



HEART DISEASE IN WOMEN

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Heart disease is usually thought of as a “man’s disease”—yet cardiovascular disease is the number one killer of women. So many women continue to underestimate the risk of the heart disease in themselves, their mothers, their sisters and their children. When asked to identify leading medical problems in women, only 13 percent of women identified heart disease as the greatest health problem facing women today. There has been a significant increase in awareness of the risks of cardiovascular disease in women in the past several years, but there is so much room for improvement and further knowledge.

Cardiovascular disease (including heart attacks and strokes) kills more women than all cancers combined, including breast cancer. Heart disease is currently the cause of death for one in four women, with the highest rates occurring in post-menopausal women. Women also tend to have a higher risk of actually dying from a heart attack once one occurs, with an estimated 38% risk of death (vs. 25% in men). Why is this the case?

There are several reasons; the most important is the lack of symptom awareness, which leads to later diagnosis of a possibly life-threatening event. Women can have a wide variety of symptoms when presenting with a heart attack. We always think of the classic symptoms of crushing chest pain or pressure and perhaps shortness of breath or sweating; women are more likely to have less classical symptoms, including neck or jaw pain, arm pain, belching or nausea. Often symptoms may occur prior to an actual heart attack and may seem unrelated to your heart: symptoms such as fatigue, weakness, dizziness, sleep disturbances or anxiety may sometimes signal the presence of heart disease.

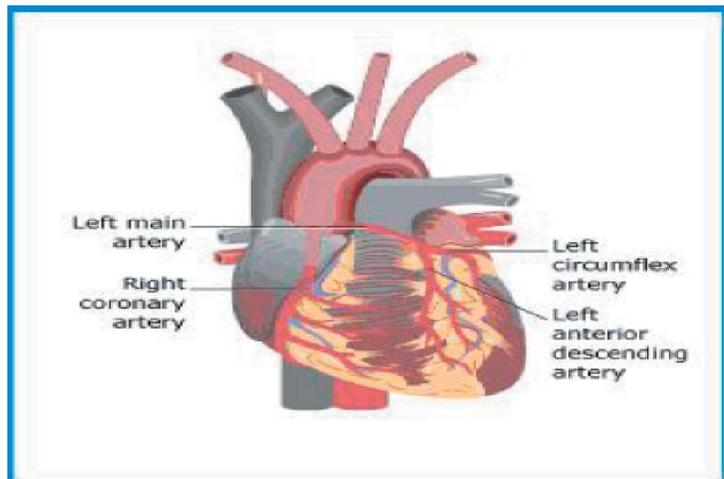
Cardiovascular disease is a broad term used to describe a range of diseases that may affect your heart or blood vessels. The various diseases include coronary artery disease, congestive heart failure, valvular heart disease, arrhythmias, high blood pressure and stroke. Coronary artery disease is a disease of the arteries that supply the heart muscle itself with blood. Also known as CAD, coronary

artery disease is the leading cause of heart attacks and heart-related deaths. It generally means that blood flow through the coronary arteries has become obstructed, reducing blood flow to the heart muscle. The most

common cause of such obstructions is a condition called atherosclerosis. This occurs via a buildup of fat and cholesterol within the arteries (plaque), ultimately causing a narrowing within the vessel. Coronary artery disease and the resulting reduced blood flow to the heart muscle can lead to dangerous heart problems, such as chest pain (angina) and, when complete occlusion occurs, a heart attack (myocardial infarction).

The first step in taking charge of your heart health is to identify your risk factor profile. Risk factors for heart disease can be divided into modifiable and non-modifiable risk factors. Modifiable risks, or those which can be changed or controlled, include: cigarette smoking, high blood pressure, high cholesterol, diabetes, obesity and physical inactivity. Non-modifiable risk factors include family history, menopausal status, age and race. A family history of premature heart disease is defined as a prior heart attack or event in a father or brother before the age of 55, or before the age of 65 in a mother or sister. The vast majority of people who die from heart disease have at least one of the above-listed risk factors. Having multiple risk factors vastly multiplies your risk of heart disease; for example, having three or more risk factors is thought to increase the risk of heart disease by more than tenfold.

