

# BRFSS Brief

Number 1104

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.

## High Blood Pressure and High Blood Cholesterol

New York State Adults, 2009

### Introduction

High blood pressure (hypertension) accounts for approximately 45% of cardiovascular disease deaths, and was estimated to be responsible for one in six deaths in the United States (US) in 2005.<sup>1</sup> In 2010, high blood pressure was estimated to cost the US an estimated \$76.6 billion in health care services, medications and missed days of work.<sup>2</sup> An Institute of Medicine report on strategies to improve blood pressure control identified high blood pressure as a “neglected disease” because of the lack of sufficient attention given to prevention and control.<sup>3</sup> In a representative sample of adults in the US, among adults measured to have high blood pressure, 80% were aware of their condition, 74% were being treated, but only 48% had their blood pressure under control.<sup>3</sup> Obesity, high sodium intake, lack of physical activity, and tobacco use are common modifiable risk factors for developing high blood pressure.

Elevated blood cholesterol levels are also a major risk factor for cardiovascular disease. Adults with high total cholesterol are twice as likely to develop coronary heart disease. Data from the National Health and Nutrition Examination Survey (NHANES) found that 16% of adults had high total cholesterol levels ( $\geq 240$  mg/dL); 31% were in the borderline high range ( $\geq 200$  mg/dL but  $< 240$  mg/dL); and only 53% had total cholesterol levels in a desirable range.<sup>2</sup> The National Cholesterol Education Program recommends that all adults have their cholesterol levels checked once every five years.<sup>4</sup> Obesity, lack of physical activity, and high intake of saturated and trans fats are common modifiable risk factors for developing high cholesterol.

### BRFSS Questions

#### High blood pressure

1. *Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?*

[If “yes”]

2. *Are you currently taking medicine for your high blood pressure?*

#### High blood cholesterol

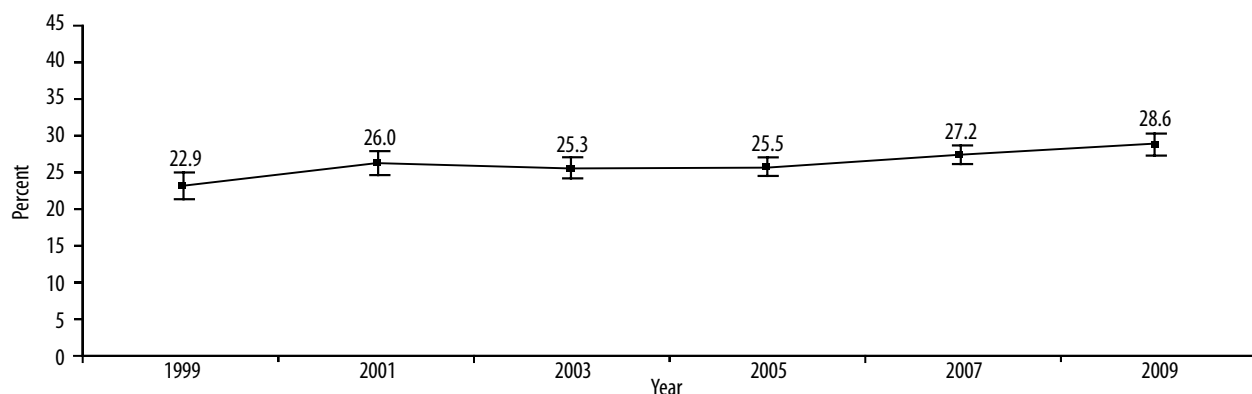
1. *Blood cholesterol is a fatty substance found in the blood. Have you ever had your blood cholesterol checked?*

[If “yes”]

2. *About how long has it been since you last had your blood cholesterol checked?*

3. *Have you ever been told by a doctor, nurse, or other health professional that your blood cholesterol is high?*

