

Bariatric



Dr. Saeed Ahmad Qureshi
FRCS (Glasgow) FRCS (London)
Bariatric Surgeon

Different Surgical Options for the Treatment of Obesity

Surgery

Obesity is a medical condition that is a rapidly growing threat across the globe. Currently, Obesity is the leading preventable cause of death worldwide, and due to the increasing rates of obesity among adults and children, it is now considered to be one of the major public health problems of the 21st century. In the US, according to the National Health and Nutrition Examination Survey 2001 to 2004, approximately 1/3rd of adults are considered to be obese.

What is Obesity?

Obesity occurs when the fat levels in the body exceed healthy limits. Healthy limits for fat are between 15 and 22 percent of body weight for men and between 18 and 32 percent for women. Body Mass Index or BMI is a simple and fairly accurate method of measuring body fat mass. The ideal BMI for the average adult is between 19 to 25. Once a patient's BMI reaches 30, they are considered to be obese, and morbidly obese at above 40. A patient's BMI can be determined using the following formula:

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m)} \times \text{Height (m)}}$$

While a patient's genetic tendencies do have an influence, the obesity epidemic is due mostly to the changes taking place in the society. The loss of traditional lifestyles due to increased urbanization and industrialization have led to more sedentary lifestyles and diets that are simply too high in fat and calories. In addition, according to a report published by the World Health Organization, 60% of the world's population does not get sufficient exercise.

Complications of Obesity

Obesity Increases the risks of many physical and mental conditions. The most common co-morbidities include:

- Diabetes
- Hypertension
- Coronary artery disease
- Stroke
- Cancer (especially of the breast, Uterus, prostate, and colon, etc.)
- Arthritis and joint pain
- Gall Bladder diseases
- Digestive disorders

- Breathing difficulties & snoring
- Urinary incontinence
- Infertility problems
- Depression

In addition to the health complications, there are personal and social complications as well. Some of them include:

- Tiring easy
- Decreased mobility
- Prejudice and discrimination, especially in the workplace
- Difficulty maintaining proper hygiene
- Difficulty forming and maintaining relationships
- Poor sex drive
- Low self-esteem

Surgical Treatment Options

When treating patients who are considered to be morbidly obese (BMI > 40), the traditional methods of weight loss (diet, exercise, and in some cases medication), normally do not yield permanent results. Most morbidly obese people end up suffering from the “yo-yo- syndrome” in which they constantly lose and regain weight, which leads to negative feelings, poor self-esteem, and a sense of failure. The most effective way to treat the morbidly obese is through bariatric surgery. The most common procedures are:

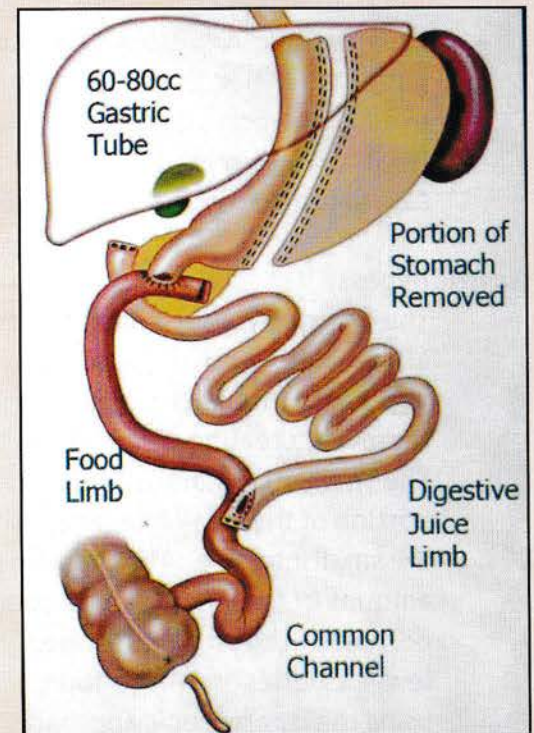
- Laparoscopic Adjustable Gastric Banding (Stomach Banding)
- Sleeve Gastrectomy
- Gastric Bypass
- Bilio-Pancreatic Diversion (BPD)

Laparoscopic Adjustable Gastric Banding (Stomach Banding):

The Laparoscopic Adjustable Gastric Banding procedure is the least invasive form of bariatric surgery, as there is not cutting of the stomach or rerouting of the intestines. This procedure is typically used on patients with a BMI of 35 and above or 32.5 and above if significant health problems exist. A silicon band is placed around the upper portion of the stomach, creating a small pouch. The patient is only able to eat a small amount as the upper portion fills up quickly, and creates a sensation of fullness. The food in the upper portion empties slowly through the constriction, and therefore he/she does not feel hungry for several hours. The band can be adjusted as needed until the patient reaches his/her desired weight. The amount lost depends on the patient's weight at the time of surgery, and how he/she is able to maintain healthy eating and exercise habits. Patients generally lose between 20kg to 100kg.

