

BRFSS Brief

Number 2021-08

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, 2019

Introduction and Key Findings

Consuming a diet rich in fruits and vegetables every day is an important part of a healthy lifestyle. The 2020-2025 Dietary Guidelines for Americans recommend a healthy eating pattern that includes a variety of vegetables from all five subgroups – dark green; red and orange; beans, peas and lentils; starchy; and other. Whole fruits, which include fresh, canned, frozen and dried forms, and 100% fruit juice are also recommended in a healthy eating pattern.¹ Fruits and vegetables are excellent sources of essential vitamins, minerals, fiber, and numerous phytochemicals. Substituting fruits and vegetables for higher calorie foods can help support a healthy weight, meet nutrient needs, and reduce the risk of stroke, high blood pressure, diabetes, and some cancers.^{1,2,3}

The National Fruit and Vegetable Alliance National Action Plan 2015 Report Card indicates that per capita fruit and vegetable consumption (excluding fried potatoes) has declined 5% between 2009 and 2014, for an average of 1.68 cups per day.⁴ The Healthy U.S.-Style Eating Pattern at the 2,000-calorie level recommends 2½ cup-equivalents of vegetables and 2 cup-equivalents of fruit per day.

The State Indicator Report for Consumption of Fruits and Vegetables from 2015 shows that the median daily intake frequency for adults in New York State is 1.0 for fruit and 1.7 for vegetables.⁵ The New York State Prevention Agenda 2019-2024 established a goal to decrease the percentage of adults who consume less than one fruit and less than one vegetable per day.⁶

Key Findings

More than thirty percent of adults in NYS (34.5%) consume fruit less than one time per day, and over twenty percent (21.5%) consume vegetables less than one time per day. Daily consumption of fruits is lower among males, adults under 65 years of age, and adults with less than a college degree. Daily consumption of vegetables is lower among males, adults with less education, adults in households that earn less than \$50,000 per year, adults living with disability, and adults living in New York City.

BRFSS questions

Now think about the foods you ate or drank during the past month, that is, the past 30 days, including meals and snacks.

1. *Not including juices, how often did you eat fruit? You can tell me times per day, times per week or times per month.*
2. *Not including fruit-flavored drinks or fruit juices with added sugar, how often did you drink 100% fruit juice such as apple or orange juice?*
3. *How often did you eat a green leafy or lettuce salad, with or without other vegetables?*

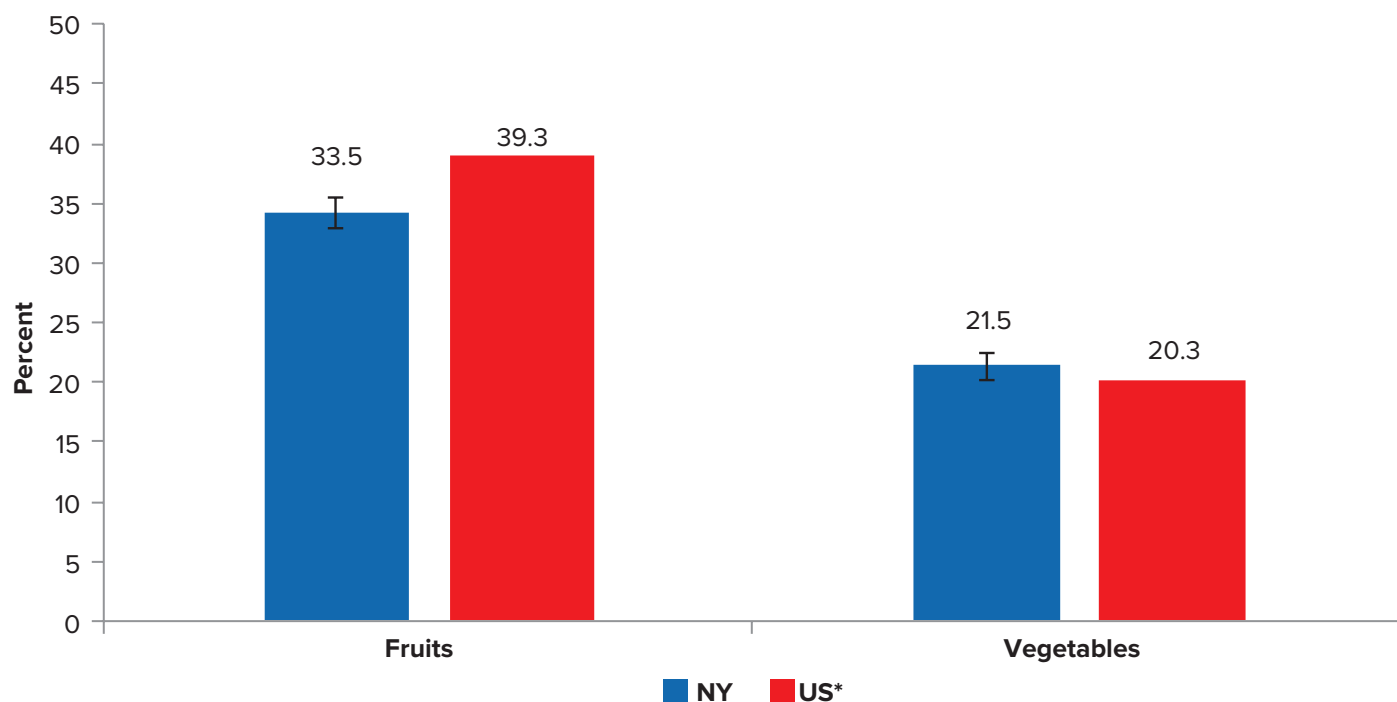
4. *How often did you eat any kind of fried potatoes, including French fries, home fries, or hash browns?*

