Early Childhood Overweight and Obesity, Ohio 2016

Overweight or obesity is an excessively high body weight in relation to height. Body mass index (BMI) is a measure used to compare weight to height. In children, an individual's BMI is compared to other children of the same age and sex, using growth charts to determine the BMI percentile for age and sex. The child is then classified as underweight, healthy weight, overweight, obese or severely obese. [1]

Severely Obese	BMI at or above the 99th percentile
Obese	BMI at or above the 95th percentile
Overweight	BMI at or above the 85th percentile, but below the 95th percentile
Healthy	BMI at or above the 5th percentile, but below the 85th percentile
Underweight	BMI below the 5th percentile

Health Impact

Children who are obese are at an increased risk for health problems, including those that were once primarily seen in adults:

- High blood pressure
- High cholesterol
- Type 2 diabetes, glucose intolerance and insulin resistance
- Asthma and heart dysfunction
- Joint problems
- Fatty liver disease, gallstones and gastro-esophageal reflux

Childhood obesity can also lead to continued complications later in life. Overweight children are more likely to become overweight or obese as adults, with the same disease risks. Adult obesity can lead to serious health conditions, including heart disease, diabetes, and cancer.

Severe Obesity Impact

Despite trends suggesting that obesity rates among children have slowed in the United States, the prevalence of severe obesity (BMI at or above the 99th percentile) is on the rise. Children with severe obesity, in addition to the above health impacts, have an even higher risk of cardiovascular dysfunction, increased cardiovascular disease, type 2 diabetes, adult obesity and premature death. [2]

Ohio Department of Health

Economic Impact

Childhood overweight and obesity in the U.S. leads to unnecessary medical costs associated with preventable diseases in both obese children and those that remain obese into adulthood. More than $2.9 billion are spent in additional health costs for overweight and obese children in the U.S., compared with children who maintain a healthy weight.[3]

Chronic diseases – such as obesity – and related risk factors are estimated to cost Ohio nearly $60 billion annually in healthcare costs and lost productivity. Without significant change, these costs are projected to increase by nearly $100 billion by 2023. [4]

Prevention Saves Money

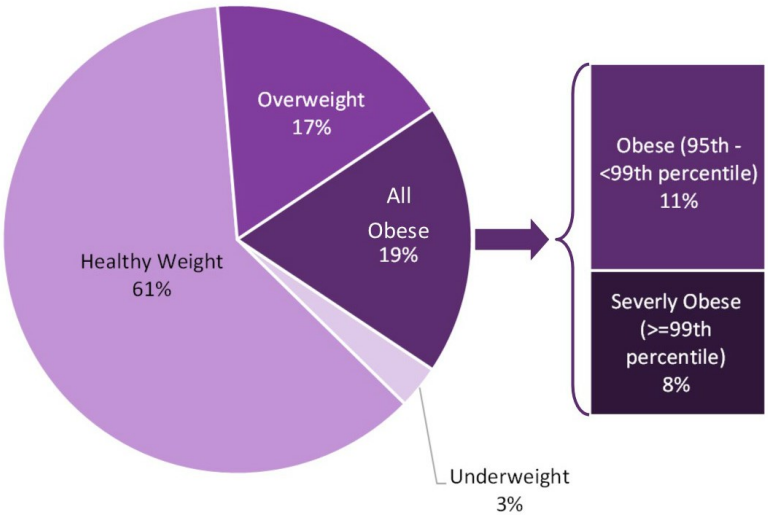
If Ohio achieves a reduction in obesity of 2.5 percent among our youngest children, the State of Ohio could realize a net return of $42 million in economic benefits, not even accounting for the reduced indirect costs and burdens of obesity over a lifetime. [5]

Early Childhood Overweight and Obesity, Ohio 2016

Head Start BMI Surveillance

The Ohio Head Start BMI Surveillance project was developed and conducted by the Ohio Department of Health (ODH). Accurate data collection and analysis on rates of overweight and obesity among children (3-5 years of age) was needed to inform state and local efforts to develop, target, fund and evaluate policies and programs that impact childhood overweight. The data collection was done through direct measure by trained health professionals using medical grade equipment.

