Know and Understand the Surgical Treatments for Severe Obesity

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The rapid increase in obesity in the United States and the world is often described as an epidemic, and the numbers are indeed staggering. It is estimated that nearly two in three adults are overweight, nearly one in three adults are obese, and 5% of the population can be described as being morbidly (or severely) obese (typically at least 100 pounds above their ideal body weight). Furthermore, the number of individuals in that last category has quadrupled over the past 14 years. This profound increase is thought to be due to a complex interaction of genetic, environmental, and social factors, and despite significant efforts being made in areas of prevention, particularly amongst children and adolescents, there are no signs that the epidemic is getting under control.

It is important to understand how scientists and physicians define and measure obesity. Obesity is defined as having an excess of fat, or adipose, tissue. There are several complex and often inconvenient ways to measure the different components of body composition such as fat and lean body mass, but the most practical means to measure obesity in the vast majority of the population is by the use of the body mass index, or BMI. This is derived by combining a person’s height and weight in a mathematical formula resulting in a number that gives a reasonable estimate as to the amount of fat tissue for that individual’s height. A normal BMI is between 20 and 25. A person is considered obese if their BMI is greater than 30. Severe obesity is characterized by a BMI of greater than 35, and is typically associated with a weight at least 100 pounds over ideal body weight.

Obesity is associated with an increased risk of dying prematurely, and this risk increases as the severity of obesity increases. It has recently been estimated that at least 250,000 deaths per year are attributable to obesity, and a recent study has suggested that a young severely obese man may have at least a ten-year reduction in life expectancy. Furthermore, obesity is associated with a long list of serious medical problems, including, but not limited to diabetes, high blood pressure, obstructive sleep apnea, high cholesterol, arthritis, acid reflux, and asthma.

Fortunately, many of these problems can be improved, if not cured, by significant and sustained weight loss. Unfortunately, for the vast majority of patients (at least 95%), behavioral modification, diet therapy, prescribed exercise regimens, and drug treatments fail to result in
significant and sustained weight loss, and are even less effective for people who are severely obese. It is difficult enough to lose, and keep off, 15, let alone 150, pounds. Surgical treatment of obesity (also known as bariatric surgery) has been shown to be the only effective means to achieve significant long-term weight loss. Less appreciated by many physicians, as well as the public, is the often significant improvement, or even cure, of many of the medical problems associated with obesity mentioned earlier, particularly diabetes.

A person is a potential candidate for obesity surgery if they have:
1. Failed prior weight loss attempts, preferably under the supervision of their primary care physician.
2. Have a BMI >40 or between 35 and 40 if they also have severe obesity-related medical problems.

Additionally, quality surgical programs utilize a team of specialists including surgeons, nutritionists, and psychologists to evaluate patients. This is done to ensure that patients are appropriately motivated, comprehend the procedures and the post-op dietary requirements, and are willing to be compliant with post-operative diet and follow-up.

The number of surgical procedures performed for the treatment of severe obesity has increased nearly 10-fold over the past decade, in part because of the increase in individuals eligible for obesity surgery as well as media attention on the subject, but also due to the development of minimally-invasive, or laparoscopic, techniques that are associated with less pain, shorter hospital stay, quicker recovery and return to work, and fewer wound and lung complications. Despite this increase, less than 1% of patients potentially eligible for obesity surgery based on BMI criteria actually undergo surgery.

It is important to understand that there are several different effective surgical procedures currently being performed in significant numbers to treat severe obesity. These include Roux-en-Y gastric bypass, adjustable gastric banding, and the duodenal switch. Each of these operations has specific benefits, risks, and success rates which should be discussed with the surgeon during evaluation. It is particularly useful to have this discussion with a surgeon who performs at least two, if not all three, procedures, as it is less likely that the procedure will be recommended based on the surgeon’s lack of experience with the other operations. Indeed, there is no single operation that is the best operation for all patients in all circumstances. Instead, the choice of operation should be individualized for the patient based on the severity of obesity, accompanying medical problems, and patient preference. At the same time, it important to recognize that all bariatric procedures are tools to lose weight, rather than cures, and like all tools, need to be used properly in order to be effective.

The Roux-en-Y gastric bypass, adjustable gastric banding, and the duodenal switch all have differing mechanisms of action. The first two operations work primarily by restriction of caloric intake, while the duodenal switch provides moderate restriction in combination with a reduced ability to absorb some of the calories ingested (a property known as malabsorption). In reality,
there are additional mechanisms by which these operations work, including alterations in hormones to the brain and the gut that signal hunger, appetite, and fullness.

In addition to selection of the most appropriate operation, another significant factor in the success of bariatric procedures is the experience of the surgeon performing the procedure and the hospital at which the procedure is performed. Several studies have suggested that complications and death rates are higher early in a surgeon’s experience, particularly with laparoscopic techniques. Furthermore, hospitals where bariatric surgeries are frequently performed have been shown to have fewer complications and lower mortality rates as well. It is mandatory that the patient ask about complications and mortality statistics specific to his or her surgeon as well as the institution.

Follow-up care after bariatric surgery is a life-long process, and is at least as important as the success of the operation itself. I like to tell patients that I will only accept half the credit for the weight loss and health improvement that they achieve – the other half is due to the decisions that they make several times a day every day for the rest of their lives with regards to healthy eating, exercise, and keeping up with follow-up visits.

To learn more about Dr. Vivek N. Prachand, visit: 
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