5. *How often did you eat any other kind of potatoes, or sweet potatoes, such as baked, boiled, mashed potatoes, or potato salad?*

6. *Not including lettuce salads and potatoes, how often did you eat other vegetables?*

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.

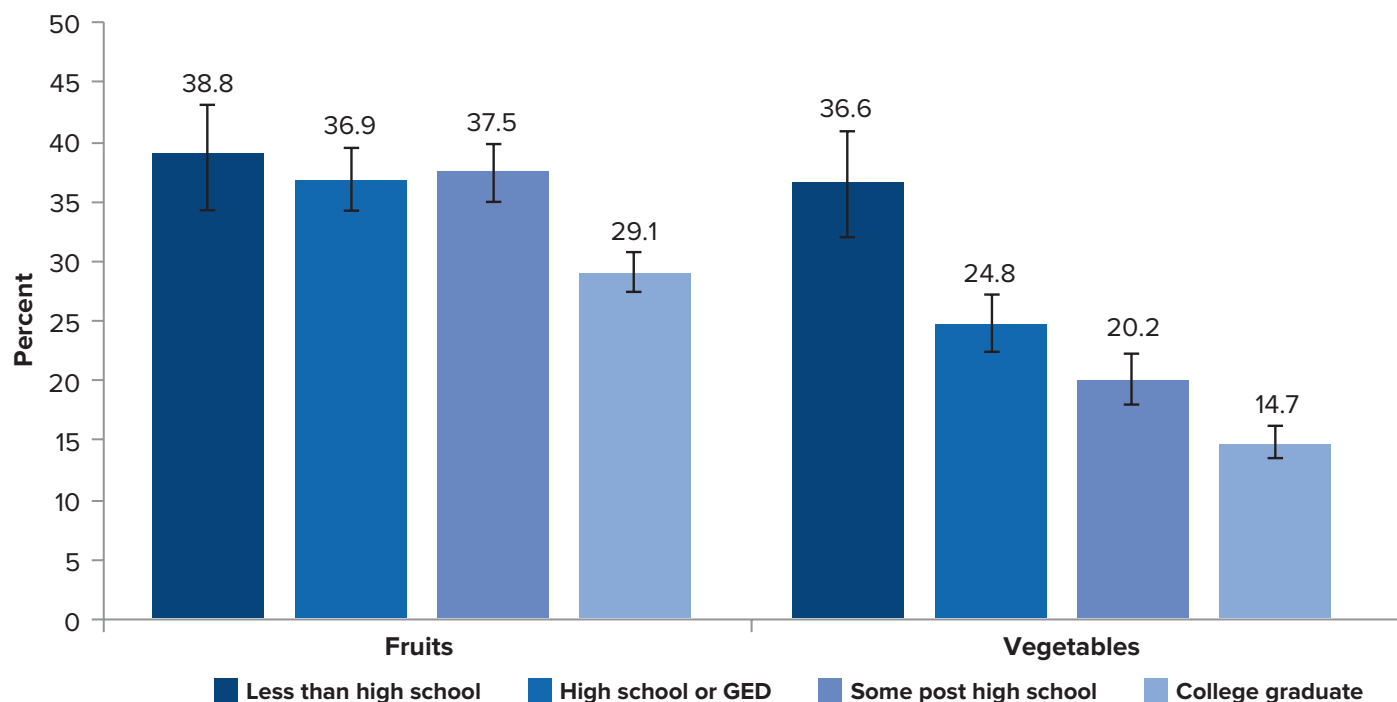
Figure 1. Percentage of adults in New York State and the U.S. who report consuming fruits and vegetables less than one time daily, BRFSS 2019



