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Surgical Solutions for Obesity and Weight Management ~ A Team Effort

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Regardless of the procedure selected the most important thing is that the surgeon is only one part of the cure, patients must learn to control their diets and lifestyles. The success of these procedures is predominantly seen within the first two years, where considerable weight loss averages out to 60 percent. This is a life altering decision and should be supported by the foundation of a trained surgeon, psychological support and an educated and motivated patient.

Rather than for cosmetic and vanity issues, bariatric surgery is a therapeutic weapon for weight reduction, especially when one's health is at risk. The largest food problem in the world ceased to be malnutrition. Today, the problems of overweight and obesity appear to have soared according to the statistics of the World Health Organization (WHO), which estimates that by 2015, the obese population will exceed 230 million adults.

The root of the cause lies in the imbalance found in diets dominated by hyper caloric consumption of food rich in fat and sugar, lacking vitamins, minerals and other nutrients necessary for a balanced diet. In addition, the sedentary nature of many jobs put us away from the cardiovascular benefits of physical activity.

This situation has led to obesity becoming a disease in America and around the world. The Association of Nutritionists and Dietitians of El Salvador say that due to poor nutrition around 53.9 percent of women are overweight. The largest problem however, is when a person loses control of food and eating habits transcend the boundary of overweight to fall into the category of morbid obesity, a dangerous condition that is accompanied by cardiac diseases, hypertension, and diabetes, among other threatening life pathologies.

There are surgical solutions for this problem known as bariatric surgery. The first step is a thorough medical assessment of the magnitude of the obesity, the presence of complications, and failure of conventional treatments. Bariatric surgery is aimed at weight loss and is based on three processes that involve two non-surgical techniques such as the Intragastric balloon placement, and surgical techniques known as Sleeve Gastrectomy, Adjustable Gastric Band and Gastric Bypass.

Intragastric Balloon

This is one of the most popular procedures for being an outpatient procedure and consists of introducing a silicone ball through the mouth of the patient. Once inside the stomach it is inflated with air or filled with liquid in order to produce the effect of fullness. The medical indications for the Intragastric Balloon are having mild to moderate obesity or morbid obesity with a high surgical risk. In these cases, the Intragastric Balloon is advantageous because it helps the patient to reduce their weight and then undergo a final procedure. The Intragastric Balloon does not require hospitalization or general anesthesia. It is a relatively quick procedure and placement takes about 25 minutes. Among the disadvantages of this procedure is the length of time the balloon can be left inside the stomach, it should not remain more than six months because the stomach acids could damage the coating and increases the risk of balloon perforation. Furthermore, the success rate in weight reduction is not as high as the rate for surgical procedures and also requires a stricter diet and exercise. Another drawback is that in order to remove the balloon it is necessary to remove all the liquid and then remove the balloon. The process takes about one hour and is preferably performed under general anesthesia for greater protection of the airways.

Surgical Options

The Sleeve Gastrectomy and the Adjustable Gastric Band along with the Gastric Bypass have precise indications and the patient needs to meet certain criteria in order to undergo these procedures. Body Mass Index (BMI) must be at least 35 with co-morbidities or BMI of 40 with or without co-morbidities (Hypertension, Diabetes, Joint problems, high cholesterol and high triglycerides, and sleep apnea among others).

Gastric Sleeve

This is a relatively new procedure and the stomach is cut in the form of a tube, like a sleeve. The goal is weight loss and

eliminates the anxiety over food. This procedure consists of reducing the size of the stomach to 85 percent of its original size. It operates under two mechanisms:

1. Reducing the size of the stomach. This causes an early satiety with little food intake by having a smaller stomach.

2. It removes a part of the stomach that is responsible for producing hormones called Ghrelins. These hormones are responsible for sending signals to the brain, which manifest into hunger.

The advantages of this surgery are that it is fast, simple and is done laparoscopically. Fast recovery time and the rate of complications is minimal. For the patient's security there is no alteration in the normal transit of food or absorption and consumption of vitamins and minerals for life is not required. Moreover, the gastric sleeve has the potential to become a gastric bypass in the future if the patient fails to achieve the established weight loss. The other advantage is that no foreign bodies are placed in the body. It has the same long term results as the "Gold Standard" which is the Gastric Bypass.

Gastric Bypass

The Gastic Bypass has the same indications as the Gastric Sleeve, and has the best success rate in terms of weight loss. The surgical technique is to cut the stomach in order to leave a small bag, yet smaller than a gastric sleeve, where there is only space for an average of 25 to 30 cubic centimeters of food or liquids. The Gastric bypass works two ways. By reducing the size of the stomach the patient eats less. The other mechanism is that we make a connection with the small intestine and the food bypasses a part of the intestine (the duodenum) and passes below with less absorption of fat or carbohydrates. By diverting the passage of foods through the duodenum, this prevents the firing mechanism of insulin resistance, creating an added advantage for type 2 diabetic patients.

Gastric Band

This procedure consists of a Silicone band that is placed around the stomach. This ring is placed on the highest part of the stomach and is connected through a small catheter to a valve under the skin and its only mechanism is to allow less food to pass to the stomach. It's a quick procedure and offers a less strenuous recovery period. As for the cons, the fact that it is an obstruction mechanism and having a foreign body present cause infections associated with the band or the valve. It can also cause other problems such as expansion, an enlarged stomach in some cases due to the pressure, and discomfort of reflux is frequent as well.

