcium. Patients are required to take lifelong nutritional supplements to prevent these deficiencies. Consuming sugar and high fat foods after gastric bypass may cause dumping syndrome, which is when the stomach contents move too rapidly through the small intestine. Symptoms include abdominal cramping, weakness, sweating, faintness, and explosive diarrhea.
RESTRICTIVE PROCEDURES

The **Sleeve Gastrectomy** procedure is considered a restrictive procedure, limiting the amount of food (and therefore calories) that can be eaten. The stomach is surgically divided and a portion of the stomach is removed, creating a tube or banana-shaped pouch. The nerves to the stomach and the outlet valve (pylorus) remain intact, preserving the functions of the stomach while drastically reducing the volume.

There is no intestinal bypass with this procedure, only stomach reduction. However, there is a risk of vitamin/mineral malabsorption. Patients are required to take lifelong nutritional supplements to prevent nutritional deficiencies.

Studies have shown the reduction in the secretion of gastric hormones, such as ghrelin, decrease hunger and produce key metabolic effects in patients who have had the procedure. The Sleeve gastrectomy is **not** reversible.

Another restrictive option is **Adjustable gastric banding** which uses an adjustable silicone band that is placed around the upper stomach to limit food intake. No part of the stomach or intestines are stapled or removed. Tubing is connected to a port which is fastened to the abdominal wall under layers of skin and tissue. Saline solution is injected through the port to adjust the amount of fluid in the band. This process provides a sensation of satiety or fullness after eating.

Overeating or eating too fast can cause vomiting. Weight loss occurs more slowly than that of the Gastric bypass and Sleeve Gastrectomy. Routine follow-up with your surgeon for band adjustments are extremely important to insure a successful surgical outcome.
# Bariatric Surgery — An Overview of Procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Pros</th>
<th>Cons</th>
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<tbody>
<tr>
<td><strong>Combination</strong></td>
<td></td>
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</tbody>
</table>
| **Roux-en-Y Gastric Bypass** | - Significant and sustained weight loss  
- Rapid improvement in blood sugar levels and other co-morbidities  
- Most long term data available  
- Stomach is not removed as in Sleeve gastrectomy | - Nutritional deficiencies/gradual weight gain if not compliant with commitment to nutritional guidelines  
- Lifelong vitamin/mineral supplement use  
- Complex to reverse |
| **Sleeve Gastrectomy** | - No malabsorption of calories  
- Decreases ghrelin and therefore ↓ sensation of hunger | - Nutritional deficiencies/gradual weight gain if not compliant with commitment to nutritional guidelines  
- Lifelong vitamin/mineral supplement use  
- Limited data greater than 5 years regarding sustained weight loss  
- Not reversible |
| **Restrictive** | | |
| **Adjustable Gastric Banding** | - Outpatient procedure  
- No malabsorption  
- Removable if absolutely necessary  
- Highly effective in motivated patient | - Slower and overall less weight loss than bypass and Sleeve gastrectomy  
- Nutritional deficiencies/gradual weight gain if not compliant with commitment to nutritional guidelines  
- More late failures due to dilation  
- Less effective with sweet eaters  
- Significant dietary compliance required  
- Risk of ↓ esophageal function  
- Risk of band erosion, band slippage and reaction  
- Requires repeat follow-up to surgeon for adjustments (“fills”) for ongoing weight loss |
## BENEFITS AND RISKS OF ROUX-EN-Y GASTRIC BYPASS

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>RISKS</th>
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<tbody>
<tr>
<td>• Performed laparoscopically and robotically by some surgeons</td>
<td>• During rapid or substantial weight loss a person’s risk of developing gallstones is increased and may require additional surgery</td>
</tr>
<tr>
<td>• Most patients lose weight rapidly and continue to do so until 18-24 months post-surgery. Although many patients regain some of their weight after 24 months, few regain it all</td>
<td>• Weight regain can occur if not compliant with lifestyle changes</td>
</tr>
<tr>
<td>• Blood sugar levels for most patients with adult onset diabetes (type II) improve quickly</td>
<td>• Nutritional deficiencies such as anemia, osteoporosis, and metabolic bone disease if not compliant with daily nutritional and dietary supplements</td>
</tr>
<tr>
<td>• Improved life expectancy by 89%. Improves or eliminates most obesity related conditions such as high blood pressure, high cholesterol, and sleep apnea</td>
<td>• Dumping syndrome – caused by stomach contents moving too rapidly through the small intestine</td>
</tr>
<tr>
<td>• Less osteoarthritis pain and improved mobility</td>
<td>• Other possible post-surgical complications include blood clots in the legs, bleeding, breathing problems, heart attack of stroke during or after surgery, infection, stoma stenosis, stricture, ulcers, obstruction, incisional hernia, and death (mortality rate 0.1%*)</td>
</tr>
<tr>
<td>• Improved mood and self-esteem</td>
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## BENEFITS AND RISKS OF SLEEVE GASTRECTOMY