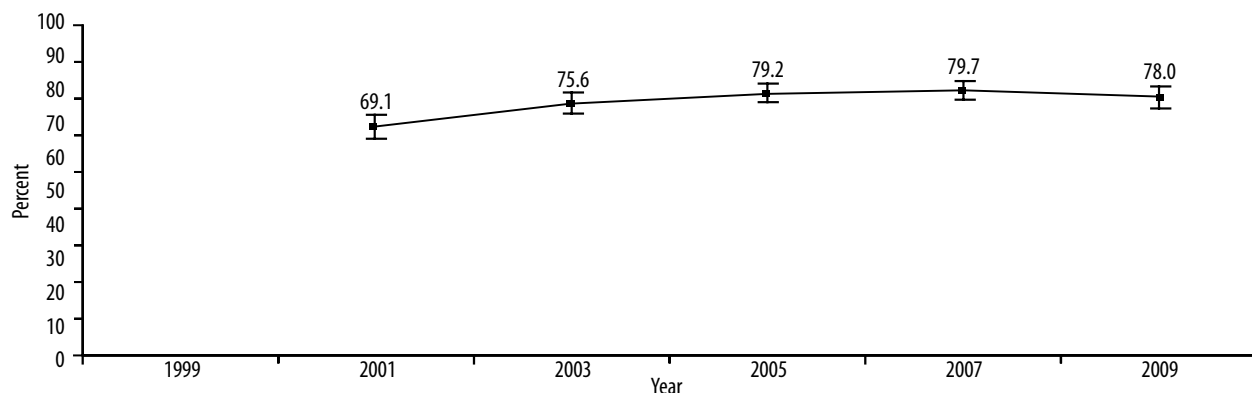
## High blood pressure\* among New York State adults, by BRFSS survey year



\* Those ever told by doctor, nurse, or other health professional that they had high blood pressure.

Note: Error bars represent 95% confidence intervals.

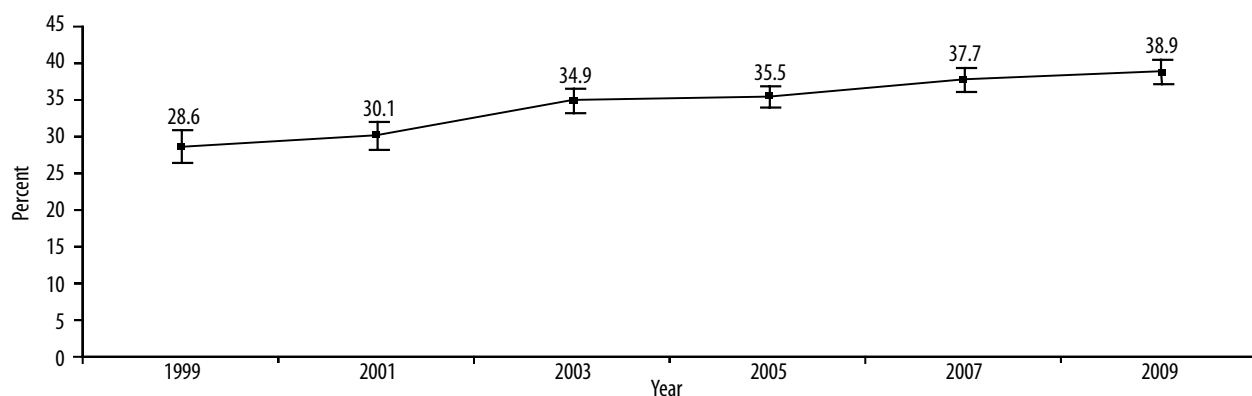
## Use of high blood pressure medication\* among New York State adults, by BRFSS survey year



\* Of those respondents who were ever told by a doctor, nurse or other health professional they had high blood pressure.

Note: Error bars represent 95% confidence intervals.

## High cholesterol\* among New York State adults, by BRFSS survey year



\* Those who ever had blood cholesterol checked.

Note: Error bars represent 95% confidence intervals.

