

BRFSS Brief

Number 1504

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual statewide telephone survey of adults developed by the Centers for Disease Control and Prevention and administered by the New York State Department of Health. The BRFSS is designed to provide information on behaviors, risk factors, and utilization of preventive services related to the leading causes of chronic and infectious diseases, disability, injury, and death among the noninstitutionalized, civilian population aged 18 years and older.

Fruit and Vegetable Consumption

New York State Adults, 2013

Introduction and Key Findings

Consuming a diet rich in fruits and vegetables every day is an important part of a healthy lifestyle. Fruits and vegetables are excellent sources of essential vitamins, minerals and fiber. Substituting fruits and vegetables for higher calorie foods can contribute to weight management and help reduce the risk of stroke, high blood pressure, diabetes, and some cancers.^{1,2,3}

The State Indicator Report For Consumption of Fruits and Vegetables, 2013 shows that consumption is low in the United States and New York State (NYS): adults in NYS consume fruit about 1.1 times per day and vegetables about 1.7 times per day.⁴ The Dietary Guidelines for Americans, 2010 recommends that Americans eat more fruits and vegetables as part of a healthy diet. The New York State Prevention Agenda 2013-2017 established a goal to increase the percentage of adult New Yorkers who consume fruits and vegetables five or more times per day to at least 33%.⁵

Key Findings

One in three adults (34.5%) in NYS consume fruit less than one time per day, while 22% consume vegetables less than one time daily. Daily consumption of fruits and vegetables is lower in adults who are male, 18-24 years old, Hispanic, earn a household income of less than \$15,000, or have less than a high school degree. In addition, daily consumption of vegetables is lower in Black, non-Hispanic adults.

BRFSS questions

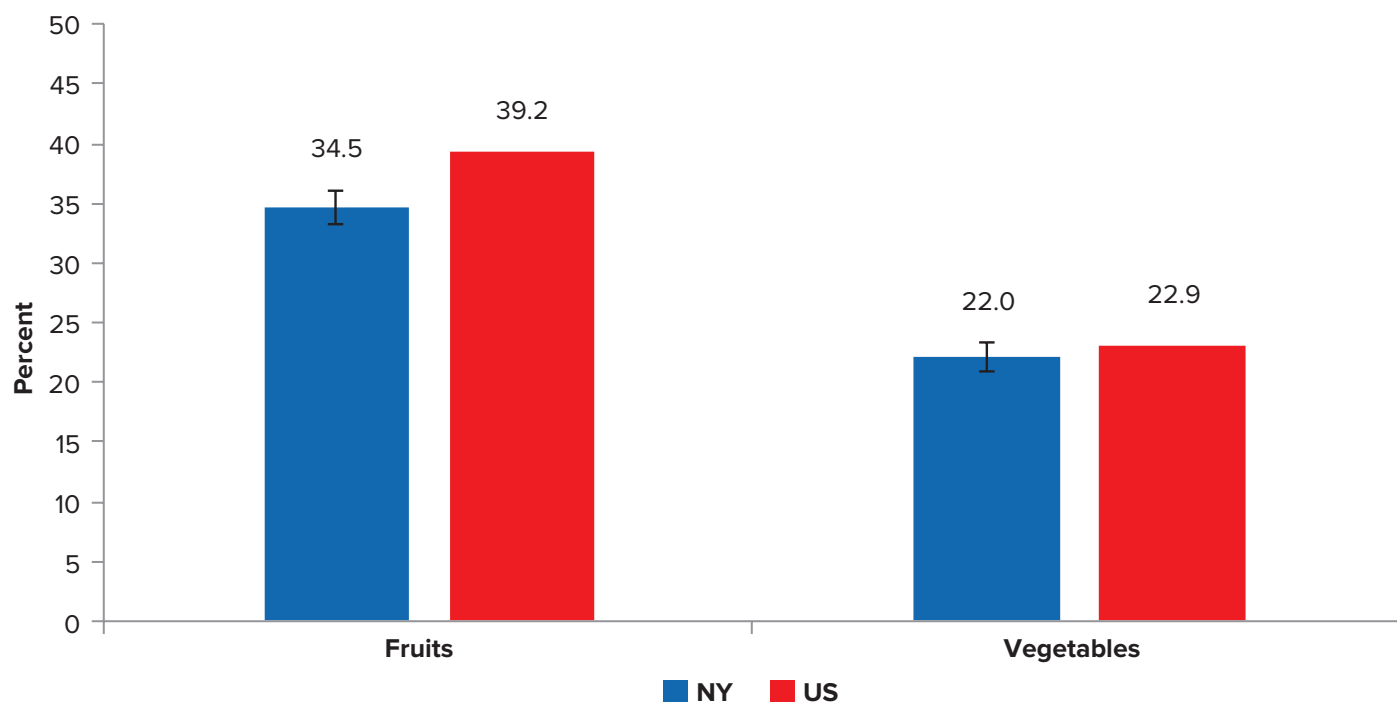
These next questions are about the fruits and vegetables you ate or drank during the past 30 days. Please think about all forms of fruits and vegetables including cooked or raw, fresh, frozen or canned. Please think about all meals, snacks, and food consumed at home and away from home. I will be asking how often you ate or drank each one: for example, once a day, twice a week, three times a month, and so forth.