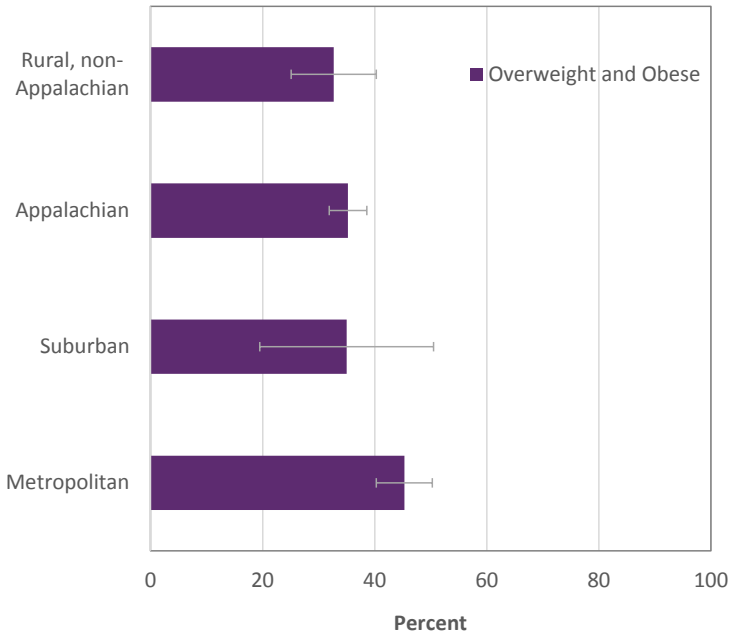
Estimated BMI Distrubution among all Head Start Students, Ohio 2014



Source: Ohio Head Start BMI Surveillance Program, 2014

- In Ohio in 2014, more than a third (35.7 percent) of Head Start students were classified as overweight or obese.
- More than 40 percent of obese students were classified as severely obese (7.7 percent of all Head Start students).

Prevalence of Overweight and Obesity among Head Start Students by County Type, Ohio 2014



Source: Ohio Head Start BMI Surveillance Program, 2014
Note: County type defined by the Ohio Medicaid Assessment Survey.

- In 2014, the prevalence of Head Start students that were overweight or obese did not significantly vary by geographic subtype.

Data Limitations

Because this surveillance measured a sample of Head Start children, there is a margin of error around each estimate (confidence interval). Data from the Head Start BMI Surveillance project should not be directly compared to data from the Pediatric Nutrition Surveillance System (PedNSS) because of differences in the populations.

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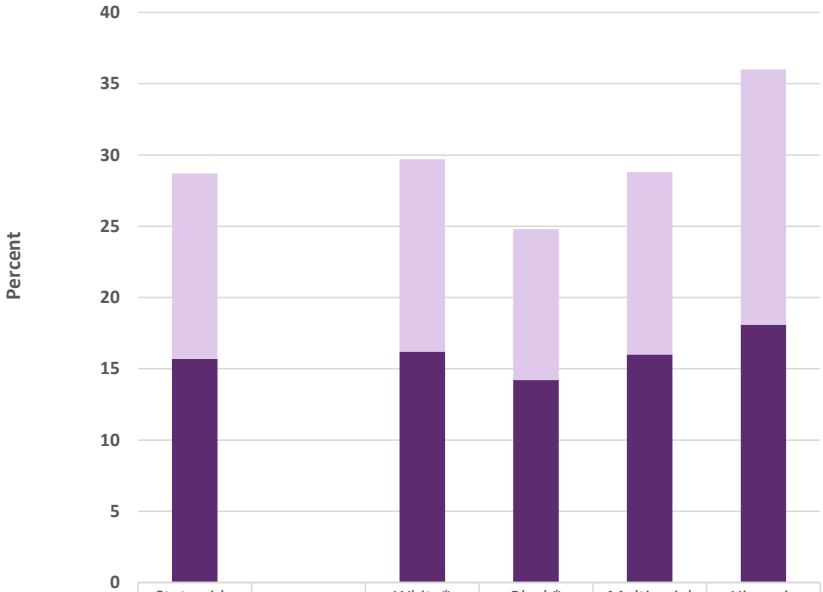
Early Childhood Overweight and Obesity, Ohio 2016

Prevalence of Overweight and Obesity among WIC Participants Aged 2 to <5 years by Race and Ethnicity, Ohio 2014

