

Cardiovascular Disease

Diseases of the heart and circulation are so common and the public is so well acquainted with the major symptoms that result from cardiovascular disorders that patients, and occasionally physicians, wrongly attribute many unrelated complaints to cardiovascular disease (CVD).^(1 &#fn107869>) It should not be a surprise that this occurs since most patients are aware that cardiovascular disease remains the leading cause of death in the United States. There are four principle properties of the cardiovascular system that can be evaluated to provide information to help manage cardiovascular disease.^(2 &#fn107871>) These include:

1. movement of electrical signals through the heart
2. heart pump function
3. blood flow through the heart
4. anatomy

Ischemia is a decrease in the amount of oxygen flowing to the heart due to a decrease in blood flow to the heart. Ischemia is noticed most frequently as chest discomfort. Heart function that is adequate at rest may not be adequate during physical stress or strain. Thus, a history of chest pain or discomfort only during activity is characteristic of heart disease. Decreases in the pumping ability of the heart frequently appear as weakness and fatigue. As the disease becomes more severe, the skin may become pale, the blood pressure can be low and the patient may even occasionally pass out. A failing heart can cause fluid (edema) to build up throughout various parts of the body and could cause shortness of breath. When the blood vessels cause obstructions to blood flow the symptoms resemble congestive heart failure. Arrhythmias or irregular heart rhythms can suddenly develop. All of these signs and symptoms may disappear as quickly as they developed.

Patients with cardiovascular disease may also be completely without symptoms. They may also have high blood pressure, a heart murmur, an abnormal chest x-ray or an abnormal electro cardiogram (ECG or EKG). In cardiovascular disease, taking a medical history, interview, and physical examination remain the most important parts of patient assessment.^(3 &#fn107872>) While there are many technologically advanced tests available, they are only effective when used with a complete medical history and physical examination. A medical history enables the examiner to establish a relationship with the patient, develop an awareness of how the patient feels about the problems and their quality of life, as well as an evaluation of the problem's severity.^(4 &#fn107873>) Particular attention should be paid to the family history.

There are many risk factors for cardiovascular disease. Three that cannot be changed are older age, male gender, and a family history of CVD. Additionally, three other major risk factors include cigarette smoking, high cholesterol and high blood pressure. Other identified factors associated with increased risk for cardiovascular disease include lack of exercise, diabetes, obesity, too much alcohol, increased homocysteine levels, certain infections and inflammation, estrogens, androgens, and certain psychosocial factors. The combination of multiple risk factors must also be considered.

The American Heart Association/American College of Cardiology (AHA/ACC) have set up guidelines for preventing heart attack and death in patients with cardiovascular disease.^(5 &#fn113569>) Their recommendations are:

1. Stop /smoking/; including cigarettes, cigars, pipes or other types of smoking.
2. Lower your /cholesterol/; talk to your healthcare professional to find out what your goal cholesterol levels are (total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides).
3. Your /blood pressure/ should be 140/90 mmHg or less; if you have heart failure or kidney disease, less than 130/85 mmHg; if you have diabetes, less than 130/80 mmHg.
4. /Exercise/; 30 minutes of activity 3 to 4 times per week, this is best if done every day.
5. If you have /diabetes/ your HbA1_c should be less than 7%. The HbA1_c is also known as the glycosylated hemoglobin test. In this lab test, a small blood sample determines the average blood glucose over a given period of time, usually several months.
6. Your /Body Mass Index/ (BMI) should be between 18.5 to 24.9 kg/m². The BMI is a measure of a healthy weight for your height. Talk to your healthcare professional or see the "Obesity, Weight Loss" health condition to learn how to calculate your BMI.

About the Author

Footnotes ^{^1} Braunwald E. Approach to the patient with heart disease. In: Fauci AS, Braunwald E, Isselbacher KJ, et al. eds. Harrison's Principles of Internal Medicine, 14th ed. New York: McGraw-Hill; 1998:1229-1231. ^{^2} American Heart Association medical/scientific statement. Classification of functional capacity and objective assessment of patients with diseases of the heart. Circulation. 1994;90:644-645. ^{^3} Braunwald E. Physical Examination. In: Braunwald E, ed. Heart Disease: A Textbook of Cardiovascular Medicine, 4th ed. Philadelphia: Saunders; 1992:13-42. ^{^4} McGuinness

ME, Talbert RL. Cardiovascular testing. In: DiPiro JT, Talbert RL, Yee GC, et al, eds. Pharmacotherapy, A Pathophysiologic Approach, 4th ed. Stamford CT: 1998;91-115. ^5 Smith SC Jr, Blair SN, Bonow RO, Brass LM, Cerqueira MD, Dracup K, et al. AHA/ACC Scientific Statement: AHA/ACC guidelines for preventing heart attack and death in patients with atherosclerotic cardiovascular disease: 2001 update: A statement for healthcare professionals from the American Heart Association and the American College of Cardiology. Circulation. Sep2001;104(13):1577-9. View Abstract view-abs.asp?fnid=113569&absid=106662> Powered by NHIONDemand Copyright © 2000-2008 NHIONDemand All rights reserved. www.nhiondemand.com This information is educational in context and is not to be used to diagnose, treat or cure any disease. Please consult your licensed health care practitioner before using this or any medical information.

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