Note: Error bars represent 95% confidence intervals.

*Median percent; includes data from 49 US states and the District of Columbia

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



Note: Error bars represent 95% confidence intervals.

Fruit and vegetable consumption among New York State adults, 2019 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=14,232]	34.5	33.2-35.8	21.5	20.4-22.6
Sex				
Male	37.4	35.6-39.3	24.6	22.9-26.3
Female	31.8	30.1-33.5	18.6	17.1-20.1
Age (years)				
18-24	38.7	34.0-43.4	28.8	24.3-33.2
25-34	39.0	35.6-42.4	22.0	19.0-25.0
35-44	33.9	30.4-37.3	20.4	17.5-23.3
45-54	36.0	33.0-39.1	20.4	17.8-23.0
55-64	35.4	32.6-38.2	21.5	18.8-24.2
65+	27.7	25.6-29.8	19.2	17.2-21.2
Race/ethnicity				
White, non-Hispanic	33.0	31.5-34.4	15.8	14.7-17.0
Black, non-Hispanic	38.0	34.1-42.0	28.5	24.8-32.2
Hispanic	38.2	34.9-41.5	35.0	31.6-38.3
Other, non-Hispanic	32.8	27.9-37.7	21.0	16.7-25.3
Annual household income				
<\$25,000	38.9	36.0-41.7	29.7	26.9-32.5
\$25,000-\$49,999	35.7	32.5-38.8	24.5	21.5-27.4
\$50,000 and greater	32.6	30.8-34.5	14.9	13.5-16.4
Missing ^b	33.1	30.2-36.1	25.4	22.6-28.3
Education				
Less than high school	38.8	34.4-43.2	36.6	32.1-41.0
High school or GED	36.9	34.2-39.5	24.8	22.4-27.2
Some post high school	37.5	34.9-40.0	20.2	18.0-22.3
College graduate	29.1	27.4-30.8	14.7	13.3-16.1
Disability^c				
Yes	36.8	34.3-39.3	26.6	24.3-29.0
No	33.6	32.2-35.1	19.7	18.4-21.1
Weight status categories				
Neither obese nor overweight	30.5	28.3-32.6	19.1	17.3-21.0
Overweight	35.1	32.9-37.4	21.4	19.3-23.4
Obese	38.4	36.0-40.8	24.9	22.7-27.2
Region				
New York City (NYC)	34.0	31.8-36.1	24.8	22.8-26.9
NYS exclusive of NYC	34.9	33.4-36.4	19.1	17.8-20.4

^a % = weighted percentage; CI = confidence interval

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

^c All respondents who reported having at least one type of disability (cognitive, mobility, vision, self-care, or independent living or deafness)

References

1. U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2020-2025. 9th Edition. December 2020. Available at <http://dietaryguidelines.gov>
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. National Fruit and Vegetable Alliance. National Action Plan to Promote Health Through Increased Fruit & Vegetable Consumption, 2015 Report Card. National Fruit and Vegetable Alliance, 2015. Web. <http://www.nfva.org/>
5. Lee-Kwan SH, Moore LV, Blanck HM, Harris DM, Galuska D. Disparities in State-Specific Adult Fruit and Vegetable Consumption — United States, 2015. MMWR Morb Mortal Wkly Rep 2017; 66:1241–1247. DOI: <http://dx.doi.org/10.15585/mmwr.mm6645a1External>
6. New York State Prevention Agenda Preventing Chronic Diseases Action Plan available at: https://health.ny.gov/prevention/prevention_agenda/2019-2024/chr.htm

Program Contributions

New York State Department of Health
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