

FACTS

Cardiovascular Disease: Women's No. 1 Health Threat

OVERVIEW

Cardiovascular diseases (CVD), including stroke, is the No. 1 cause of death in American women, claiming nearly 400,000 lives each year, or nearly one death every 80 seconds.¹ CVD kills approximately the same number of women as all forms of cancer, chronic lower respiratory disease and diabetes combined.^{1,2} In 2013, one in 32 female deaths was from breast cancer, but one in three was from cardiovascular disease.¹ Unfortunately, the statistics are even worse when race and age are considered. The prevalence of CVD among African-American women (48%) is much higher than among Caucasian women (36%).¹ Women age 45 and older are less likely than men of that age group – 77% vs. 82% – to survive a year after their first heart attack.¹ And although coronary heart disease death rates have been declining overall, the rates for women aged 35-54 have been increasing.³ In women, heart disease is too often a silent killer – nearly two-thirds of women who died suddenly had no previous symptoms.¹

CVD is largely preventable. A recent study among young women found that nearly 75% of coronary heart disease cases can be prevented with better lifestyle choices, such as not smoking, exercising, and eating a healthy diet.⁴ In an analysis of more than 161,000 women participating in the Women's Health Initiative, 83% of the women were either classified as "high risk" or "at risk" for CVD and an additional 13% of the women lacked risk factors for CVD but did not adhere to a healthy lifestyle.⁵ But prevention is hindered by the fact that many women and their health care providers don't realize that CVD is a woman's No. 1 health threat. The American Heart Association (AHA) is working to close this knowledge gap through education and advocacy.

RAISING AWARENESS

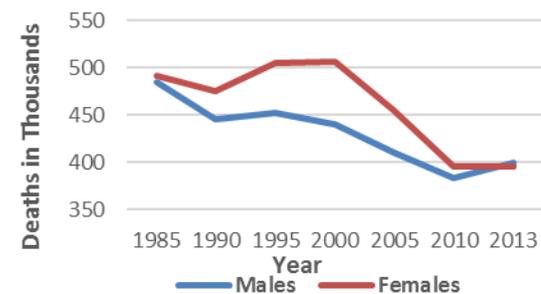
A 2012 survey conducted by the AHA found that 44% of women were unaware that heart disease is the leading cause of death among women, although awareness has nearly doubled since 1997.⁶ In addition, women of color and of low socioeconomic status are disproportionately affected by coronary heart disease; the death rate was 26% higher for black women than for white women in 2013.¹

However, only 36% of black women and 34% of Hispanic women know that heart disease is their leading cause of death, compared to 65% of white women.⁶

Only 25% of women can name hypertension and high blood cholesterol as risk factors for heart disease, and less than 50% know the major symptoms of CVD.⁷ Further, women of higher CVD risk have less knowledge of heart attack symptoms,⁸ and only 65% of women said the first thing they would do if they thought they were having a heart attack was to call 9-1-1.⁷ Unfortunately, this lack of awareness extends to women's health care providers, often resulting in less aggressive and sophisticated diagnosis and treatment, with worse outcomes.^{9,10}

Cardiovascular disease mortality trends for males and females (United States: 1979–2013).¹

Source: National Center for Health Statistics and National Heart, Lung, and Blood Institute.



GENDER DIFFERENCES IN CVD

Researchers have learned that gender differences play an important role in the prevention, diagnosis, and treatment of CVD. Heart attack symptoms may be different in women than in men and women may also respond differently to cardiac medications.¹¹

- Although chest pain is the most common heart attack warning sign in both men and women, women may be less likely to report chest pain during a heart attack and more likely to report other symptoms, often resulting in misdiagnosis and delays in treatment.¹¹
- Women tend to develop CVD later in life than men, and their outcomes are often worse.¹
- Women who smoke are more than twice as likely to die of sudden cardiac death, compared

