



# Childhood Obesity

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## Overview

The amount of children who are obese in the United States is reaching epic proportions with an estimated 16.9% of American children who are obese. Concurrently, up to 30% of African-American teenagers and 18% of Hispanic teenagers are considered obese compared to just 14.5% of their non-Hispanic white peers. It is not by coincidence that the same diseases that disproportionately affect the African-American and Hispanic communities, are also rooted in the sequelae of obesity like diabetes, kidney disease, and other cardiovascular diseases. Such that, preventing and eliminating childhood obesity will have a direct impact on the future health of minority patients.

considered to be obese if their BMI is above the 95th percentile. The causes of obesity are complex as children are themselves. From the very basic level, obesity happens when a child is consuming more calories than he or she is expending. There are variety of reasons why this imbalance occurs ranging in genetic, behavioral, and environmental factors. Although genetics do account for some instances of childhood obesity it is often thought that these genes must be compounded by the behavioral and environmental issues<sup>2</sup>. These issues include, but are not limited to, underdeveloped healthy eating habits, lack of exercise, decreased participation in physical education in schools, increased amount of time participating in sedentary behaviors, like television and video games, or even stressful life events or changes.

## What is Obesity?

Obesity is defined as when a child weighs at least 10 percent over the recommended body weight for the child's height and age. The problem starts early; the average age of children first becoming obese is between five and six. If a child is obese between the ages of 10-13 they have an 80 percent chance of being an obese adult<sup>1</sup>. A child is considered to be overweight if they have a Body Mass Index (BMI) in the 85th to 95th percentile, they are

## Complications of Obesity

Obesity can affect nearly every system in the body. Most notably would be the effects on glucose intolerance and the cardiovascular system. The incidence of type 2 diabetes in children and adolescents has dramatically increased in the last twenty years. In regard to the cardiovascular system, obesity increases the prevalence of hypercholesterolemia, hyperlipidemia, and hypertension.<sup>3</sup> Additionally, children who are obese also experience comorbidities such as hepatic steatosis, sleep apnea,

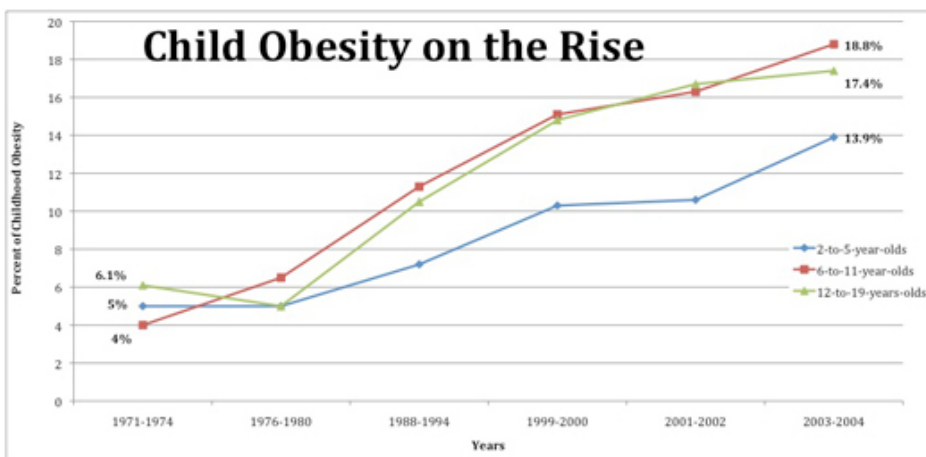


Fig.1- Childhood obesity rates have more than doubled in the last 20 years.

<http://news.medill.northwestern.edu/chicago/news.aspx?id=109907&print=1>

renal complications, and even asthma<sup>4</sup>. Psychosocially, overweight and obese children are more likely to experience low self-esteem and depression; which can persist into adulthood while affecting academic and social functioning<sup>5</sup>.

