

CHAPTER 14: CARDIOVASCULAR DISEASE

Definition: Have ever been diagnosed with a) Heart attack or myocardial infarction, b) Angina or coronary heart disease, or c) Stroke by a doctor, nurse, or other health professional.

HEART ATTACK AND ANGINA

- **State Prevalence:** The rates of heart attack and angina were not significantly different.
 - **Heart attack: 7.4%** (95% CI: 6.5-8.4); 1st among 25 BRFSS participants.
 - **Angina: 8.7%** (95% CI: 7.7-9.7); 1st among 25 BRFSS participants.
- **Time Trends:** The prevalence of lifetime heart attack significantly decreased from 7.6% to 5.6% between 2000 and 2002 and then significantly increased to 7.4% in 2003.
- **Gender:** Men had a significantly higher prevalence of heart attack than women. Among men, the prevalence of heart attack significantly increased from 5.8% in 2002 to 9.5% in 2003.
 - **Heart attack: Men 9.5%** (95% CI: 7.9-11.1); **Women 5.5%** (95% CI: 4.5-6.6).
 - **Angina: Men 9.4%** (95% CI: 7.8-11.0); **Women 8.1%** (95% CI: 6.9-9.4).
- **Age:** The rates of both heart attack and angina significantly increased with age. Adults aged 65 and older were most likely to have ever had a heart attack (19.6%) and angina (20.9%). Among those who had ever had a heart attack, 49% had their first attack before the age of 55.
- **Education:** The prevalence of both heart attack and angina significantly decreased as education increased. Approximately 14% of adults without a high school diploma/GED had suffered a heart attack or angina, compared with about 4% of college graduates.
- **Household Income:** The prevalence of both heart attack and angina also significantly decreased with increasing household income. Adults with an income less than \$15,000 were more than six times as likely as the wealthiest adults to have had a heart attack or angina.

STROKE

- **State Prevalence: 4.2%** (95% CI: 3.5-4.8); 1st among 25 BRFSS participants.
- **Time Trends:** The prevalence of stroke did not significantly change between 1999 and 2003.
- **Gender: Men 3.1%** (95% CI: 2.1-4.0); **Women 5.1%** (95% CI: 4.2-6.1). Women had a significantly higher prevalence of stroke than men. Among women, the prevalence of stroke significantly increased between 2002 and 2003 (from 3.1% to 5.1%).
- **Age:** The elderly were significantly more likely to have ever had a stroke than adults in all younger age groupings. Among those who had ever had a stroke, 39.1% had their first stroke before the age of 55.
- **Education:** Adults without a high school diploma/GED had a significantly higher prevalence of stroke than those with higher levels of education. There were no significant differences in the risk of stroke among adults in the three highest education categories.
- **Household Income:** The prevalence of stroke was highest among adults in the poorest households (9.2%). The risk of stroke was significantly lower among adults with an income of \$35,000 or more than among those with an annual income less than \$25,000.

Table 14.1: Prevalence of heart attack, angina, and stroke: WVBRFSS, 2003

Characteristic	Heart Attack or Myocardial Infarction			Angina or Coronary Heart Disease			Stroke		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	3,300	7.4	(6.5-8.4)	3,289	8.7	(7.7-9.7)	3,310	4.2	(3.5-4.8)
Sex									
Males	1,303	9.5	(7.9-11.1)	1,297	9.4	(7.8-11.0)	1,305	3.1	(2.1-4.0)
Females	1,997	5.5	(4.5-6.6)	1,992	8.1	(6.9-9.4)	2,005	5.1	(4.2-6.1)
Age									
18-24	197	0.0	--	197	0.0	--	197	0.2	(0.0-0.6)
25-34	447	0.4	(0.0-1.3)	447	1.7	(0.3-3.1)	447	0.4	(0.0-1.2)
35-44	548	1.8	(0.6-3.0)	548	2.9	(1.3-4.4)	549	0.6	(0.0-1.3)
45-54	667	7.4	(5.2-9.6)	666	8.1	(5.8-10.3)	668	2.4	(1.1-3.7)
55-64	637	11.3	(8.4-14.1)	639	14.9	(11.7-18.0)	639	5.3	(3.5-7.1)
65+	792	19.6	(16.5-22.6)	780	20.9	(17.8-24.0)	798	13.2	(10.7-15.8)
Education									
Less than H.S.	624	13.6	(10.8-16.5)	615	13.8	(10.9-16.7)	631	11.1	(8.5-13.6)
H.S. or G.E.D.	1,291	6.7	(5.2-8.1)	1,291	9.0	(7.4-10.6)	1,294	3.1	(2.2-4.0)
Some Post-H.S.	739	6.5	(4.6-8.4)	736	7.9	(5.9-9.8)	739	2.4	(1.3-3.5)
College Graduate	642	4.0	(2.3-5.7)	643	4.2	(2.6-5.7)	642	1.5	(0.5-2.4)
Income									
Less than \$15,000	521	13.8	(10.4-17.2)	515	16.2	(12.7-19.8)	523	9.2	(6.6-11.8)
\$15,000- 24,999	710	10.3	(8.0-12.7)	710	10.6	(8.3-12.9)	712	6.5	(4.6-8.5)
\$25,000- 34,999	459	7.1	(4.6-9.6)	460	9.6	(6.6-12.6)	461	3.0	(1.4-4.6)
\$35,000- 49,999	474	4.6	(2.6-6.6)	472	6.4	(4.1-8.7)	475	1.5	(0.3-2.6)
\$50,000- 74,999	389	4.8	(2.5-7.0)	390	5.8	(3.4-8.2)	390	1.5	(0.2-2.9)
\$75,000+	326	2.2	(0.5-3.8)	326	2.2	(0.7-3.6)	326	0.7	(0.0-1.5)