FACT SHEET: Cardiovascular Disease: Women's No. 1 Health Threat

- to women who have never smoked.¹²
- Certain risk factors such as high blood pressure and diabetes increase heart attack risk in women more severely than in men.¹¹
- Young women with acute coronary syndrome are more likely than men to have adverse outcomes, including death, heart attack, stroke, or re-hospitalization, even after adjusting for age differences.¹³
- Previous studies and clinical trials have often not been done with adequate numbers of women in the study population, and thus, their conclusions are not always generalizable to women. Despite their substantial burden of CVD, women have been underrepresented in clinical trials, generally making up only about 20% of enrolled patients, even though women represent 40% to 50% of participants in longitudinal studies and registries.¹¹
- In an analysis of more than 120 studies of 78 FDA-approved medical devices between 2000 and 2007, women made up only one-third of the participants in the studies that reported sex distribution; 28% of the studies didn't provide the gender of the patients enrolled in the trials.¹⁴
- Researchers have identified gender differences in response to cardiac medications. Drugs that are beneficial for men may produce no benefit or even be harmful to women.¹⁵

DIAGNOSIS AND TREATMENT DISPARITIES

Women are less likely than men to receive aggressive diagnosis and treatment for CVD.

- Among Medicare patients, men are two to three times more likely than women to receive an implantable cardioverter-defibrillator for the prevention of sudden cardiac death.¹⁶
- Women with CVD are less likely than men to receive statins for cholesterol care, and are less likely to achieve ideal cholesterol recommendations.^{17,18}
- Women are less likely than men to receive care within benchmark times for electrocardiography.¹⁹
- Women are less likely to be referred to cardiac rehabilitation (CR), even though women who complete CR receive a greater benefit, compared to men.²⁰
- The percentage of women who were uninsured fell from 12.3% in 2013 to 9.6% in 2014, a 21% decrease, but there are still about 15 million women who are uninsured. Uninsured women are more likely to have inadequate access to care, get a lower standard of care when they are in the health system, and have poorer health outcomes.²¹
- Women are more likely than men to have forgone needed health care due to cost.²²

THE ASSOCIATION ADVOCATES

The nation has made remarkable progress in reducing the overall rates of death and disability from CVD in men. Realizing a comparable level of improvement for women requires the concerted efforts of everyone.

- The AHA applauds the Food and Drug Administration's *Action Plan to Enhance the Collection and Availability of Demographic Subgroup Data*, which was required by Congress as a result of the association's work on the HEART for Women Act. The AHA is now working to monitor and ensure implementation of the 27 steps FDA proposes in the Action Plan.
- AHA supports requiring equitable use of female cells, tissues, and animals in basic research supported by the National Institutes of Health.
- AHA supports legislation to address barriers to cardiac rehabilitation for women (S. 488/H.R. 3355).
- The AHA supports maintaining funding for the WISEWOMAN program, which provides free CVD screening and lifestyle counseling to low-income uninsured or under-insured women.
- AHA supports improved reporting of health care data by sex, race, and ethnicity.
- AHA is working to implement provisions of the Affordable Care Act that is making health insurance more accessible and affordable for women as well as men.

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¹⁴ Dhruva, SS, Berro, L, and Redberg, R. Gender Bias in Studies for Food and Drug Administration Pre-market Approval of Cardiovascular Devices. *Circulation: Cardiovascular Quality and Outcomes*. 2011; 4: 165-171.

¹⁵ Rathore SS, et al. Sex-based differences in the effect of digoxin for the treatment of heart failure. *New England Journal of Medicine* 2002; 347(18): 1403-1411.

¹⁶ Sahni, S et al. Gender Bias Trends in Implantable Cardioverter-Defibrillator Therapy. *Current Cardiovascular Risk Reports*.2014; 8:3: 1-6.

¹⁷ Virani, SS, et al. Gender disparities in evidence-based statin therapy in patients with cardiovascular disease. *Am J Cardiol* 2015.115(1): 21-26.

¹⁸ Schoen, MW., et al. Comparison of Adherence to Guideline-Based Cholesterol Treatment Goals in Men Versus Women. *Am J Cardiol*. 2016. 117(1): 48-53.

¹⁹ McSweeney, JC et al. Women's early warning symptoms of acute myocardial infarction. *Circulation*. 2013 108.21: 2619-2623.

²⁰ Colbert, JD., et al. Cardiac rehabilitation referral, attendance and mortality in women. *European journal of preventive cardiology* 2014. 2047487314545279.

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²² Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 2007-2009. Analysis conducted by the Maternal and Child Health Information Resource Center.