### The Cost of Obesity

This generation of children who are obese may have a shorter lifespan than the previous generation, with a 2-5 year decrease. Obese children are more likely to become obese adults if the right steps are not taken to correct the problem now. The consequences of obesity do not just negatively influence health, it is estimated that obesity costs the United States more than \$145 billion a year<sup>6</sup>. The direct medical costs include preventive, diagnostic, and treatment services related to obesity. The indirect costs are a contribution of decreased activity and productivity, absenteeism, bed days, and future income lost as a result of premature deaths<sup>7</sup>. According to one study, ramifications of obesity may have cost as high as \$92.6 million dollars in medical expenditures or 9.1 percent of total medical expenses in 1998, with approximately half of these expenses paid for by medicaid and medicare.<sup>8</sup>

### Let's Move

Let's Move is a government initiative headed by First Lady Michelle Obama, the goal of the program is to eliminate childhood obesity within one generation. A laborious objective, but one well worth undertaking. The program offers support services for parents and caregivers to help make healthier choices for their children. This will include working with the FDA to put easy to understand labeling on the front of food packages, online resources such as the food pyramid on [mypyramid.gov](http://mypyramid.gov) and food atlases which are interactive databases that allow adults to see the availability of healthy food choices, down to the local level, across the country. Since children consume up to half of the daily caloric intake at school and the Let's Move initiative aims to facilitate the availability of healthy food throughout the school day. Additionally, Let's Move hopes to target the amount of physical activity that children currently partake. The goal would be to get children and their families to commit to doing physical activity at least five days a week. The last platform of the program aims to tackle the burden of accessing healthy and affordable food, especially for those families who live in low-income urban and rural neighborhoods that are more than a mile away from a grocery store.

### Better Options<sup>9</sup>

1. Healthier Schools: This can be done by providing better options for child nutrition and physical activity in schools. As recommended by the Surgeon General this includes schools providing more nutritious choices throughout the school day (like fruits and vegetables to replace sweets and sodas) and provide additional funding in school systems that would facilitate at least 150 minutes per week of physical activity for elementary school children, and 225 minutes for secondary schools.
2. Increasing physician education on nutrition: Physicians are the most trusted source of health information, and therefore should be well versed in nutrition, in a way that will increase the flow of information from physician to patient and foster an educational environment that will provide the patient and their families with ample information regarding healthy lifestyle choices and how they relate to disease prevention.
3. Community improvement: Children should be able to live and access an environment that will allow them to engage in healthy behaviors. Communities should evaluate the availability of supermarkets, limiting the advertisements of less healthy foods and beverages, enhancing and constructing infrastructures that will support active lifestyles (biking, walking, running) and improving the overall safety of the neighborhoods in order to encourage outdoor physical activity.

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<sup>1</sup> [http://www.aacap.org/cs/root/facts\\_for\\_families/obesity\\_in\\_children\\_and\\_teens](http://www.aacap.org/cs/root/facts_for_families/obesity_in_children_and_teens)

<sup>2</sup> <http://www.cdc.gov/obesity/childhood/consequences.html>

<sup>3</sup> [http://www.usatoday.com/news/health/weightloss/2010-02-09-1Afirstlady09\\_CV\\_N.htm](http://www.usatoday.com/news/health/weightloss/2010-02-09-1Afirstlady09_CV_N.htm)

<sup>4</sup> <http://www.cdc.gov/obesity/childhood/consequences.html>

<sup>5</sup> <http://www.cdc.gov/obesity/childhood/consequences.html>

<sup>6</sup> [http://www.usatoday.com/news/health/weightloss/2010-02-09-1Afirstlady09\\_CV\\_N.htm](http://www.usatoday.com/news/health/weightloss/2010-02-09-1Afirstlady09_CV_N.htm)

<sup>7</sup> <http://www.cdc.gov/obesity/childhood/consequences.html>

<sup>8</sup> <http://www.cdc.gov/obesity/childhood/consequences.html>

<sup>9</sup> [http://www.surgeongeneral.gov/library/obesityvision/obesityvision\\_factsheet.html](http://www.surgeongeneral.gov/library/obesityvision/obesityvision_factsheet.html)