Table 14.2: Other cardiovascular disease issues: WVBRFSS, 2003

Characteristics	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Respondents who had their first heart attack before the age of 55^a	136	53.4	(44.3-62.4)	105	41.5	(31.2-51.9)	241	49.0	(42.1-55.8)
Respondents who had their first stroke before the age of 55^b	43	45.9^d	(29.7-62.2)	114	35.3	(25.5-45.1)	157	39.1	(30.4-47.8)
Respondents who did NOT have any outpatient rehabilitation after leaving the hospital following their heart attack or stroke^c	164	74.5	(67.3-81.6)	203	78.1	(71.7-84.5)	367	76.2	(71.4-81.0)

a. Among respondents who have ever been told by a doctor that they had a heart attack.

b. Among respondents who have ever been told by a doctor that they had a stroke.

c. Among respondents who have ever been told by a doctor that they had either a heart attack or a stroke.

d. Use caution in interpreting percentages with N<50.

West Virginia Healthy People 2010 Objectives

Objective 12.1 Reduce heart disease mortality to no more than 200 deaths per 100,000 population. (Age-adjusted Baseline: 323.5 in 1998; Current: 294.3 in 2003; Source: WV Vital Statistics, 2003).

Objective 12.2 Reduce stroke deaths to no more than 45 per 100,000 population. (Age-adjusted Baseline: 59.1 in 1998; Current: 61.5 in 2003; Source: WV Vital Statistics, 2003).

Aspirin Therapy: Adults aged 35 and older who take aspirin daily or every other day.

State Prevalence	38.2% (95% CI: 36.2-40.3); 1 st among 25 BRFSS participants.
Time Trends	The percentage of adults on aspirin therapy significantly increased from 33.4% in 2002 to 38.2% in 2003.
Gender	Men 42.3% (95% CI: 39.0-45.5); Women 34.7% (95% CI: 32.2-37.2). Men were significantly more likely to be on aspirin therapy than women.
Age	The prevalence of aspirin therapy significantly increased at every age grouping. Approximately 18% of adults aged 35 to 44 were taking aspirin regularly, compared with nearly 60% of elderly adults.
Education	Aspirin therapy did not significantly differ by educational attainment. Adults without a high school diploma/GED were most likely to be on an aspirin regimen (43.5%).
Household Income	Generally, the prevalence of aspirin therapy decreased as income increased. Adults with an income between \$25,000 and \$34,999 had a significantly higher rate of aspirin use (43.7%) than those in the two highest income categories (31.2% and 30.1%, respectively).
Quick Stats	Of those that took aspirin regularly... <ul style="list-style-type: none"> • 90.8% took it to reduce the chance of a heart attack or stroke. • 6.3% took it for pain only. • 34.5% had a diagnosis of heart attack, angina, or stroke.

Table 14.3: Daily or alternate-day aspirin therapy among adults aged 35 and older: WVBRFSS, 2003

Characteristic	Men			Women			Total		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
TOTAL	1,028	42.3	(39.0-45.5)	1,623	34.7	(32.2-37.2)	2,651	38.2	(36.2-40.3)
Age									
35-44	230	17.8	(12.6-23.0)	319	18.7	(13.8-23.7)	549	18.3	(14.7-21.8)
45-54	280	37.4	(31.3-43.6)	386	22.3	(17.9-26.7)	666	29.8	(26.0-33.7)
55-64	248	52.8	(46.1-59.4)	393	42.0	(36.7-47.3)	641	47.3	(43.1-51.6)
65+	270	64.4	(58.3-70.5)	525	52.0	(47.4-56.7)	795	57.0	(53.3-60.8)
Education									
Less than H.S.	202	47.9	(40.5-55.4)	346	39.8	(34.2-45.4)	548	43.5	(38.9-48.1)
H.S. or G.E.D.	402	42.6	(37.4-47.8)	651	33.0	(29.1-37.0)	1,053	37.4	(34.2-40.6)
Some Post-H.S.	203	42.7	(35.4-50.1)	350	34.1	(28.7-39.5)	553	37.9	(33.5-42.4)
College Graduate	219	36.2	(29.4-43.0)	275	33.1	(27.0-39.2)	494	34.7	(30.2-39.3)
Income									
Less than \$15,000	140	45.8	(36.3-55.3)	299	39.9	(33.7-46.0)	439	42.3	(37.0-47.6)
\$15,000- 24,999	195	46.0	(38.5-53.5)	357	37.2	(31.8-42.6)	552	40.9	(36.5-45.4)
\$25,000- 34,999	155	52.0	(43.5-60.6)	214	36.0	(29.1-43.0)	369	43.7	(38.1-49.2)
\$35,000- 49,999	156	38.2	(30.1-46.2)	203	29.2	(22.6-35.9)	359	33.9	(28.6-39.1)
\$50,000- 74,999	138	35.3	(27.0-43.5)	185	27.2	(20.2-34.2)	323	31.2	(25.8-36.6)
\$75,000+	148	34.5	(26.5-42.5)	118	22.6	(14.7-30.5)	266	30.1	(24.2-35.9)