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>RISKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Performed laparoscopically</td>
<td>• Nutritional deficiencies such as anemia, osteoporosis, and metabolic bone disease if not compliant with daily nutritional and dietary supplements</td>
</tr>
<tr>
<td>• Like other weight loss surgeries, improves or eliminates most obesity related conditions such as high blood pressure, high cholesterol, sleep apnea, diabetes, arthritic pain, mood and self-esteem.</td>
<td>• Other possible post-surgical complications include infection, gastritis, heartburn, injury to the stomach, intestines or other organs during surgery, leaking from the staple line, scarring inside the belly, bleeding, delayed gastric emptying, ulcers, blood clots, and death (mortality rate of 0.19%*)</td>
</tr>
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→ Note: It is important to know that these surgeries cannot be completely reversed. The decision to have this procedure must be made in consultation with your surgeon, and a very careful consideration of the potential benefits and risks, and the lifelong consequences.
BENEFITS AND RISKS OF ADJUSTABLE GASTRIC BANDING

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>RISKS</th>
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<tr>
<td>• Considered the simplest of weight loss surgeries, is done laparoscopically</td>
<td>• Vomiting</td>
</tr>
<tr>
<td>• Usually outpatient procedure with minimal recovery time</td>
<td>• Complications from band, such as the gastric band eroding through the stomach, the gastric band slipping partly out of place, reaction to “foreign object”, infection in the port, injury to the stomach, intestines, or other organs during surgery, and scarring inside the belly</td>
</tr>
<tr>
<td>• Is removable, but not simple and weight gain is expected</td>
<td>• Risk for gastritis, heartburn, stomach ulcers, esophagitis or gastroesophageal reflux disease (GERD)</td>
</tr>
<tr>
<td>• Gradual weight loss, less risk for formation of gallstones</td>
<td>• Risk of esophageal dilation (possibly requiring surgical procedure)</td>
</tr>
<tr>
<td>• Like other weight loss surgeries, improves or eliminates most obesity related conditions such as high blood pressure, high cholesterol, sleep apnea, diabetes, arthritic pain, mood and self-esteem.</td>
<td>• Possible nutritional deficiencies if not compliant with daily nutritional and dietary supplements</td>
</tr>
<tr>
<td></td>
<td>• Other possible post-surgical complications include infection, outlet obstruction, gastric perforation or tearing, bleeding and death (mortality rate of 0.02%*)</td>
</tr>
</tbody>
</table>

*According to May 2013 data from ASMBS

EXPECTED WEIGHT LOSS/RESULTS

Bariatric surgery can successfully start patients on the road to recovery from clinically severe obesity, but surgery alone will not ensure long-term success. Weight loss surgery should be thought of as a tool to make dieting and exercise more effective. In order to lose weight effectively and in a healthy manner, patients must make necessary lifestyle changes, including learning about nutrition to make healthy food choices and developing routine exercise patterns.

There is no amount of weight loss that is guaranteed. Weight control is the personal responsibility of the patient.
Not all pre-existing medical and psychological conditions, including eating disorders, will improve with weight loss surgery. This is “stomach” surgery, not “brain” surgery. Abnormal eating patterns, including binge eating, night eating, grazing, and other loss-of-control eating patterns are quite common in bariatric surgery candidates. During the preoperative phase, we encourage you to examine what and why you are eating. This can help you to identify triggers to overeating and problem solve alternative coping methods. You can also discuss these triggers and coping methods with the psychologist during your preoperative evaluation. It is important to address these eating patterns prior to surgery to have the best outcome long term.

Participation in support group and close follow-up with your Bariatric team, has been proven to increase overall weight loss and prevent complications. However, success depends entirely on major lifestyle changes including increased activity and appropriate food selection. Weight loss surgery is only a helpful tool. A program of regular exercise is very important for promoting and maintaining weight loss. Many bariatric surgery candidates have negative beliefs about physical activity. These must be addressed before and after surgery to maximize weight loss. Studies have shown that patients who attend support group are more likely to exercise and have greater weight loss than those who do not attend.

