

HOW THE BUILT ENVIRONMENT AFFECTS CHILDHOOD OBESITY

One of the most serious public health challenges of the 21st century is childhood obesity. The U. S. Centers for Disease Control and Prevention (CDC) stated that high calorie, fatty foods and drinks have become a big part of the American culture. That culture makes it more difficult for families and children to make healthy food choices.

There are many communities in the U.S. that are built or assembled in ways that make it challenging or unsafe to be physically active. For example, some families do not have parks and recreation centers near their homes or they may not feel they are safe, and public transportation may not be available. For many children, safe routes to walk or bike to school or recreation areas may not exist or it is too far from home. According to the Harvard School of Public Health, the built environment is a very important part of our health and how physically active we are.

<http://www.cdc.gov/obesity/childhood/problem.html>

<http://www.hsph.harvard.edu/obesity-prevention-source/obesity-causes/physical-activity-environment/>

Vanderbilt University's Humanities and Social Sciences Department was involved with a study of the built environments of two economic and socially different neighborhoods (Belle Meade and Bordeaux) in Nashville. The study, *How the Built Environment Contributes to the Adolescent Obesity Epidemic: A Multifaceted Approach* revealed that decreased physical activity and food quality were related to the built environment and linked to increased chronic health problems.

The study evaluated the stability and safety of roads and sidewalks as to whether they encouraged or discouraged residents from engaging in play and physical recreation. It found that having good street lighting, good neighbors, and recreational facilities like parks, playgrounds, and sports fields encouraged regular activity. The lower income, predominately minority area, showed a lack of physical activity and overweight residents, linked to the lack of access to recreational facilities. High rates of crime also prevented children from playing outside. The study revealed that access to healthy foods was limited at the neighborhood grocery stores in the low income, minority neighborhood. The lack of healthy foods and higher prices were accepted as part of the convenience of being in the neighborhood.

<http://vurj.vanderbilt.edu/index.php/vurj/article/viewFile/3504/1743>

The Metropolitan Department of Parks and Recreation has a system of parks and recreational facilities, including hiking and mountain bike trails and greenways. Metro Parks also has a variety of classes and other activities at some community centers.



<http://www.nashville.gov/Parks-and-Recreation.aspx>

According to the CDC, when children are deprived of a built environment that has access to safe areas to play and lack access to nutrition foods, the children are more likely to be obese. Childhood obesity is one of the leading causes of serious chronic illnesses in children. The CDC stated that childhood obesity could lead to multiple chronic health problems. Obese children are at risk for high blood pressure and high cholesterol that affect the heart, diabetes, breathing problems, joint pains, liver disease, and gallstones. Obese children have a greater risk of social and psychological problems related to being bullied, teased, etc. When children are obese in childhood, they are more likely to be obese as adults.

<http://www.cdc.gov/obesity/childhood/basics.html>

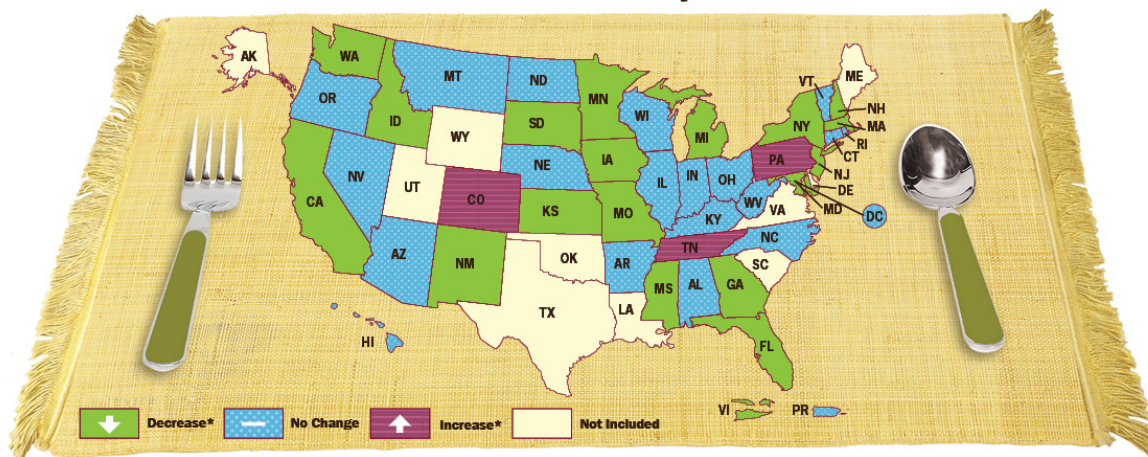
<http://www.aecf.org/m/resourcedoc/AECF-KCReducingChildDeathRate-2009.pdf#page=2>

Childhood Obesity in Tennessee was ranked as the 5th worst in the nation, based on *The State of Obesity: 2014*, with adult obesity being ranked at 4th worst in the nation. The report from by the Trust for America's Health through the Robert Wood Johnson Foundation also revealed that 20.5% of children from ages 10-17 that were obese in the state in 2014. Out of the top 10 states with the worst rates of obesity for children, 7 of the states were southern states that included Tennessee.