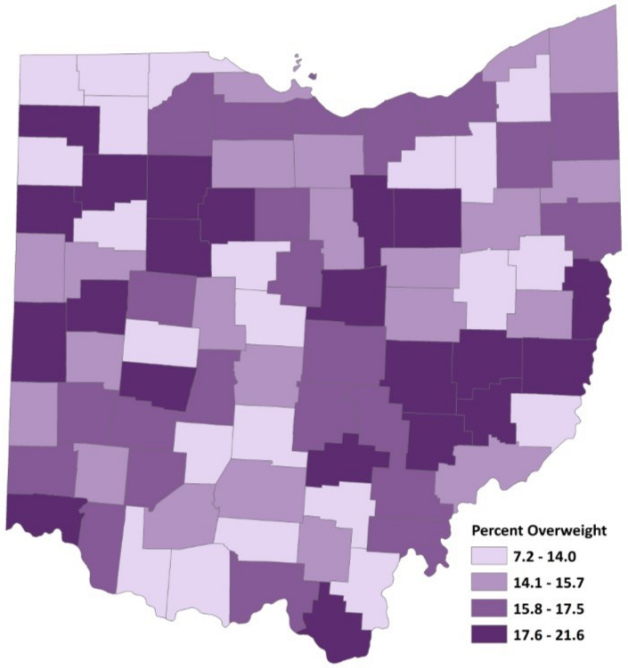


	Statewide	White*	Black*	Multiracial	Hispanic
Obese	13.0	13.5	10.6	12.8	17.9
Overweight	15.7	16.2	14.2	16.0	18.1

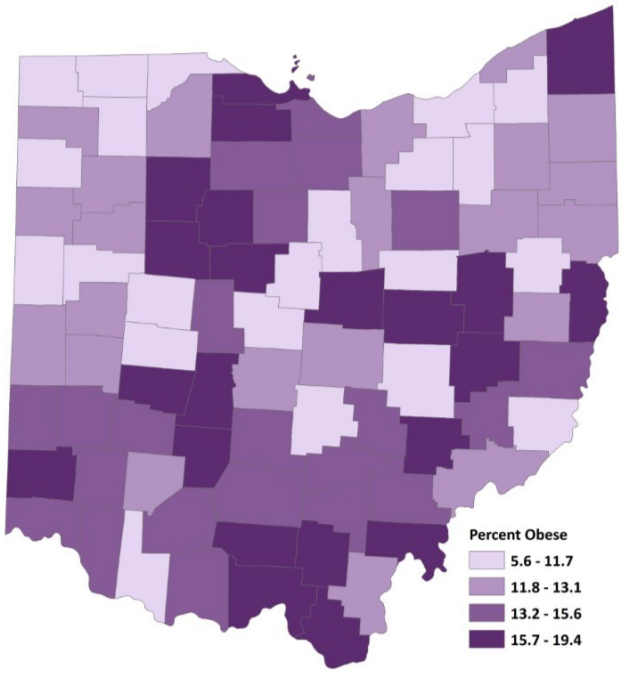
- Among Ohio children, two to five years old, enrolled in the Supplemental Nutrition Program for Women, Infants and Children (WIC), over one quarter (28.7%) were overweight or obese in 2014.
- Hispanic children in Ohio had the highest prevalence of overweight and obesity (36.0 percent) compared with their black (24.8 percent) and white peers (29.7 percent) in 2014.

Source: Ohio Pediatric Nutrition Surveillance System, 2014
* Non-Hispanic
Note: Obesity is a BMI at or above the 95th percentile.

Prevalence of Overweight among WIC Participants Aged 2 to <5 years by County, Ohio 2014



Prevalence of Obesity among WIC Participants Aged 2 to <5 years by County, Ohio 2014



Source: Ohio Pediatric Nutrition Surveillance System, 2014
Note: The prevalence ranges in the four categories for these two maps are different, thus the maps should not be directly compared.

The 2014 PedNSS data suggests there is no consistent geographic trend in Ohio for the prevalence of overweight and obesity among WIC participants ages 2-5 years.

Ohio Department of Health

What Is Being Done to Prevent and Reduce Childhood Overweight and Obesity in Ohio?

Reducing the prevalence of obesity is one of Ohio's top priorities for improved health. ODH is developing and implementing programs statewide to prevent obesity among children and foster the acquisition of healthy habits at a young age.