1. *During the past month, how many times per day, week or month did you drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.*
2. *During the past month, not counting juice, how many times per day, week, or month did you eat fruit? Count fresh, frozen, or canned fruit*
3. *During the past month, how many times per day, week, or month did you eat cooked or canned beans, such as refried, baked, black, garbanzo beans, beans in soup, soybeans, edamame, tofu or lentils. Do NOT include long green beans.*

4. *During the past month, how many times per day, week, or month did you eat dark green vegetables for example broccoli or dark leafy greens including romaine, chard, collard greens or spinach?*
5. *During the past month, how many times per day, week, or month did you eat orange-colored vegetables such as sweet potatoes, pumpkin, winter squash, or carrots?*
6. *Not counting what you just told me about, during the past month, about how many times per day, week, or month did you eat OTHER vegetables? Examples of other vegetables include tomatoes, tomato juice or V-8 juice, corn, eggplant, peas, lettuce, cabbage, and white potatoes that are not fried such as baked or mashed potatoes.*

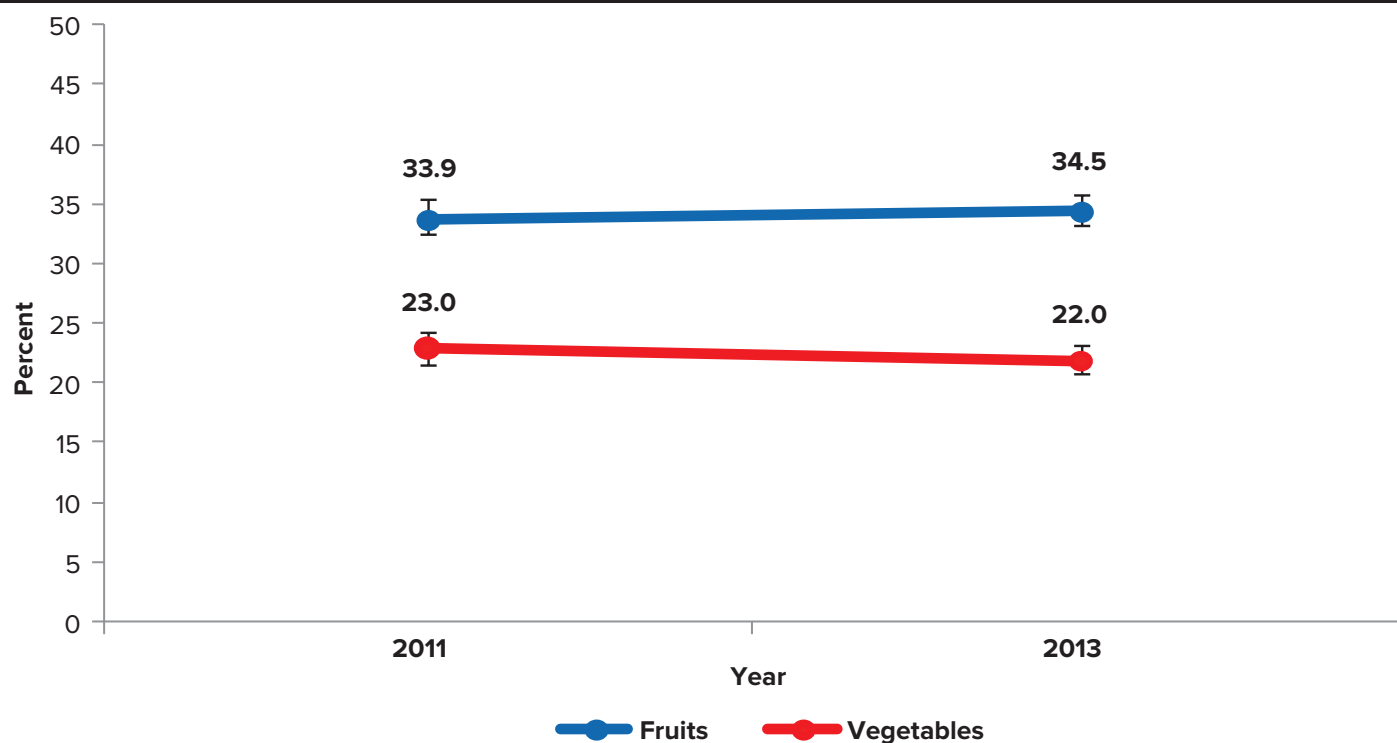
Total daily fruit consumption was calculated based on responses to questions 1 and 2, and total daily vegetables consumption was based on questions 3-6. Responses were combined to create a composite measure of average

