



Prevention Research Center for Healthy Neighborhoods
at Case Western Reserve University

2016 Cuyahoga County Youth Risk Behavior Survey: Dietary Behavior

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 spring of 2016, the PRCHN conducted the YRBS among 7th and 8th grade students in Cuyahoga County middle schools. A more detailed description of the methodology is available at our website, <http://prchn.org/yrbs.aspx>.

This brief report presents results from the 2016 Cuyahoga County Middle School Youth Risk Behavior Survey, with a particular focus on Nutrition. In this brief report, we present:

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

Data for similar behaviors can be found at our website, <http://prchn.org/yrbs.aspx>.

Nutrition

Diet and nutrition have important links to adolescent health and well-being, as well as to major causes of morbidity and mortality later in life. Fruits and vegetables are good sources of complex carbohydrates, vitamins, minerals, and other substances that are important for good health. There is probable evidence to suggest that dietary patterns with higher intakes of fruits and vegetables are associated with a decreased risk for some types of cancer,^{i,ii,iii} cardiovascular disease,^{iv} and stroke.^v Although data are limited, an increased intake of fruits and vegetables appears to be associated with a decreased risk of being overweight.^{vi}

Eating breakfast every day may reduce the risk for obesity and insulin resistance syndrome — an early sign of developing diabetes, by as much as 35 to 50 percent.^{vii} Breakfast eaters tend to eat fewer calories, less saturated fat and cholesterol and have better overall nutritional status than breakfast skippers.^{viii}

Overall Prevalence

The following table summarizes nutrition behaviors among the 13,261 middle school students who completed the 2016 Cuyahoga County YRBS. Prevalence estimates and 95% confidence intervals were computed for all variables.

Risk Behavior	% (95% Confidence Interval)
Ate fruits and vegetables five or more times (During the day before the survey.)	29.6 (29.2-30.1)
Had a can, bottle, or glass of soda or pop one or more times (Not including diet pop, during the day before the survey.)	48.7 (48.2-49.2)
Drank water at school every day (Including water from a fountain, a sink or faucet, a bottle, a reusable bottle brought from home, or another source; every day during an average school week.)	56.6 (56.1-57.1)
Did not eat breakfast every day (During the 7 days before the survey.)	59.8 (59.3-60.3)
Ate fast food on one or more days (During the 7 days before the survey.)	69.1 (68.7-69.5)
Went hungry because there was not enough food in their home (Sometimes, most of the time, or always; during the 30 days before the survey.)	14.7 (14.4-15.0)
Took a multivitamin every day (During the 7 days before the survey.)	11.2 (11.0-11.4)

Regional Prevalence

The table below represents nutrition behaviors by the six regions of Cuyahoga County. This division was conducted to provide a geographic representation of the prevalence of different risk behaviors in Cuyahoga County. In 2016, we were able to weight to 5 of 6 regions in Cuyahoga County. The column under Outer Ring-West does not include data because school participation within this region was insufficient to permit weighting.

Risk Behavior	CMSD East % (95% CI)	CMSD West % (95% CI)	Inner Ring East % (95% CI)	Inner Ring West % (95% CI)	Outer Ring East % (95% CI)	Outer Ring West % (95% CI)
Ate fruits and vegetables five or more times (During the day before the survey.)	20.9% (18.5-23.4)	22.7% (20.3-25.3)	26.4% (25.7-27.2)	27.8% (27.3-28.3)	39.0% (38.0-40.1)	N/A
Had a can, bottle, or glass of soda or pop one or more times (Not including diet pop, during the day before the survey.)	65.3% (63.4-67.2)	62.1% (59.8-64.4)	56.2% (55.0-57.4)	50.0% (49.3-50.7)	35.2% (34.2-36.2)	N/A
Drank water at school (Including water from a fountain, a sink or faucet, a bottle, a reusable bottle brought from home, or another source; every day during an average school week.)	44.6% (42.4-46.9)	41.8% (39.2-44.6)	49.9% (49.1-50.6)	56.4% (55.6-57.2)	65.9% (63.9-67.7)	N/A
Did not eat breakfast every day (During the 7 days before the survey.)	69.0% (66.0-71.8)	68.6% (66.1-71.0)	68.3% (67.3-69.3)	61.6% (60.7-62.4)	51.7% (50.8-52.5)	N/A
Ate fast food on one or more days (During the 7 days before the survey.)	80.1% (77.8-82.2)	71.4% (69.2-73.5)	73.9% (72.7-75.1)	70.6% (69.9-71.3)	57.9% (56.9-58.9)	N/A
Went hungry because there was not enough food in their home (Sometimes, most of the time, or always; during the 30 days before the survey.)	13.7% (12.0-15.5%)	13.4% (11.9-15.0)	16.6% (15.9-17.2)	18.0% (17.5-18.5)	13.1% (12.5-13.6)	N/A
Took a multivitamin every day (During the 7 days before the survey.)	5.6% (4.6-6.8)	6.3% (5.2-7.8)	7.6% (7.1-8.1)	10.5% (10.0-11.1)	15.2% (14.5-16.0)	N/A

Demographic Prevalence

The tables below allow for further comparisons of nutrition behaviors between demographic groups. Data are presented by gender, race/ethnicity, and grade level. A statistically significant difference exists between groups if the 95% confidence intervals do not overlap.