## Blood pressure and blood cholesterol screening and control among New York State adults: <sup>a</sup>2009 BRFSS

	Blood pressure				Blood cholesterol			
	High blood pressure		Taking medication <sup>b</sup>		High cholesterol <sup>c</sup>		Checked within past 5 years	
	% <sup>d</sup>	95% CI <sup>d</sup>	%	95% CI	%	95% CI	%	95% CI
<b>New York State (NYS)</b> [n= 6,927]	28.6	27.1-30.0	78.0	74.9-80.8	38.9	37.3-40.6	81.9	80.3-83.4
<b>Sex</b>								
Male	29.6	27.2-32.1	70.9	65.5-75.7	39.4	36.7-42.2	79.7	77.0-82.2
Female	27.6	25.9-29.3	84.9	82.2-87.3	38.5	36.5-40.5	84.0	82.0-85.8
<b>Age (years)</b>								
18-24	8.5	4.9-14.3	—	—	15.8	9.5-25.1	53.9	46.1-61.4
25-34	12.3	9.2-16.3	—	—	21.8	17.1-27.5	69.1	64.3-73.6
35-44	15.4	12.6-18.7	—	—	26.3	22.9-30.1	81.9	78.2-85.1
45-54	29.0	25.9-32.2	73.6	66.6-79.6	42.0	38.7-45.5	89.7	87.7-91.4
55-64	44.7	41.4-48.1	89.6	86.5-92.1	57.4	54.0-60.7	91.4	88.5-93.6
65+	59.3	56.6-62.0	94.3	92.7-95.6	53.3	50.5-56.1	96.1	94.9-97.0
<b>Race/ethnicity</b>								
White	28.8	27.3-30.3	80.8	77.6-83.5	39.9	38.2-41.7	84.7	83.1-86.2
Black	38.0	32.9-43.3	76.5	66.8-84.0	38.3	33.0-44.0	80.2	74.3-85.0
Hispanic	20.9	17.1-25.1	72.3	60.9-81.3	37.8	32.1-43.8	76.2	71.0-80.8
Other	26.2	20.4-32.9	—	—	36.5	29.5-44.1	78.4	71.2-84.3
<b>Annual household income</b>								
<\$15,000	36.2	30.8-42.1	83.8	73.8-90.5	45.2	38.5-51.9	73.1	66.2-79.0
\$15,000-\$24,999	35.1	31.2-39.2	83.2	77.3-87.9	43.4	38.6-48.2	76.1	71.3-80.4
\$25,000-\$34,999	36.5	31.3-42.0	82.1	72.5-88.9	42.2	36.5-48.2	76.9	71.0-81.9
\$35,000-\$49,999	30.9	26.8-35.3	—	—	36.3	32.1-40.7	81.2	76.2-85.3
\$50,000-\$74,999	28.6	24.4-33.2	—	—	37.7	33.2-42.3	85.6	81.1-89.2
\$75,000 and greater	21.3	19.0-23.7	71.8	64.5-78.0	35.6	32.8-38.5	90.2	87.9-92.1
Missing <sup>e</sup>	26.4	23.0-30.1	78.2	70.5-84.4	41.0	36.0-46.2	75.6	70.3-80.2
<b>Educational attainment</b>								
Less than high school (HS)	34.1	28.6-40.1	—	—	48.1	40.9-55.4	64.8	57.3-71.7
High school or GED	33.8	31.0-36.7	82.2	77.5-86.1	42.9	39.6-46.3	78.5	75.3-81.5
Some college	28.5	25.6-31.5	77.5	70.7-83.2	34.9	31.6-38.3	84.5	81.4-87.1
College graduate	23.5	21.4-25.8	74.6	68.6-79.7	37.3	34.8-39.8	87.2	85.1-89.1
<b>Disability<sup>f</sup></b>								
Yes	44.9	41.7-48.2	84.5	80.3-87.9	50.3	46.9-53.7	87.5	84.5-90.0
No	24.0	22.5-25.6	76.0	71.9-79.6	36.0	34.1-38.0	80.3	78.4-82.1
<b>Health care coverage<sup>g</sup></b>								
Yes	30.4	28.9-32.0	79.0	75.8-82.0	39.7	38.0-41.5	85.0	83.4-86.5
No	15.5	12.3-19.5	—	—	30.9	24.9-37.5	59.7	53.4-65.8
<b>Region</b>								
New York City (NYC)	26.6	23.9-29.5	76.5	70.1-81.9	39.2	35.5-42.6	81.2	78.0-84.1
NYS exclusive of NYC	29.5	27.9-31.2	78.6	75.1-81.8	38.8	36.9-40.7	82.3	80.4-84.0

a Rows with less than 50 observations and rows that contain a confidence interval with a half-width of greater than 10 have been suppressed.

b Of those respondents who were ever told by a doctor, nurse or other health professional that they had high blood pressure.

c If ever had blood cholesterol checked, and ever told by a doctor, nurse or other health professional that blood cholesterol was high.

d % = weighted percentage; CI = confidence interval.

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

f All respondents who report activity limitations due to physical, mental, or emotional reasons OR have health problems that require the use of special equipment.

g Includes health insurance, prepaid plans such as HMOs, and government plans such as Medicare.

## References

1. IOM (Institute of Medicine). 2010. A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension. Washington, DC: The National Academies Press.
2. Lloyd-Jones D, Adams RJ, Brown TM, et al. Heart Disease and Stroke Statistics—2010 Update. A Report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. *Circulation*. 2010;121:e1-e170.
3. Yoon S, Ostchega Y, Louis T. Recent trends in the prevalence of high blood pressure and its treatment and control, 1999-2008. NCHS data brief, no48. Hyattsville, MD: National Center for Health Statistics, 2010.
4. National Cholesterol Education Program, National Heart, Lung, and Blood Institute, National Institutes of Health. Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) Executive Summary. NIH Publication No. 01-3670. May 2001. [cited May 10, 2011] Available from: <http://www.nhlbi.nih.gov/guidelines/cholesterol/atp3xsum.pdf>

## Program Contributions

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