Sleeve Gastrectomy:

With this laparoscopic procedure, 80-85% of the stomach is removed without bypassing the intestines or causing gastrointestinal malabsorption. The small stomach creates a sense of fullness early, so that only a small amount of food can be eaten. This procedure is occasionally used as an alternative to the



BPD + Sleeve Gastrectomy



Dr. Saeed Qureshi & Prof. Scopinaro
BPD Specialist

Laparoscopic Adjustable Gastric Banding for lower weight patients (BMI < 60). Currently, the Sleeve Gastrectomy is used as the first stage of treatment for super obese patients (BMI > 60) to bring their weight down to a point where it is safe to proceed with the Gastric Bypass

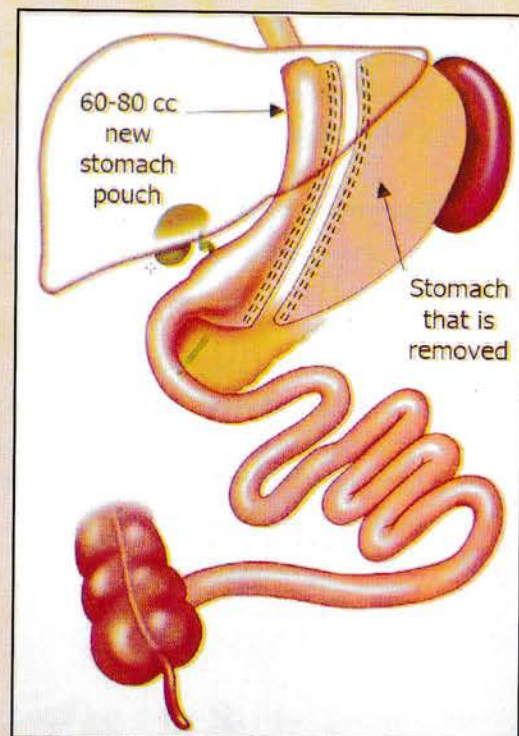
Gastric Bypass:

The Gastric Bypass is the most commonly practiced restrictive and malabsorptive procedure in the US, and is gaining popularity elsewhere. Approximately 80% of the stomach is removed, creating a small pouch at the top of the stomach. The smaller stomach is then connected directly to the middle portion of the small intestine, by passing the upper portion of the small intestine. The reduced size of the stomach limits the amount of food that can be consumed, and since the upper portion of the small intestine is bypassed, the body absorbs fewer calories from the food. This procedure is also done using the laparoscopic approach.

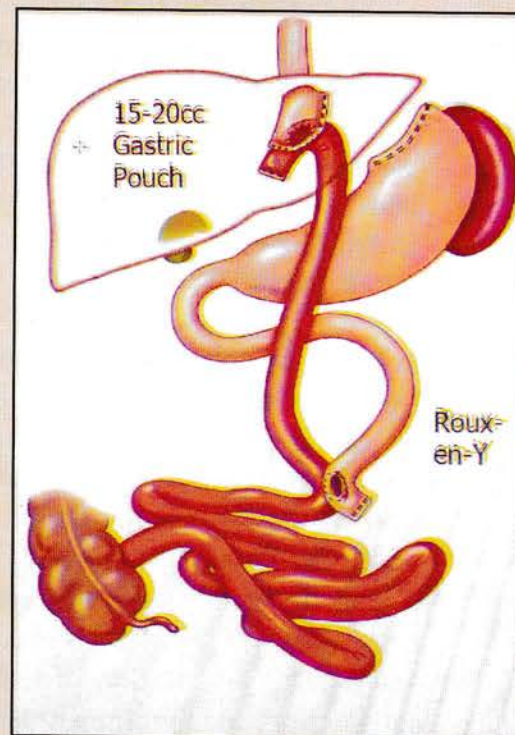
Bilio-Pancreatic Diversion:

This procedure was developed by an Italian surgeon by the name of Prof. Nicola Scopinaro. As with the Sleeve Gastrectomy and the Gastric Bypass, a significant portion of the stomach is removed, leaving a small pouch. The small pouch that remains is then connected directly to the final segment of the small intestine. As a result, the food that is consumed only passes through about 40% of the small intestine. In addition, the bile and pancreatic juices have only 1/10th of the normal time to digest the food before it enters the colon. The body is therefore only able to absorb approximately 25% of the fats, starches, and proteins consumed. This procedure is the most complex of the bariatric surgeries and is also used to treat metabolic disorders.

Bariatric surgery has proven to be very effective in treating morbidly obese patients. Choosing the right option depends on the needs of the patient, and all the benefits and risks of each procedure should be completely understood before making any decision. In addition, it is important that the patient understands the extensive dietary, exercise, and medical guidelines that must be followed for the remainder of their lives after having weight loss surgery.



Sleeve Gastrectomy



Stomach bypass