



FACT SHEET

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ADOLESCENT OBESITY AND BARIATRIC SURGERY

PREVALENCE OF OBESITY IN ADOLESCENTS

- Obesity is a serious health condition; as of 2007, 32% of children aged 10-17 in the U.S. are overweight and 16% are obese¹, childhood obesity has more than tripled in the past 30 years²
- Without intervention, extremely obese children may continue to suffer from obesity as adults;³ Overweight adolescents have a 70% chance of becoming overweight or obese adults and an 80% chance if a parent is overweight or obese⁴
 - *Journal of the American Medical Association (JAMA)* study found about half of obese teenage girls and a third of obese teenage boys become severely obese by the time they are 30⁵
 - 1 in 12 teenagers become severely obese, or 100 pounds above their ideal weight, as they enter adulthood⁵
- Obesity may be more prevalent among minority populations; 6% of African-American, 5% of Mexican-American and 3% of Caucasian children and adolescents are considered obese⁶

RISKS ASSOCIATED WITH OBESITY IN ADOLESCENTS

- 2010 *New England Journal of Medicine (NEJM)* study suggests obese adolescents are more than twice as likely than non-obese adolescents to die prematurely, before age 55, of illness or self-inflicted injury⁷
- Without major lifestyle changes, obese children may face a 10-20 year shorter life span and may develop health problems in their twenties that are typically seen in 40-60 year-olds⁸
- 2010 *Journal of Pediatrics* study finds nearly two-thirds of morbidly obese children have 2 or more cardiovascular risk factors and a substantial proportion have significant co-morbidities typically seen in adults, including obstructive sleep apnea, type 2 diabetes, severe depression, nonalcoholic fatty liver disease, significant hypertension and an enlarged heart³
- A study of 5- to 17-year-olds found that 70% of obese children had at least one risk factor for cardiovascular disease and 39% of obese children had at least two risk factors⁹
- Among morbidly obese adolescents ages 15-17, 83% had elevated C-Reactive Protein levels, a blood marker for inflammation that in adults is considered an early warning sign for possible future heart disease, compared to 18% of healthy weight adolescents¹⁰

IMPACT OF BARIATRIC SURGERY ON ADOLESCENTS

- Studies suggest bariatric surgery should be considered for adolescents with BMI ≥ 40 or ≥ 35 with serious co-morbid conditions¹¹
- Bariatric surgery in adolescents with morbid obesity is shown to be more effective for losing weight than diet and exercise alone; a 2010 *Journal of the American Medical Association (JAMA)* study found teens fitted with gastric bands had an average of nearly 80% excess weight loss, while diet and exercise group lost an average of 13% excess weight¹¹

- Studies show that surgery may also be an effective tool for resolving or improving co-morbid conditions such as high blood pressure, high cholesterol, Type 2 diabetes and metabolic syndrome and in adolescents^{3, 11, 12}
 - Patients in a 2010 *JAMA* study showed improvements in physical functioning, general health, self-esteem and family activities¹¹
- 2010 *Journal of Pediatrics* study on the importance of early medical intervention to treat morbid obesity, found with earlier surgical intervention, adolescents may have a greater chance of reversing the effects of obesity³

¹ GK Singh. "Changes in State-Specific Childhood Obesity and Overweight Prevalence in the United States From 2003 to 2007." *Archives of Pediatrics & Adolescent Medicine*. May 2010.

² U.S. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. "Childhood Obesity." February 2010. [Cited May 2010]. Available from: <http://www.cdc.gov/HealthyYouth/obesity/>

³ TH Inge. "Baseline BMI is a Strong Predictor of Nadir BMI after Adolescent Gastric Bypass." *Journal of Pediatrics*. 2010. 156(1):103-108.

⁴ U.S. Department of Health and Human Services. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity. Overweight in Children and Adolescents. Updated January 2007. [Cited April 2010]. http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_adolescents.htm

⁵ NS The et al. "Association of Adolescent Obesity with Risk of Severe Obesity in Adulthood." *Journal of the American Medical Association (JAMA)*. 2010. 304(18): 2042-2047.

⁶ JA Skelton et al. "Prevalence and Trends of Severe Obesity Among US Children and Adolescents." *Academic Pediatrics*. 2009. 9(5):322-329.

⁷ PW Franks et al. "Childhood Obesity, Other Cardiovascular Risk Factors, and Premature Death." *New England Journal of Medicine (NEJM)*. 2010. 362(6):485-493.

⁸ C Koebnick et al. "Prevalence of Extreme Obesity in a Multiethnic Cohort of Children and Adolescents." *Journal of Pediatrics*. 2010. <http://www.jpeds.com/article/S0022-3476%2810%2900040-5/abstract>

⁹ National Center for Chronic Disease Prevention and Health Promotion. Obesity – Halting the Epidemic by Making Health Easier At-A-Glance 2009. [Cited April 2010]. Available from: <http://www.cdc.gov/nccdphp/publications/AAG/pdf/obesity.pdf>.

¹⁰ AC Skinner et al. "Multiple Markers of Inflammation and Weight Status: Cross-sectional Analyses Throughout Childhood." *Pediatrics*. 2010. 125(4):801-809.

¹¹ PE O'Brien et al. "Laparoscopic Adjustable Gastric Banding in Severely Obese Adolescents." *Journal of the American Medical Association (JAMA)*. 2010. 303(6):519-526.

¹² TH Inge. Reversal of Type 2 Diabetes Mellitus and Improvements in Cardiovascular Risk Factors After Surgical Weight Loss in Adolescents. *Pediatrics*. 2009. 123(1):214-222

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