

Introduction

Obesity is a complex, multifactorial condition that affects millions of individuals worldwide. The rising rates of obesity are a significant concern for public health due to the associated risks of chronic diseases, including type 2 diabetes, heart disease, stroke, and certain cancers. While lifestyle interventions, such as diet and exercise, form the foundation of weight management, these strategies are not always effective for individuals with severe obesity. In such cases, bariatric surgery has emerged as a promising solution for achieving significant, long-term weight loss and improving overall health outcomes. Bariatric surgery encompasses a range of surgical procedures designed to help individuals with obesity lose weight by altering the digestive system.

This article explores the different types of bariatric surgery, their effectiveness, and the impact they have on obesity management [1].

Description

Bariatric surgery refers to a collection of surgical procedures aimed at helping individuals with severe obesity achieve significant weight loss. These surgeries work by either restricting the amount of food that can be consumed, altering the absorption of nutrients, or both. Bariatric surgery is typically recommended for individuals with a body mass index (BMI) of 40 or higher, or those with a BMI of 35 or higher who have obesity-related health conditions, such as diabetes or hypertension, that have not been successfully managed through diet and exercise [2].

The primary goal of bariatric surgery is not just to facilitate weight loss, but also to improve or resolve obesity-related health issues, such as diabetes, high blood pressure, and sleep apnea. These surgeries are considered only after other weight loss methods, such as diet changes and exercise, have proven ineffective.

Types of bariatric surgery

There are several different types of bariatric surgery, each with its unique approach to treating obesity. The most common procedures include:

Gastric bypass (Roux-en-Y Gastric Bypass): This procedure involves creating a small pouch from the stomach and rerouting a portion of the small intestine to this pouch. The small pouch limits the amount of food that can be consumed, while the rerouted intestine reduces the absorption of calories and nutrients. Gastric bypass surgery is highly effective for weight loss and has been shown to significantly improve or resolve conditions like type 2 diabetes [3].

Gastric sleeve (Sleeve Gastrectomy): In this procedure, approximately 80% of the stomach is removed, leaving behind a smaller, tube-like structure or "sleeve." The reduced stomach size limits food intake and helps patients feel full after consuming smaller portions. This procedure does not alter the small intestine, so nutrient absorption remains relatively intact, but the reduction in stomach size leads to significant weight loss.

Adjustable gastric band (Lap-Band): This surgery involves placing

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