Figure 1. Percentage of adults in New York State and the U.S. who report consuming fruits and vegetables less than one time daily, BRFSS 2013



Note: Error bars represent 95% confidence intervals.

Figure 2. Percentage of adults in New York State who report consuming fruits and vegetables less than one time daily, by BRFSS survey year



Note: Error bars represent 95% confidence intervals.

Fruit and vegetable consumption among New York State adults: 2013 BRFSS

	Percentage who report consuming fruits and vegetables less than one time daily			
	Fruits		Vegetables	
	% ^a	95% CI ^a	%	95% CI
New York State (NYS) [n=8,979]	34.5	33.1-35.9	22.0	20.8-23.3
Sex				
Male	39.4	37.2-41.6	25.7	23.7-27.6
Female	30.1	28.2-31.9	18.7	17.2-20.3
Age (years)				
18-24	44.8	39.4-50.1	28.3	23.4-33.2
25-34	36.0	32.4-39.7	19.1	16.2-22.0
35-44	34.4	30.7-38.1	22.4	19.1-25.6
45-54	36.9	33.7-40.1	23.0	20.3-25.7
55-64	31.5	28.6-34.5	20.8	18.2-23.5
65+	26.1	23.6-28.7	20.3	18.0-22.6
Race/ethnicity				
White non-Hispanic	32.7	31.0-34.4	19.5	18.0-20.9
Black non-Hispanic	33.9	29.5-38.3	27.2	23.2-31.1
Hispanic	40.7	36.9-44.4	27.8	24.3-31.3
Other non-Hispanic	37.3	31.5-43.0	19.7	15.4-24.0
Annual household income				
<\$15,000	44.7	40.2-49.3	30.9	26.8-35.1
\$15,000-\$24,999	36.6	32.8-40.4	26.3	22.9-29.7
\$25,000-\$34,999	32.8	28.0-37.7	22.2	18.2-26.3
\$35,000-\$49,999	30.3	26.4-34.2	20.6	17.0-24.1
>\$50,000	31.0	29.0-33.1	15.7	14.0-17.4
Missing ^b	37.5	33.2-41.8	28.9	24.9-32.9
Education				
Less than high school	40.2	35.5-44.9	30.3	26.1-34.6
High school or GED	37.4	34.6-40.3	27.1	24.5-29.7
Some post high school	34.7	31.8-37.5	21.7	19.3-24.2
College graduate	28.8	26.7-30.8	14.1	12.6-15.6
Weight status categories				
Obese	38.4	35.5-41.2	23.1	20.7-25.5
Overweight	36.3	33.9-38.8	22.3	20.2-24.5
Neither obese nor overweight	30.6	28.1-33.0	20.3	18.3-22.3
Region				
New York City (NYC)	34.4	32.1-36.6	22.9	21.0-24.8
NYS exclusive of NYC	34.6	32.7-36.4	21.4	19.8-23.0

a % = weighted percentage; CI = confidence interval

b "Missing" category included because more than 10% of the sample did not report income.

References

1. U.S. Department of Health and Human Services and U.S. Department of Agriculture. *Dietary Guidelines for Americans*, 2005. 6th Edition, Washington, DC: U.S. Government Printing Office, January 2005.
2. IARC Handbooks of Cancer Prevention. In: *Fruits and vegetables*. vol. 8:Lyon, France: IARC Press; 2003.
3. Hung HC, Joshipura KJ, Jiang R, et al. Fruit and vegetable intake and risk of major chronic disease. *J Natl Cancer Inst*. 2004;96:1577–1584.
4. State Indicator Report on Fruits and Vegetables 2013 available at: <http://www.cdc.gov/nutrition/downloads/state-indicator-report-fruits-vegetables-2013.pdf>
5. New York State Prevention Agenda Preventing Chronic Diseases Action Plan available at: http://www.health.ny.gov/prevention/prevention_agenda/2013-2017/docs/prevent_chronic_diseases.pdf

Program Contributions

New York State Department of Health
Bureau of Chronic Disease Evaluation and Research
Bureau of Chronic Disease Control

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