Ate fruits and vegetables five or more times			
Category	%	CI	
Gender			
Female	30.0	29.4	30.6
Male	29.3	28.6	29.9
Race/Ethnicity			
White	33.6	33.3	34.0
Black	23.8	22.9	24.8
Hispanic	22.9	20.0	26.0
Other/Multiple	42.1	40.6	43.6
Grade			
7th	30.9	30.2	31.7
8th	28.3	27.7	29.0
Total	29.6	29.1	30.1

Drank soda or pop one or more times yesterday			
Category	%	CI	
Gender			
Female	44.6	44.0	45.3
Male	52.5	51.8	53.2
Race/Ethnicity			
White	38.8	38.4	39.1
Black	62.2	61.2	63.1
Hispanic	61.5	58.5	64.4
Other/Multiple	45.9	44.2	47.7
Grade			
7th	49.1	48.2	50.1
8th	48.0	47.0	49.0
Total	48.6	48.1	49.0

Drank water at school every day			
Category	%	CI	
Gender			
Female	53.8	53.1	54.5
Male	59.5	58.8	60.2
Race/Ethnicity			
White	64.6	64.2	64.9
Black	47.0	46.0	48.1
Hispanic	39.3	36.0	42.7
Other/Multiple	58.3	56.5	60.1
Grade			
7th	55.4	54.3	56.4
8th	58.0	57.1	59.0
Total	56.7	56.2	57.2

Did not eat breakfast every day			
Category	%	CI	
Gender			
Female	64.3	63.7	64.9
Male	55.3	54.6	56.1
Race/Ethnicity			
White	51.6	51.2	52.0
Black	70.6	69.5	71.7
Hispanic	70.4	66.8	73.8
Other/Multiple	56.6	55.1	58.1
Grade			
7th	57.2	56.4	58.1
8th	62.1	61.3	62.9
Total	59.7	59.2	60.2

Ate fast food one or more days			
Category	%	CI	
Gender			
Female	68.9	68.3	69.5
Male	69.2	68.6	69.8
Race/Ethnicity			
White	62.7	62.3	63.2
Black	78.8	77.9	79.7
Hispanic	72.7	69.6	75.6
Other/Multiple	66.5	65.1	67.8
Grade			
7th	68.1	67.3	68.9
8th	69.8	69.1	70.5
Total	69.0	68.5	69.4

Went hungry because not enough food in the home			
Category	%	CI	
Gender			
Female	14.6	14.1	15.1
Male	14.8	14.3	15.2
Race/Ethnicity			
White	12.8	12.6	13.1
Black	16.5	15.8	17.3
Hispanic	19.7	17.3	22.4
Other/Multiple	19.7	18.5	21.0
Grade			
7th	15.6	15.2	16.1
8th	13.5	13.1	14.0
Total	14.6	14.2	14.9

Took a multivitamin every day			
Category	%	CI	
Gender			
Female	11.6	11.2	11.9
Male	10.8	10.5	11.2
Race/Ethnicity			
White	14.2	13.9	14.4
Black	7.3	6.7	7.8
Hispanic	7.2	5.9	8.7
Other/Multiple	14.9	13.9	15.9
Grade			
7th	9.5	9.1	9.9
8th	12.7	12.2	13.1
Total	11.1	10.9	11.4

Cuyahoga County Trend Data

The following table presents the prevalence of nutrition behaviors among Cuyahoga County middle school students in 2008, 2010, 2012, 2014, and 2016. The prevalence for each year is given (when available), with 95% confidence intervals below.¹

Cuyahoga County, 2008	Cuyahoga County, 2010	Cuyahoga County, 2012	Cuyahoga County, 2014	Cuyahoga County, 2016
Ate fruits and vegetables five or more times (During the day before the survey.)				
24.2% (23.0-25.3)	26.9% (25.6-28.3)	28.1% (27.0-29.1)	25.1% (24.3-25.9)	29.6% (29.2-30.1)
Ate fast food one or more times (During the 7 days before the survey.)				
70.9% (69.6-72.1)	68.9% (67.8-70.0)	70.6% (69.6-71.7)	70.7% (69.6-71.5)	69.1% (68.7-69.5)
Did not eat breakfast every day (During the 7 days before the survey.)				
62.2% (61.1-63.4)	59.8% (58.0-61.5)	58.7% (57.6-59.9)	59.5% (58.6-60.5)	59.8% (59.3-60.3)
Drank 3 or more glasses of milk per day (During the day before the survey.)				
24.4% (23.2-25.6)	28.0% (26.6-29.4)	24.3% (23.4-25.3)	N/A	N/A
Had a can, bottle, or glass of soda or pop one or more times (Not including diet pop, during the day before the survey.)				
N/A	N/A	N/A	51.6% (50.6-52.5)	48.7% (48.2-49.2)
Took a multivitamin every day (During the week before the survey.)				
N/A	N/A	N/A	10.3% (9.8-10.8)	11.2% (11.0-11.4)

¹ The YRBS questions with two or more data points over 2008-2016 are included. The new 2016 questions are not included for the purpose of demonstrating trends. For those questions not asked in 2016, refer to the PRCHN archives at www.prchn.org/asp for more detailed information.

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