

Adolescent Obesity and Weight Loss Surgery

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Obesity in the United States has taken a rapid rise over the past 3 decades and is now becoming a major epidemic; extreme obesity (body mass index [BMI] >40 kg/m²) has quadrupled to 2% of the adult population from 1986 to 2000.¹ With this rise, there are more people who have developed comorbidities, who are hospitalized, and who eventually expire from diseases related to obesity. One-seventh of the cancer deaths in men and one-fifth of the deaths in women were related to obesity,² and obesity has become the second leading cause of death in the United States.³

Unfortunately, this trend has also taken effect in the pediatric and adolescent populations. More adolescents are obese now than ever before. In the past 30 years, obesity in the adolescent population has tripled to 15.5% of all adolescents.^{1,4-6} More than 50% of adolescents meet the criteria for metabolic syndrome, which include being diagnosed with hypertension, increased fasting glucose, hyperlipidemia, and excess body weight.⁷ As the obesity rates continue to climb, we will soon see that the current generation will have a lower life expectancy than the previous ones.⁶ With the recent push to reverse this trend, more research is being poured into weight loss surgery. Long-term effects of obesity studies have shown that not only can adolescents develop the same comorbidities as adults who are overweight (such as type 2 diabetes),⁴ but adolescents who are overweight are more likely than their counterparts to have obesity as adults (55% to 77% will become obese adults).^{4,6,8} Research has even shown that high waist circumference and triglycerides in childhood (9 to 10 years old) can predict that these patients will develop metabolic syndrome by young adulthood (18 to 19 years old).⁹ Children who were obese in childhood were also found to have shorter life spans than their counterparts in adulthood, starting at age 45.^{5,8}

In 1988, a long-term (55-year) follow-up of patients enrolled in the Harvard Growth Study was performed. Children were categorized as “overweight” if their BMI >75th percentile on 2 consecutive measurements between the ages of 13 to 18, while “lean” patients were those whose BMI was in the 25th to 50th percentile during the same time period. Phone or personal interviews were performed, looking at medical, reproductive, and exercise histories. Two big trends were seen. The first was that 52% of those who had been overweight as children were still overweight 55 years later.⁸ Likewise, children who were overweight were more likely as adults to have a higher morbidity due to coronary heart disease, atherosclerosis, colorectal cancer, and gout in men. Women who