There are several long term habits that successful patients can adopt. The pre-operative and first post-operative year is a critical time that must be dedicated to changing old behavior and forming new, lifelong habits. Patients should take personal responsibility for staying in control. Lack of exercise, poorly balanced meals, constant grazing and snacking, and drinking carbonated beverages are some of the basic causes of not maintaining weight loss. Regular attendance of support groups greatly increases patients’ compliance with the recommendations for optimal weight loss and maintenance.

Roux-en-Y Gastric Bypass patients can lose nearly half of their excess weight in the first 1-2 years and continue to lose weight after this point with diet and exercise. Average expected weight loss is 50-75% of excess weight at 5 years and 60% at 10 years post-op.

Patients who have had the Sleeve Gastrectomy have an average weight loss of 55% of excess weight within 3-5 years. People with lower BMIs tend to lose even more of their excess weight.

Weight loss with Adjustable Gastric Banding is gradual, with expected weight loss of 1 to 2 pounds weekly, until a desired weight goal is achieved. With proper diet and exercise, patients can expect to lose 40-50% of their excess body weight within 2-3 years of surgery.
POST-OP DIETARY GUIDELINES

After weight loss surgery, patients must carefully follow nutrition recommendations to ensure safe recovery and proper healing. The dietitian will provide you with detailed instructions depending on the type of surgery you and your surgeon have discussed. After the initial recovery from surgery -- with the help of your bariatric team, support groups and your own efforts - you can enjoy Bariatric friendly foods, but in much smaller portions.

Roux-en-Y Gastric Bypass

For the first 2-3 days after surgery (while still in the hospital), patients receive a clear liquid diet which is provided for hydration during the initial post-operative period. Patients usually go home on a full liquid diet, which is also essential in the continuation of pouch healing. Introducing semi-solid foods or a solid diet too early after surgery may lead to blockage, nausea and vomiting, and leaks. It may also unduly stress and irritate your pouch, causing a significant setback during the healing process.

The diet after surgery progresses from a full liquid/pureed diet to a soft solid diet and then a regular (modified) bariatric diet. The diet progression is designed to allow your body to heal. Initially, it will help you meet your protein and liquid requirements, and later, to assist you in meeting all your nutritional needs. It is imperative that you follow the diet progressions and adhere to this regimen to maximize healing and minimize the risk for unnecessary complications.

Pouch size

The initial size of your stomach pouch is about one ounce (or the size of a golf ball). At first your capacity will be somewhat limited, so be patient. You may find that two to three teaspoons of food fill you up. This is expected. You may also find that you are able to eat more of one type of food than another. That is okay, too. Over time, your pouch will stretch. By six months after surgery, it may stretch to eight ounces of 1 to 1 ½ cups. This will limit the amount of food you can eat at one time.

You will need to be aware of the volume of food that you can tolerate at one time and make health food choices to ensure maximum nutrition in minimum volume. A remarkable effect of Bariatric surgery is the progressive change in attitudes towards eating. Patients begin to eat to live – they no longer live to eat. As well, exercise must be part of your daily routine.
**Dumping Syndrome**

After the Roux-en-Y Gastric Bypass, it is critical that patients avoid foods which contain processed or refined sugar. Sugar will not only slow down your weight loss, but it can make you very sick, or cause Dumping syndrome. In short, “dumping” is when undigested sugars go directly from your stomach pouch into the small intestine without absorption, causing heart palpitations, nausea, light-headed or dizziness, abdominal cramping, and explosive diarrhea. Symptoms and duration may vary among patients. Avoiding processed sugar will eliminate the chances of experiencing nutritional deficiencies and unpleasant symptoms. To prevent Dumping Syndrome, check for processed or refined sugar by looking at the first three ingredients on all foods and beverages.

**Foods that may be difficult to tolerate early after Roux-en-Y Gastric Bypass would include:**
- Non-toasted breads, pasta and rice
- Tough protein sources
- Raw fruits and vegetables
- Peels/skins of fruits and vegetables
- Highly seasoned, spicy foods

**Foods which must always be avoided after Roux-en-Y Gastric Bypass:**
- High fat, protein sources (ribs, bacon, sausage, skin on chicken, etc.)
- High fat/fried foods
- Full fat diary
- High sugar foods and drinks

**Sleeve Gastrectomy**

For the first 2-3 days after surgery (while still in the hospital) patients receive a clear liquid diet, which is provided for pouch healing and hydration during the initial post-operative period. Patients usually go home on a full liquid diet, which is also essential in the continuation of pouch healing. Introducing semi-solid foods or a solid diet too early after surgery may lead to blockage, nausea and vomiting, and leaks. It may also unduly stress and irritate your pouch, causing a significant setback during the healing process.