Modifying or changing your risk factors is very important in trying to decrease the risk of heart disease. If you already have heart disease, controlling your risk factors



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Lifestyle Approaches to Hypertension in Women

- Maintain ideal body weight
- DASH eating plan
 - Even without weight loss, a diet rich in fruits, vegetables, and low fat dairy products can reduce blood pressure
- Sodium restriction to 2400 mg/day
- Increase physical activity
- Limit alcohol to one drink per day
 - One drink = 12 oz beer, 5 oz wine, or 1.5 oz liquor

Source: JNC VII 2004, Sacks 2001

may actually slow the progression of further disease. Ways to achieve this include eating a healthy diet, exercising and maintaining a normal body weight. Perhaps the most important lifestyle change is avoiding cigarette smoking. Women who smoke are two to six times more likely to develop heart disease; the risk further increases with the number of cigarettes smoked per day.

Daily aspirin may be important as well, depending on your risk factor profile; it is important to discuss both the risks and benefits of either starting or continuing aspirin therapy with your doctor.

Another important step in preventing heart disease and treating disease, once present, is to establish an ongoing treatment plan with your doctor for your specific medical problems. Working with your doctor to control blood pressure, cholesterol and blood sugar levels (in diabetics) will tremendously impact your risk of heart disease and future heart attacks.

Cardiovascular Risk Factors in Women

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| <ul style="list-style-type: none"> • Non-modifiable <ul style="list-style-type: none"> – Age – Menopausal status – Family History – Gender – Race | <ul style="list-style-type: none"> • Modifiable <ul style="list-style-type: none"> – Sedentary Lifestyle – Smoking – Obesity – Diabetes – Hypertension – Dyslipidemia |
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Source: ATP III 2002

Blood pressure is ideal at levels less than 120mmHg for a systolic reading (the top blood pressure number) and lower than 80mmHg for a diastolic reading (the bottom blood pressure number); this goal results in lower risks for heart disease, stroke and kidney failure. Blood pressure goals can be achieved through medications, but also through exercise, nutrition and maintaining a healthy weight. Daily or near-daily exercise for a minimum of 30 minutes is the current recommendation by the American Heart Association. Taking medications exactly as prescribed is clearly very important in achieving blood pressure goals; combining your medications with lifestyle changes will help even more in maintaining an ideal blood pressure.

Controlling your cholesterol level can similarly be achieved through medications as well as diet, specifically via limiting saturated fats and increasing fiber intake. Cholesterol is easily tracked through a simple blood test, which should be obtained after fasting for a minimum of 6, and ideally 12 hours. A cholesterol panel should provide a total cholesterol number, as well as figures for LDL (“bad” or “Lousy” cholesterol), HDL (“good” or “Healthy” cholesterol) and triglycerides. Cholesterol goals are determined by your risk factor profile; the higher your cardiac risk, the lower your LDL goal. On the other hand, the HDL cholesterol should be as high as possible, since this is protective cholesterol; this should be higher than 40-45mg/dL in everyone. Like high blood pressure, high cholesterol can be controlled with medications as well as with lifestyle and dietary changes; the combination of both is more likely to control your cholesterol and help you achieve healthy cholesterol goals.

If you have multiple family members with heart disease or multiple risk factors, discuss this with your physician and together formulate a plan to diagnose and treat any heart disease. Common tests that may be ordered may include an electrocardiogram (EKG), an echocardiogram (or ultrasound of the heart) or a stress test. Stress testing can occur either on a treadmill or via a chemical stress test if you are unable to walk for any period of time on a treadmill. Women will probably also have some type of imaging along with their stress testing, either with a nuclear image (often called thallium stress testing) or with an ultrasound image (also called stress echocardiography). If any stress testing is abnormal, a cardiac catheterization may be performed to fully examine all the coronary arteries.

