Obesity and Overweight in Cuyahoga County

Nearly one in every three (28.6%) Cuyahoga County middle and high school students was obese or overweight when surveyed during 2013 and 2014. This brief describes data provided in 2013 (n=16,855) and 2014 (n=12,607) from the Cuyahoga County Youth Risk Behavior Survey (YRBS). The graphs and narrative identify those students most at risk for obesity and being overweight. Relationships with academic achievement, perceptions of weight, and trying to lose weight are also examined.

In the survey, county students were asked for their height, weight, and age. Body mass index (BMI) is calculated using these values and adjusted for age and gender. BMI is categorized as underweight (< 5th percentile), normal weight (≥ 5th percentile and < 85th percentile), overweight (≥ 85th percentile and < 95th percentile), and obese (≥ 95th percentile). The Centers for Disease Control and Prevention (CDC) reports that adolescents who are obese are at a higher risk for a variety of medical, social, and psychological problems. Obese adolescents are likely to remain obese as adults and to experience chronic health problems such as Type 2 diabetes, high blood pressure, and heart disease.

In 2013, the CDC reported that nationally 13.7% of high school students were obese, while 16.6% were overweight. Obesity varied by gender with male adolescents more likely than females to be obese.

The highest rates for BMI consistent with obesity were reported for middle and high school students in both the Cleveland East and West regions and the Inner Ring East. Students from the county’s Inner Ring West reported the next highest obesity rates, which were significantly lower than Cleveland East and West but not significantly lower than Inner Ring East. The remaining Outer Ring East and West regions reported similar rates to one another but were significantly lower than all other regions. (See Fig. 1)

In 2013, 28.6% of Cuyahoga County high school students were overweight or obese.

In Cuyahoga County, similar prevalence was reported for BMI categories of underweight/normal weight, overweight, and obese at every grade level. The underweight and normal weight categories were combined due to less than 3% of the students reporting heights and weights consistent with being underweight at each grade level. More than 2/3 of students in each grade (7th–12th) reported heights and weights consistent with being underweight or normal weight. Less than 1/5 of students reported BMI consistent with being overweight. Approximately 12% of students in every grade reported heights and weights consistent with obesity. (See Fig. 2) The proportion of students reporting heights and weights consistent with each BMI category by grade have remained similar since 2009.

Fig. 1: Prevalence of Obesity among High School Students

Fig. 2: Prevalence (%) of BMI categories Grades 7-12

Source: 2013/2014 Youth Risk Behavior Survey (YRBS) Prevention Research Center for Healthy Neighborhoods, Case Western Reserve University
Studies have shown negative relationships between academic performance and health risk behaviors, including weight status. In Cuyahoga County, higher-than-normal BMI (overweight or obese) is negatively associated with academic achievement. Nearly 3/4 of underweight and normal weight middle and high school students reported that they earned grades of A’s and B’s most or all of the time. This decreases to 2/3 of overweight middle and high school students who reported that they earned grades of A’s and B’s most or all of the time. This trend continues as the rate of obese middle and high school students who report that they earned grades of A’s and B’s most or all of the time is approximately 60%. Regardless of BMI, greater than half of Cuyahoga County middle (67.9%) and high (72.1%) school students reported that they earned grades of A’s and B’s most of the time or always. (See Fig. 3)

Inconsistencies between BMI category, perception of weight, and weight management were noted among Cuyahoga County middle and high school students. Female high school students were more likely than male high school students to be trying to lose weight and to consider themselves overweight, regardless of weight status. (See Fig. 4) Similar patterns were present among middle school females and males, although at lower rates.

References
http://www.cdc.gov/healthyschools/obesity/facts.htm

Full data modules from the YRBS are available online at: http://www.prchn.org/YRBSResults.aspx

Methods: The Prevention Research Center for Healthy Neighborhoods (PRCHN) regularly uses a two-stage cluster sample design that mimics the sampling method of the Centers for Disease Control and Prevention (CDC) and its national Youth Risk Behavior Survey (YRBS). In 2013, 43 of 54 Cuyahoga County high schools (79.6%) and 16,855 of 22, 458 county students (75.1%) participated in the survey. In 2014, 97 of 109 selected middle schools (89%) and 12,607 of 14,682 students (85.9%) participated in the survey. Each year, overall response rates of at least 60% (60% in 2013 and 76.5% in 2014) allowed the data to be weighted to the entire population of 7th – 12th grade students in Cuyahoga County. Analyses were conducted using SPSS Statistical software survey procedures to account for the sampling design.