The diet after surgery progresses from a full liquid/pureed diet to a soft solid diet and then a regular (modified) bariatric diet. After sleeve gastrectomy surgery, as with all bariatric procedures, the diet progression post-surgery is designed to allow your body to heal and meet your nutritional needs. It is imperative that you follow the diet’s
progression and adhere to this regimen to maximize healing and minimize the risk for unnecessary complications, such as leaks.

**Pouch Size**

The size of your stomach will vary depending on the surgeon. All surgeons use a tube to guide them when stapling the stomach. This tube size can vary from as small as 34 French Bougie (1-2 ounces) to as large as 64 French Bougie (6-8 ounces). This is a very important question to ask when considering this surgery, since those patients with larger pouches may have less weight loss.

At first your capacity will be somewhat limited, so be patient. You may find that two to three ounces of food fills you up. This is expected. You may also find that you are able to eat more of one type of food than another. That is okay, too. Over time, your food pouch will stretch. By six months after surgery, it may stretch to eight ounces or one cup. Long term, the size of your pouch is likely to be eight to twelve ounces or 1 to 1 ½ cups. This will limit the amount of food you can eat at one time.

You will need to be aware of the volume of food that you can tolerate at one time and make healthy food choices to **ensure maximum nutrition in minimum volume**. A remarkable effect of Bariatric surgery is the progressive change in attitudes towards eating. Patients begin to eat to live – they no longer live to eat. As well, exercise must be part of your daily routine.

**Foods that may be difficult to tolerate early after Sleeve Gastrectomy** would include:

- Non-toasted/doughy breads, pasta and rice
- Tough protein sources
- Raw fruits and vegetables
- Peels/skins of fruits and vegetables
- Highly seasoned, spicy foods

**Foods which must always be avoided after Sleeve Gastrectomy:**

- High fat protein sources (ribs, bacon, sausage, skin on chicken, etc.)
- High fat/fried foods
- Full fat dairy
- High sugar foods and drinks
Adjustable Gastric Banding

After adjustable gastric band surgery, the diet progression is designed to allow your body to heal and meet your nutritional needs. It is imperative that you follow the diet's progression and adhere to this regimen to maximize healing and minimize the risk for unnecessary complications.

For the first 24 hours after surgery, patients receive a clear liquid diet, which is provided for pouch healing and hydration during the initial post-operative period. Patients usually go home on a full liquid diet, which is also essential in the continuation of pouch healing. Introducing semi-solid foods or a solid diet too early after surgery may lead to blockage, nausea and vomiting. It may also unduly stress and irritate your pouch, causing a significant setback during the healing process.

The diet after surgery progresses from a full liquid /pureed diet to a soft solid diet and then a regular (modified) bariatric diet. The diet progression is designed to allow your body to heal. Initially, it will help you meet your protein and liquid requirements, and later, to assist you in meeting all your nutritional needs. It is imperative that you follow the diet progressions and adhere to this regimen to maximize healing and minimize the risk for unnecessary complications.

After about 3-4 weeks, follow up with your surgeon usually includes a band adjustment ("fill"). At this time, you will be given special diet instructions on how to gradually progress your diet to reduce post-fill swelling in the pouch.

Pouch Size

Your stomach size is dependent on many factors, including the amount of saline in your band. Close follow up with your surgeon will determine the frequency and amount of saline injected at the time of each band fill.

Small, nutritionally balanced meals are important for weight loss, as well as healing and avoiding complications, such as nausea and vomiting from stretching your stomach pouch. Remember, your stomach can only hold about one-half of a cup of food, or four ounces, at a time. Stop eating when your hunger is gone or when you feel comfortable.

You will need to be aware of the volume of food that you can tolerate at one time and make healthy food choices to ensure maximum nutrition in minimum volume. A remarkable effect of Bariatric surgery is the progressive change in attitudes towards eating. Patients begin to eat to live – they no longer live to eat. As well, exercise must be part of your daily routine.
Don’t Panic!

Initially after Adjustable Gastric Banding you may feel like there is fluid in your band. This sense of restriction is due to the initial swelling caused by having a band around your stomach. Over time, as the weeks progress, you may find that your portions of food have grown. Try not to let this panic, scare or discourage you. It is very normal for patients to feel good restriction initially after surgery and it go away after a week or two. This is your pouch healing, which means the swelling in your pouch is going down. Stay focused on the nutrition guidelines in respect to the progressing stages of your diet and all will be well.

With each adjustment, your portions of food will become less and less (to total half cup). At this time, your eyes and pouch will need some time to connect. Because your pouch will eventually grow significantly smaller, you will feel satisfied with much less. It is critical that you listen and trust your body’s signals of fullness – try not to let your eyes do that for you.