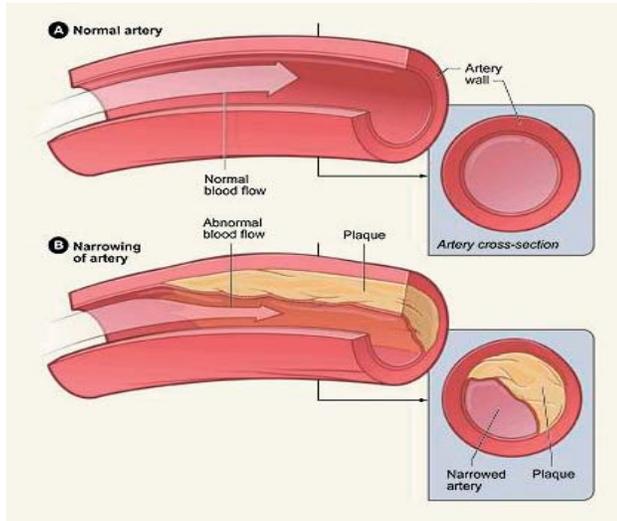
Sometimes a CT scan may identify the presence of plaque in the coronary arteries, which is seen and reported as a calcium score. Lab tests will also be helpful, including a fasting cholesterol profile.

The good news is that research is evolving and continuing to provide more information for and

about heart disease in women. There are an estimated 8 million American women living with heart disease today. Several campaigns, including the GO RED FOR WOMEN campaign sponsored by the American Heart

Websites to visit for more information:

- www.hearttruth.gov
- www.womenheart.org
- www.goredforwomen.org



Association, and THE HEART TRUTH campaign sponsored by the National Heart, Lung and Blood Institute are urging women to take control of their risk factors and health, and to seek preventative care from their doctors. The red dress is the most recognizable symbol of the fight against heart disease in women; this has become a symbol for the importance of recognizing heart disease and risk factors in women. Increased community awareness will help more women survive this deadly disease, and more interaction between women and their doctors will lead to healthier, longer lives for all.



About The Author

Dr. Jennifer Morrow, M.D., FACC is board certified in Internal Medicine and Cardiology. She received her M.D. from the University of Tennessee. Dr. Morrow completed her internship and residency in Internal Medicine at the University of Maryland in Baltimore, MD. She subsequently completed her cardiology fellowship

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Overweight, Obese Women Improve Quality of Life with 10 to 30 Minutes of Exercise

Sedentary, overweight or obese women can improve their quality of life by exercising as little as 10 to 30 minutes a day, researchers reported at the American Heart Association's Conference on Nutrition, Physical Activity and Metabolism.

The **Dose Response to Exercise** in postmenopausal **Women (DREW)** study, first reported in 2007, was the largest randomized, controlled trial examining the role of exercise in postmenopausal women. These secondary results focus on quality of life among 430 women divided into four groups: three groups exercising at various levels and one control group that did not exercise.

"While the women who participated in the highest exercise group saw the greatest improvements in most quality of life scales, the women in the lowest exercise group also saw improvements," said Angela Thompson, M.S.P.H., co-author of the study and research associate at Pennington Biomedical Research Center in Baton Rouge, La. "The public health message is tremendous, because it provides further support for the notion that even if someone cannot exercise an hour or more daily, getting out and exercising 10 to 30 minutes per day is beneficial, too."

All participants in the exercise groups reported a statistically significant improvement in social functioning compared to those in the control group of women who didn't exercise. However, women who participated in more exercise, from 135 to 150 minutes a week, also showed significant improvements in general health, vitality and mental health. The women who exercised more also improved in physical functioning, role limitations in work or other activities due to physical problems and role limitations due to emotional problems, the researchers said. None of the women reported a statistically significant improvement in pain.



Cholesterol

- Optimal levels of cholesterol (lipids) in women are as follows (with lifestyle changes and with medications):
 - LDL < 100 mg/dL
 - HDL > 45 mg/dL
 - Triglycerides < 150mg/dl