What Should You Know Before Surgery?

Surgical treatment of obesity is a major surgery. Although most patients benefit from an improvement in their health conditions related to obesity (such as mobility, self-image and self-esteem) after the success of a weight-reduction surgery, this should not be the primary motivation to undergo the procedure. The goal is to have a healthier and longer life. This is why one should make a decision only after doing the research and having a consultation with an experienced physician or bariatric surgeon. A qualified surgeon should answer your questions clearly and explain the exact details of the procedure. It is imperative that the patient understand the recovery period and the post-operative care required. As part of the routine assessment of the weight reduction surgery, your physician may ask you to consult a dietitian or nutritionist and a psychiatrist or therapist. This will help establish a clear understanding of postoperative behavioral changes that are essential for long-term success. It is important to remember that there is no absolute guarantee in any kind of medical or surgical procedure. Even in what seem simple procedures unexpected results may vary. In terms of the surgical treatment for obesity, the procedure is only successful when patients acquire a commitment for life. This surgery is only a tool. Their ultimate success depends on strict adherence of the recommended regimen of diet and exercise, and changes in one's lifestyle. On average patients remain in the hospital for approximately one to four days depending on the procedure to be performed. In general, the patient is discharged when:

- Patient is able to take sufficient fluids and nutrients by mouth to prevent dehydration.
- Patient does not have a fever.
- Patient has an adequate pain control with medication.
- Patient does not have complications.

Diet

The changes made to the gastrointestinal tract require a permanent change in eating habits in order to ensure weight loss success. The instructions vary according to each surgical dietary surgeon. It is important to remember that not all surgeons perform exactly the same surgical procedure for weight reduction and diet instructions differ for each surgeon as well. The important thing is to adhere strictly to the recommendations of your surgeon. The following is an example of the dietary instructions for patients following weight reduction surgery:

- When you begin to eat solids it is essential to chew well. You cannot eat steak and other cuts of meat if it is not crushed, and if it is not chewed thoroughly.
- Do not drink liquids with food that will make you feel satiated before a meal.
- Avoid eating sugary desserts and other foods where sugar appears as one of the first three ingredients.
- Avoid soft drinks, nutritional supplements high in calories, milk shakes, foods high in fat and foods high in fiber.
- Avoid alcoholic beverages.
- Limit consumption of snacks between meals.

Returning to Work

The patient's ability to resume their job after the surgical procedure depends on their physical conditions, the type of work and the type of weight-reduction surgery performed. Many patients return on average in the period of one week after the procedure.

Bases of Surgical Treatment

The best way to achieve an effective reduction of long-term weight in patients with morbid obesity is surgery. It is not referred to as a cosmetic procedure, by contrast, bariatric surgery is defined as a procedure that reduces the size of the gastric reservoir, with or without an intestinal bypass. This surgery reduces the caloric intake and helps patients alter their eating habits enabling them to eat slowly and in smaller quantities. It took over 30 years to find the best surgical procedure. Prevention of secondary complications of morbid obesity is a major objective of its management. Hence, the surgical option it's a rational choice based on the principle that this is less dangerous than the disease itself.

Patient Selection

Surgical treatment should be offered to patients with morbid obesity, well informed, motivated and with an acceptable operative risk. The patient should be able to participate actively in the management and long term monitoring. Some patients

with mental disorders should be excluded. Choosing surgery requires an assessment of risks and benefits for each case.

Patients with a BMI above 40 are candidates for surgery if they are convinced in reducing their weight, because obesity has damaged their quality of life and understand how their life can change after the surgical procedure. In certain patients with less obesity and BMI between 35 and 40 may also be considered for surgery. For example, patients with a high risk of disease have been diagnosed with conditions such as cardiopulmonary problems, sleep apnea, Pickwick syndrome, obesity-related cardiomyopathy, or Type 2 Diabetes.

The overall care of patients undergoing bariatric surgery require programs that involve both the preoperative management and long-term monitoring. A thorough pre-operative evaluation is essential for lowering risks. The patient should be clear about the risks, complications and real benefits and long-term consequences of the procedure. The surgeon should be prepared for the diagnosis and management of complications and the management of morbidly obese patients in terms of having the technology, equipment and adequate staff. That is a management team that includes internal medicine, dietary instructors, an exercise program, among others. The operations and procedures that are performed more frequently are: Intragastric Balloon, Gastric Sleeve or Sleeve Gastrectomy, Gastric Bypass and Adjustable Gastric Band. Virtually all bariatric surgeries can be performed by laparoscopic surgery. For safety and effectiveness it requires not only the surgical skills but also to have the appropriate technology. It is therefore of great importance that the surgeon has advanced training in laparoscopic surgery. Finally, these procedures require a surgical team familiar with these techniques and mastering the use of instruments and equipment used in bariatric surgery. Morbid obesity is a major health problem. Bariatric surgery is the only alternative that maintains an effective reduction of weight. Laparoscopic techniques, based on open surgery are available. Performed by trained surgeons, it has excellent results. It is important to have experience and training in bariatric surgery to achieve these results, advanced laparoscopic skills, and a protocol for monitoring the long-term results.

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