# ASK DR. BOB

## BARIATRIC SURGERY

**When I was a resident in Internal Medicine there was a prominent surgeon who, when consulted on an obvious surgical case such as acute cholecystitis, would simply write on the consult page "HSWC." This stood for "have scalpel will cut." Surgery is an easy and proper decision when faced with such clear cut circumstances. However, surgery may not be as clear when it comes to the surgical treatment of obesity. Obesity is defined as a BMI of 30 or more. As everyone knows from the media, it has reached epidemic proportions in the United States, effecting approximately 30% of adults. It leads to an increased incidence of hypertension, diabetes, coronary artery disease, degenerative arthritis, and a wide variety of other ailments. Annual direct costs for treating obesity-related medical illnesses have been estimated at nearly $50 billion. In the U.S., annual expenditure on direct weight reduction methods exceeds $30 billion per year.**

There is a subset of obesity referred to as morbid obesity, which has been defined as a BMI of 40 or greater or weighing more than 100% above ideal body weight. Mortality rates in the morbidly obese have definitely been shown to be increased from 6 to 12 times higher depending on the person's age. In the past, dietary measures to reduce weight have overall not been successful, especially so in the morbidly obese.

As a result, over the years surgeons have devised methods to try and treat weight loss with other than dietary manipulation. More than 30 years ago, a balloon device was devised that could be placed in the stomach, limiting how much a person could eat. This could be considered a gastric obstructive device. Enthusiasm was great, but it had to be removed from the market after several years because of frequent rupture or movement of the balloon. Complete gastric bypass was also developed years ago, but was abandoned because of a high rate of side effects and complications after the bypass.

In more recent years, there has been a resurgence of bariatric surgery to control obesity. There are now three standard operations performed for weight control. The first is the stapled gastroplasty. In this operation, the stomach is partitioned with staples, creating a small capacity upper stomach pouch with a small calibrated outlet that leads out of the stomach into the rest of the intestine. This is a gastric restrictive type of surgery.

The next operation is that of gastric banding. In this surgery a prosthetic device to restrict oral intake is positioned around the outside of the stomach. This results in a small pouch in the stomach, similar to the gastroplasty. They now have inflatable bands that can be used rather than the original solid bands. Weight loss with gastric banding has been less consistent than weight loss after gastroplasty.

The third operation is the new gastric bypass surgery, which is referred to as the Roux-en-Y gastric bypass. In this operation, a stapler is used to create a pouch in the upper portion of the stomach, which is then connected to a piece of the small intestine that has been severed from its normal connection. The proximal small intestine just beyond the duodenum is then anastomosed in a side to side fashion with the rest of the small intestine. The gastric bypass procedure combines gastric restriction with some degree of sub-clinical malabsorption.

Early weight loss esults after banded gastroplasty or gastric bypass surgery has been acceptable, with losses usually approximating 60% of body weight. Overall, there is approximately 1% perioperative mortality rate.

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It has been shown that with significant weight loss, there can be amelioration of many of the medical complications of obesity. This includes improvement in blood pressure control, diabetes control (which can even completely disappear), and lipid parameters.

However, what really counts in bariatric surgery is the long-term control of the weight problem, not what happens in the first 1 – 5 years. A large study was published in the December 2004 the New England Journal of Medicine. This article looked at lifestyle, diabetes, and cardiovascular risk factors 10 years after bariatric surgery. They had 1,703 individuals who had been followed for at least 10 years. They also compared the surgical patients to a group of control individuals who did not have surgery. At 1 – 2 years after surgery, the banding and vertical gastroplasty individuals had lost an average of 25% of their weight, while the gastric bypass individuals had lost 35% of their weight. However, over the next 8 years, all three surgical groups had regained approximately 5 – 10% of the weight back. However, this was still much better than the control group who did not have surgery. To the control group, the weight was noted to increase by 1.6% over the years despite diet. The authors also showed that at 2 and 10 years out from surgery, recovery from diabetes, elevated cholesterol and lipids, and high blood pressure was improved. Their conclusion was that in comparison with conventional dietary treatment, bariatric surgery appeared to be a viable option for the treatment of severe obesity, and resulted in long-term weight loss, improved lifestyle, and overall amelioration in various risk factors that were present at baseline.

In all types of surgery, long-term patient compliance is necessary. These pouches can stretch and increase in size. This means the person can now eat more. In addition, frequent feedings of high caloric intake can also cause weight gain even with a properly functioning pouch. The person who has this surgery must develop a whole new lifestyle. This lifestyle consists of regular exercise as well as proper eating habits. It is likely that more of these types of operations will be performed in the future. Because of the perioperative morbidity and mortality, an individual should not consider surgery except as a last resort after numerous failures with standard dietary manipulation. Even after dietary failures, an individual must be highly motivated to enable him to maintain the lifestyle that will keep the weight off. It will be interesting to see what longer term results may have in the future.

I would be happy to discuss bariatric surgery. Please feel free to call me with any questions that you may have.