These include:

- **Ohio Healthy Programs (OHP):** A training program for early child care and education programs run in collaboration with the Ohio Child Care Resource and Referral Association. OHP includes training and technical assistance on healthy habits, healthy policies and healthy menus for child care programs. Programs earn *Step Up To Quality* hours by participating in OHP and become eligible for state recognition.
- **OHP for Family Child Care Providers:** A webinar based training and technical assistance program for family child care providers run in collaboration with Children's Hunger Alliance. This program parallels OHP with additional one-on-one site visits adapted to the unique setting of family child care programs but still focused on healthy habits, healthy policies and healthy menus for young children.
- **Parenting at Mealtime and Playtime (PMP):** A learning collaborative for health practitioners run in collaboration with the Ohio Chapter, American Academy of Pediatrics. PMP trains pediatric practices on obesity risk assessment, prevention and treatment that is tailored to each child's needs. PMP emphasizes developmentally appropriate nutrition, activity, and sleep recommendations with an emphasis on family-child engagement starting from birth to 5 years of age.
- **WIC**: Low-income families receiving WIC benefits require health practitioners to refer all children that measure overweight or obese to their primary care physician, and are encouraged to work together as a team to address that child's specific needs. The WIC Peer Helper Program promotes and supports breastfeeding, which lowers a child's risk for developing obesity.
- **Maternal Child Health Program (*formerly Child and Family Health Services*)**: Serves uninsured and underinsured low-income women and children in racial and ethnic groups that are disproportionately affected by poor health outcomes. Local health departments work to reduce the percentage of children who are overweight by working with childcare facilities and schools to provide nutrition education, access to healthy food choices, and/or physical activity.
- **Creating Healthy Communities (CHC):** Exists in 23 counties in Ohio to increase access to physical activity opportunities, healthy, affordable food and tobacco-free living. CHC impacts the places where children live, learn and play to prevent and reduce the burden of chronic disease in Ohio.

Five Reasons Why Acting Early (ages 0-5) is Critical:

1. Children in the U.S. (and Ohio) are gaining weight at younger ages than ever before and carrying the extra weight into kindergarten. [6]
2. Obesity prevention programs focused on 2-7 year olds have been shown to be effective, resulting in lasting habit changes. [7, 8]
3. It is easier to impact the habits of 0-5 year olds than to change habits in adulthood. [9]
4. Preferences for food and levels of activity are set by the time children are 2-3 years old. [10]
5. Delayed action regarding obesity prevention can lead to steeply rising costs and morbidity, while early intervention can lead to decreased health risks later. [4]

Ohio Department of Health

References

1. http://www.cdc.gov/obesity/childhood/defining.html
2. Kelly, A., et al (2013). Severe Obesity in Children and Adolescents: Identification, Associated Health Risks, and Treatment Approaches. Circulation, 128:1-25.
3. Trassande, L., Chaterjee, S. (2009) The Impact of Obesity on Health Service Utilization and Costs in Childhood. Obesity, 17 (7): 1473.
4. Ohio Department of Health (2014). "Early Childhood Overweight and Obesity." http://www.odh.ohio.gov/~/media/ODH/ASSETS/Files/data%20statistics/maternal%20and%20child%20health/ec_overweightobesity.ashx
5. Trust for America's ealth and the Robert Wood Johnson Foundation: Bending the Obesity Cost Curve in Ohio; Issue Brief, September (2012).
6. Cunningham, S., Kramer, M., & Narayan, K. (2014). Incidence of childhood obesity in the United States. N Engl J Med., 370 (5):403-11.
7. Wen, L., et al. (2012). Effectiveness of home based early intervention on children's BMI at age 2: randomized controlled trial. British Medical Journal, 344: e3732.
8. Baidal, J., & Taveras, E. (2012). Childhood obesity: shifting the focus to early prevention. Archives of pediatrics & adolescent medicine, 166 (12):1179-1181.
9. Birch, L., Savage, J., & Ventura, A. (2007). Influences on the development of children's eating behaviors: from infancy to adolescence. Canadian journal of dietetic practice and research: a publication of Dietitians of Canada, 68 (1):s1.
10. Schwartz, C., et al. (2011). Development of healthy eating habits early in life. Review of recent evidence and selected guidelines. Appetite, 57(3):796–807.

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