

Practical Approaches to the Treatment of Severe Pediatric Obesity

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KEYWORDS

- Pediatrics • Severe obesity • Assessment • Pharmacotherapy
- Weight loss surgery • Behavior treatment

Pediatric obesity is a major public health threat. Obese children and adolescents are at increased risk for a wide range of medical and surgical conditions **Fig. 1**. These conditions may affect both their quality of life and life expectancy. The rapidly progressive nature of type 2 diabetes mellitus (T2DM) within the first 5 years of obesity diagnosis is particularly concerning. Because health risk increases with degree of obesity, it is crucial that one identify and counsel adolescents who may be eligible for more aggressive obesity treatment.¹

DEFINITION OF SEVERE OBESITY

Defining a child as obese is only useful if that definition helps to predict morbidity or mortality. Most complications of obesity are associated with body fat and not muscle mass. Using Body Mass Index (BMI, weight/height²), therefore, is a solid attempt at estimating adiposity. BMI is an adequate screening method at a population level.

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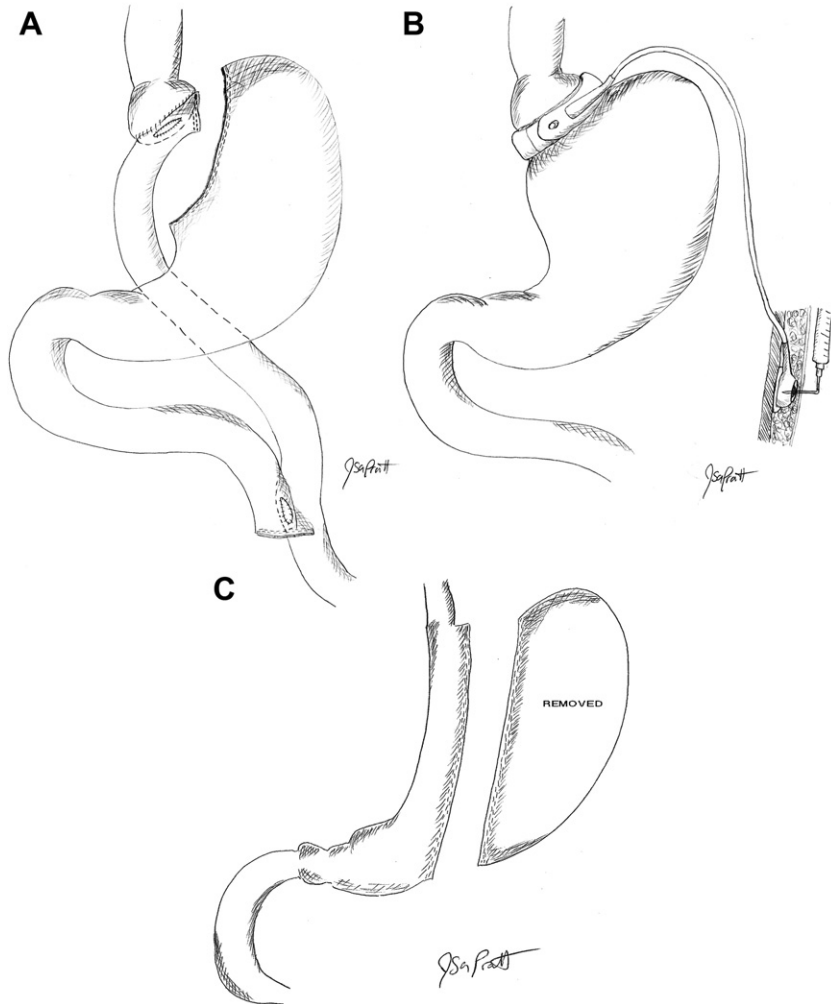


Fig. 1. Current weight loss surgery procedures. (A) The route -en-Y gastric bypass. (B) The adjustable gastric band. (C) The sleeve gastrectomy.

However, its strength as an indicator of pediatric adiposity decreases with younger children (birth to 12 years). There is also variation in BMI by ethnicity/race. Currently there is no valid measure to define children as having severe obesity.²

Barlow and the Expert Committee (2007) proposed to use a BMI cut off point at the 99th percentile among adolescents, which corresponds to a BMI of about 30–31 kg/m² for those 10 to 12 years old and a BMI of about 34 kg/m² for adolescents age 14 to 16 years, given its association with higher cardiovascular risk.^{3–5} As will be described, a more conservative approach has been proposed for weight loss surgery.^{1,6}

EVALUATION OF ASSOCIATED COMORBIDITIES

Even though the cause of obesity is typically idiopathic (>95%), the next most important step for the medical assessment of obesity is the exclusion of potential underlying

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