<http://stateofobesity.org/files/stateofobesity2014.pdf>

Childhood obesity continues to be prevalent for young people between the ages of 2 and 17. However, data indicates that the obesity rate for low-income preschoolers in several states has decreased. The map below indicates that in Tennessee, Pennsylvania and Colorado, the obesity rate for low-income preschoolers has continued to rise. Childhood obesity is also associated with the level of education and income of the head of the household.

Obesity rates among low-income preschoolers decreased in many states



SOURCE: CDC Vital Signs, August, 2013. www.cdc.gov/vitalsigns. Pediatric Nutrition Surveillance System, 2008-2011. * Represents statistically significant annual decrease or increase in obesity. To learn more about how childhood obesity is measured, see <http://www.cdc.gov/obesity/childhood/basics.html>.

<http://www.cdc.gov/obesity/childhood/basics.html>

<http://www.cdc.gov/obesity/data/childhood.html>



The White House Task Force on Childhood Obesity Report, *Solving the Problem of Childhood Obesity within a Generation*, is a comprehensive report on recommendations to reduce the problem of childhood obesity in the United States. President Obama established the childhood obesity task force to reduce the national childhood obesity rate to 5% by 2030, which is the same rate before childhood obesity first began to rise in the late 1970s. The report related the increase of childhood obesity to the changes in American lifestyles. The report referred to not only changes in poor eating habits but also that children are getting less physical exercise. Children are spending increased “screen time” watching television, on computers, gaming systems and other electronic gadgets that do not involve physical play.

Childhood obesity can have life threatening consequences, and has reached epidemic proportions. It also reported that children of obese parents may have a genetic component linked to also become obese. Although genes generally contribute to obesity, it stated that obesity could improve or worsen based on the environment and other factors.

http://www.letsmove.gov/sites/letsmove.gov/files/TFCO_Challenge_We_Face.pdf
<http://www.letsmove.gov/white-house-task-force-childhood-obesity-report-president>

The problems of obesity, according to the Harvard School of Public Health, has slowly but progressively grown over the years and are associated with many factors that include the environment. It stated that addressing obesity has to be a step-by-step process with changes by government, schools, businesses, neighborhoods/ communities, families and individuals. Policy changes have to be prioritized to develop an environment with healthy choices for all.

The Harvard School of Public Health summarized the recommendations for improving physical activity of the environment, based on expert assistance from the CDC, the Institute of Medicine, the World Health Organization, and other major U.S. governmental, professional, and public health groups. One of their recommendations was to build physical activity into daily routines through community designs that discourage urban sprawl, prioritize recreation space, and facilitate safe walking and biking to increase opportunities to be active. The major point stressed was to establish working relationships that would connect city planning and development with the public.

<http://www.hsph.harvard.edu/obesity-prevention-source/obesity-prevention/>
<http://www.hsph.harvard.edu/obesity-prevention-source/obesity-prevention/physical-activity-environment/>
<http://www.hsph.harvard.edu/obesity-prevention-source/obesity-prevention/physical-activity-environment/community-design-active-transportation-and-obesity-prevention/>

The CDC has described healthy environments as those designed and built to improve the quality of life for all people who live, work, worship, learn, and play within their communities. These environments allow every resident to make choices from a variety of healthy, available, accessible, and affordable options. It also stated that poorly planned city growth often results in what is known as sprawl. Sprawl includes:

- Large tracts of land converted into low-density housing (requiring accessible transportation), commercial buildings, or paved parking lots;
- Separation of housing from schools, businesses, and recreational areas; and
- Necessity of using an automobile as a primary means of transportation.

The CDC's healthy community designs recommendations for improving health included:

- Promotion of physical activity
- Reduction of potential injury
- Increase of access to healthy food
- Improvement of air and water quality
- Preparation to limit health impacts of climate changes on communities
- Limiting driving /commuting times (to decrease stress, and increase time for physical activity and socialization)

<http://www.cdc.gov/healthyplaces/about.htm>

<http://www.cdc.gov/healthyplaces/healthtopics/social.htm>

<http://www.cdc.gov/climateandhealth/default.htm>

The American Psychological Association's *The nation's childhood obesity epidemic: Health disparities / the making* (July 2012) notes that the childhood obesity epidemic "disproportionately affects ethnic minorities and those who live in poorer communities." It explains that beginning about 60 years ago, low-density suburbs were created and were considered attractive but had not mixed-use commercial access, necessitating vehicle transportation to almost every destination. This type of sprawl is associated with fewer minutes walked and obesity.

<http://www.apa.org/pi/families/resources/newsletter/2012/07/childhood-obesity.aspx>



Although there is no single solution to address childhood obesity, the CDC has recommended that states and communities along with parents do more to ensure that all children and their families have access to healthy choices and lifestyles. It also recommended that government provide incentives for supermarkets, farmers markets for underserved communities; help for early child care and education facilities to promote physical activity, nutrition, limiting screen time (television, computers, etc.); and help in developing safe neighborhoods that promote physical activity and access to parks and playgrounds.

For parents and caregivers it also recommended limiting screen time to no more than 1-2 hours per day; visits to their child's day care or school to see what they are eating and doing; and ensuring that children engage in physical activity and play every day.

<http://www.cdc.gov/obesity/childhood/solutions.html>