



Prevention Research Center for Healthy Neighborhoods
at Case Western Reserve University

2019 Cuyahoga County Youth Risk Behavior Survey: Obesity and Weight Control

Introduction

The Prevention Research Center for Healthy Neighborhoods (PRCHN) at Case Western Reserve University has administered the Youth Risk Behavior Survey (YRBS) in school districts throughout Cuyahoga County since 2000. The YRBS is a cross-sectional tool developed by the Centers for Disease Control and Prevention (CDC) to track adolescent risk behavior over time. In fall of 2019, the PRCHN conducted the YRBS among 9th through 12th grade students in Cuyahoga County high schools. A more detailed description of the methodology is available at our website, www.prchn.org/YRBSDataCollectionAnalysis.aspx.

This brief report presents results from the 2019 Cuyahoga County High School Youth Risk Behavior Survey, with a particular focus on Obesity & Weight Control. In this brief report, we present:

- [Overall Prevalence](#)
- [Demographic Prevalence](#)
- [Trend Report](#)

Data for similar behaviors can be found at our website, www.prchn.org/yrbs_home.aspx.

Obesity and Weight Control

Obesity has reached epidemic proportions. In the past 20 years, the prevalence of obesity has increased by more than 60% among adults and tripled in children and adolescents.ⁱ Overweight adolescents often become overweight adults with an increased risk for a wide variety of poor health outcomes including diabetes, stroke, heart disease, arthritis and certain cancers.^{ii, iii} Obesity during adolescence is associated with negative psychological and social consequences and health problems such as type 2 diabetes, obstructive sleep apnea, hypertension, dyslipidemia, and metabolic syndrome.^{iv}

Obese was defined as a BMI of $\geq 95^{\text{th}}$ percentile for age and sex. Overweight was defined as a BMI of $\geq 85^{\text{th}}$ percentile and $< 95^{\text{th}}$ percentile for age and sex. Normal weight was defined as a BMI of $\geq 5^{\text{th}}$ percentile and $< 85^{\text{th}}$ percentile for age and sex. Underweight was defined as a BMI of $< 5^{\text{th}}$ percentile for age and sex. It is important to note that BMI is calculated using self-reported height and weight and, therefore, may underestimate the actual prevalence of overweight and obese.

Overall Prevalence

The following table summarizes obesity and weight control among the 15,350 high school students who completed the 2019 Cuyahoga County YRBS. Prevalence estimates and 95% confidence intervals were computed for all dichotomous variables. The 2019 Ohio Youth Risk Behavior Survey prevalence for shared variables is also shown. A statistically significant difference exists between groups if the 95% confidence intervals do not overlap.

Risk Behavior	Cuyahoga County % (95% Confidence Interval)	Ohio % (95% Confidence Interval)
Obese (Having a BMI of >95 th percentile for age and sex. Calculated from self-reported height and weight, adjusted for sex and age.)	16.1 (15.2 - 17.1)	16.8 (13.7 - 20.4)
Overweight (Having a BMI >85 th percentile and <95 th percentile for age and sex. Calculated from self-reported height and weight, adjusted for sex and age.)	16.6 (15.7 - 17.4)	12.2 (9.5 - 15.6)
Describes self as slightly or very overweight	28.3 (27.2 - 29.5)	n/a
Trying to lose weight	42.8 (41.6 - 44.1)	n/a

Demographic Prevalence

The tables below allow for further comparisons of obesity and weight control between demographic groups. Data are presented by gender, race/ethnicity, grade level, and sexual identity. In following tables, LGB stands for lesbian, gay, or bisexual. A statistically significant difference exists between groups if the 95% confidence intervals do not overlap.

Obese			
Category	%	CI	
Gender			
Female	15.4	14.1	16.7
Male	16.9	15.6	18.1
Race/Ethnicity			
White	11.5	10.2	12.9
Black	23.2	21.7	24.9
Hispanic	19.8	17.4	22.5
Other/Multiple	12.7	10.5	15.2
Grade			
9th	18.0	16.0	20.2
10th	15.7	13.8	17.9
11th	15.4	13.3	17.8
12th	15.2	13.1	17.5
Sexual Identity			
Heterosexual	15.1	14.1	16.2
LGB	22.6	19.9	25.5
Not sure	16.9	12.6	22.3
Total	16.1	15.2	17.1