Food Tolerance

As each diet stage progresses, be cautious when introducing tough or fibrous foods back in to your diet. You may find that some foods are best tolerated when introduced after a significant amount of time.

Foods that may be difficult to tolerate early after Adjustable Gastric Banding would include:
- Non-toasted breads, pasta and rice
- Tough protein sources
- Raw fruits and vegetables
- Peels/skins of fruits and vegetables

Foods which must always be avoided after Adjustable Gastric Banding:
- High fat protein sources (ribs, bacon, sausage, skin on chicken, etc.)
- High fat/fried foods
- Full fat dairy
- High sugar foods and drinks
Vitamin and Mineral Supplementation after Bariatric Surgery

After any weight loss surgery, the small pouch does not allow you to eat enough food to meet your nutritional needs. Therefore, it is essential that you take a complete multivitamin and additional Calcium citrate for the rest of your life in order to achieve optimal post-operative nutrition. Gastric bypass and Sleeve gastrectomy patients may also need to take additional Iron and Vitamin B12.

Establishing Balance

It is common to see some variation from program to program related to nutrition. Most programs agree that the primary source of nutrition should be protein - 75 grams of protein per day. Protein drinks are recommended to help fulfill your protein requirements. Seventy percent (70%) of all calories consumed should be protein based (eggs, leans meats, poultry and fish, etc). Carbohydrates (bread, potatoes, corn, peas, etc.) should make up only 10- 20 %, and fats (butter, cheese, etc.) only 5-15 % of the calories that you eat. A diet consisting of 600 to 800 calories should be the goal for the first 6 months.

Preventing Weight Regain

To maintain a healthy weight and to prevent weight regain, you must develop and keep healthy eating habits. Ultimately, you are in control of the tool provided to you at the time of surgery. It is very important to always make sure you optimize your tool to prevent weight regain in the future. How diligent you are with working your tool will determine the amount of weight kept off several years down the road.

Patients tend to struggle with weight regain by slipping back into the following habits:

- Eating and drinking together at meals and snacks; thus causing the consumption of larger portions and a lack of prolonged fullness.
- Grazing; not eating 3 well balanced, designated meals consisting of a lean protein.
- Regularly consuming ‘slider foods’ (soups, shakes, mashed potatoes, etc.)
- The consumption of sugar, high fat/fried “junk” foods, or drink high-calorie beverages.
- Lack of physical activity.
- Lack of taking personal responsibility for staying in control by not regularly attending Support Group meetings, avoiding routine follow-up visits with the surgeon, Bariatric Coordinator and Dietitian.
Nothing Tastes Sweeter than Success!

Below are the top ten ways to ensure long-term success and prevent weight regain.

1. **Remember “protein first”**. At mealtimes, eat protein foods first before any other food. Concentrate on eating protein rich foods such as lean meat, fish, low fat cheese, eggs, and poultry. Again, 75 grams of protein is recommended. You will need to take a **protein supplement** to ensure you are meeting the daily requirement for proper post-operative nutrition.

2. **Avoid all liquids 30 minutes before, during and after all meals and snacks**. Drink fluids 30 minutes before the meal, then wait at least thirty minutes after meals before resuming fluids to prevent pouch stretching, vomiting and irritation.

3. **Eat slowly, savoring your food**. Take the time to eat without feeling rushed or stressed as hurried eating may cause pouch irritation. Learning about “Mindful Eating” may be helpful. Stop eating when feeling slight pressure or discomfort in chest (pouch area).

4. Always **cut food into small pieces** and **chew food very well** to prevent blockage and/or vomiting.

5. **Avoid sugar and high fat foods**! All sweets, such as cakes, candy, cookies and high-sugar beverages must be avoided to prevent excessive calorie consumption, ultimately stopping weight loss. Also be sure that all foods, including dairy, are low fat/reduced fat or light to prevent excessive calorie consumption and slowing or stopping weight loss.

6. **Sip liquids slowly**, drinking at least 8 oz every hour between meals to total 64 ounces per day to avoid dehydration.

7. **Carbonated, caffeinated and sugary beverages should be avoided**.

8. **Avoid alcohol** as it is high in calories and extremely irritating to the pouch - it may cause ulcers. It is important for patients who have had Gastric bypass to avoid alcohol -- intoxication can occur with less quantity and you can stay intoxicated longer.

9. **Be consistent with vitamin and mineral supplementation**. Take a multivitamin and calcium every day.

10. **Routine follow-up** with multidisciplinary staff (Surgeon, Nurse, Dietitian, etc.) is crucial for prevention of complications and long-term weight loss success.