Overweight			
Category	%	CI	
Gender			
Female	17.8	16.6	19.1
Male	15.4	14.1	16.7
Race/Ethnicity			
White	13.6	12.6	14.7
Black	20.9	19.4	22.4
Hispanic	20.6	18.2	23.3
Other/Multiple	15.8	12.9	19.1
Grade			
9th	17.4	15.8	19.2
10th	16.5	14.7	18.4
11th	16.4	14.5	18.5
12th	15.8	14.0	17.8
Sexual Identity			
Heterosexual	16.3	15.4	17.3
LGB	19.3	17.1	21.8
Not sure	13.8	10.2	18.3
Total	16.6	15.7	17.4

Describes self as slightly or very overweight		
Category	%	CI
Gender		
Female	33.5	31.9 - 35.2
Male	23.1	21.6 - 24.6
Race/Ethnicity		
White	28.3	26.6 - 30.1
Black	27.7	26.2 - 29.4
Hispanic	32.7	30.2 - 35.3
Other/Multiple	28.6	25.6 - 31.9
Grade		
9th	28.2	26.2 - 30.3
10th	28.8	26.2 - 31.5
11th	29.0	26.5 - 31.5
12th	27.3	25.3 - 29.4
Sexual Identity		
Heterosexual	26.0	24.7 - 27.2
LGB	40.3	37.0 - 43.6
Not sure	36.2	30.9 - 41.9
Total	28.3	27.2 - 29.5

Trying to lose weight		
Category	%	CI
Gender		
Female	54.7	52.9 - 56.4
Male	31.0	29.3 - 32.8
Race/Ethnicity		
White	42.7	40.8 - 44.7
Black	42.6	40.8 - 44.4
Hispanic	47.9	45.3 - 50.6
Other/Multiple	40.5	36.9 - 44.1
Grade		
9th	43.2	40.7 - 45.7
10th	43.4	41.1 - 45.8
11th	44.1	41.3 - 46.9
12th	40.7	38.3 - 43.2
Sexual Identity		
Heterosexual	40.9	39.5 - 42.3
LGB	53.8	50.4 - 57.1
Not sure	45.9	40.1 - 51.7
Total	42.8	41.6 - 44.1

Cuyahoga County Trend Data

The following table presents the prevalence of obesity and weight control among Cuyahoga County high school students in 2011, 2013, 2015, 2017, and 2019. The prevalence for each year is given (when available), with 95% confidence intervals below.

Cuyahoga County, 2011	Cuyahoga County, 2013	Cuyahoga County, 2015	Cuyahoga County, 2017	Cuyahoga County, 2019
Obese (Having a BMI of >95 th percentile for age and sex. Calculated from self-reported height and weight, adjusted for sex and age.)				
12.9 (12.0 - 13.8)	12.6 (11.7 - 13.5)	13.3 (12.3 - 14.3)	15.5 (14.7 - 16.3)	16.1 (15.2 - 17.1)
Overweight (Having a BMI >85 th percentile and <95 th percentile for age and sex. Calculated from self-reported height and weight, adjusted for sex and age.)				
16.0 (15.0 - 17.0)	16.0 (15.0 - 16.9)	18.2 (16.6 - 20.0)	17.8 (16.8 - 18.8)	16.6 (15.7 - 17.4)
Describes self as slightly or very overweight				
27.1 (26.1 - 28.1)	29.2 (28.0 - 30.3)	29.9 (28.5 - 31.3)	31.1 (30.0 - 32.1)	28.3 (27.2 - 29.5)
Trying to lose weight				
41.9 (40.7 - 43.1)	43.7 (42.6 - 44.8)	42.5 (40.8 - 44.2)	44.1 (43.1 - 45.1)	42.8 (41.6 - 44.1)

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ⁱ National Center for Health Statistics. (2015). Prevalence of Overweight among Children and Adolescents in the United States and Canada. National

Center for Health Statistics Web site. Available <https://www.cdc.gov/nchs/products/databriefs/db211.htm>. Accessed April 7, 2020.

ⁱⁱ Ferraro, K., Thorpe, R., Wilkinson, J. (2003). The Life Course of Severe Obesity: Does Childhood Overweight Matter? *Journal of Gerontology*. 58B(2):S110-S119.

ⁱⁱⁱ Mokdad, A., Ford, E., Bowman, B., et al. (2003). Prevalence of Obesity, Diabetes, and Obesity-Related Health Risk Factors, 2001. *Journal of the American Medical Association*. 289(1):76-79.

^{iv} Freedman, D., Khan, L., Serdula, M., Dietz, W., Srinivasan, S., Berenson, G. (2005). The Relation of Childhood BMI to Adult Adiposity: The Bogalusa Heart Study. *Pediatrics*. 115(1):22-27.