



IN BRIEF:

# Your Guide To Living Well With Heart Disease

*heart disease*

If you have heart disease, or think you do, there's a lot you can do to protect your heart health. This fact sheet gives you the key steps to control the disease, including how to survive a heart attack and prevent serious damage to heart muscle. Caring for your heart is worth the effort. Use the information here to start today to take charge of your heart health.

## What Is Heart Disease?

Coronary heart disease—often simply called heart disease—occurs when the arteries that supply blood to the heart muscle become hardened and narrowed due to a buildup of plaque on the inner walls of the arteries. A heart attack occurs when the plaque bursts and a clot forms over the plaque, blocking flow through the artery and preventing oxygen and nutrients from getting to the heart.

Heart disease is a lifelong condition. Even if you've had surgery or other procedures to help with blood flow in your heart, your arteries remain damaged. Their condition will worsen unless you make changes in your daily habits. There is much you can do to control heart disease, prevent a first or second heart attack, and increase your chances for a long and vital life.

## Getting Tested

If you have been told that you have heart disease, you may have had one or more screening tests. Tests for blood pressure and cholesterol levels are often done as part of routine physicals. Additional tests that may indicate heart muscle damage or blood flow problems

help doctors evaluate the severity of your condition. Most tests are done outside of the body and are painless. Ask your doctor whether you may need any of the tests described in the "Tests for Heart Disease" box on the last page.

## Risk Factors

Risk factors are health conditions or habits that increase the chances of developing a disease or having it worsen. Because you already have heart disease, you'll need to work especially hard to control your risk factors.

There are two types of heart disease risk factors—those that are beyond your control and those that can be changed. Those that can't be changed are a family history of early heart disease and age. For women, heart disease risk increases at age 55; for men, it's age 45.

The risk factors you can control are smoking, high blood pressure, high blood cholesterol, overweight/obesity, physical inactivity, and diabetes. While having even one risk factor is dangerous, having multiple risk factors is especially serious, because risk factors tend to "gang up" and worsen each other's effects.

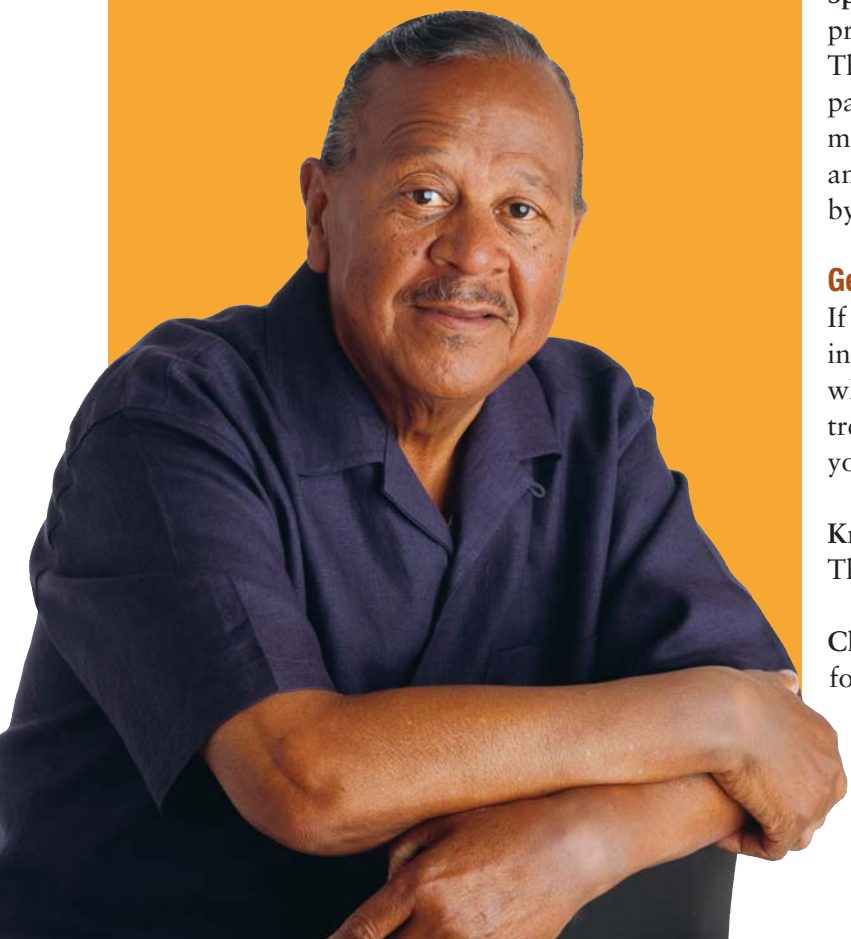
## Treatment

Heart disease and its risk factors can be treated in three ways: by making heart healthy changes in your daily habits, by taking medication, and in some cases, by having a medical procedure.

# About Angina

Angina is a pain or discomfort in the chest that occurs when the heart muscle is not getting enough blood due to the buildup of plaque in the arteries. It is not a heart attack, but if you have angina, you are more likely to have a heart attack. The pain may feel like pressure or squeezing in your chest, or may also occur in your shoulders, arms, neck, jaw, or back.

Stable angina—a type with a predictable pattern—can be brought on by a physical or emotional strain, but unlike a heart attack, is usually relieved by rest or medicine. Unstable angina is less predictable, may not be relieved by rest or medicine, and is a sign that you may have a heart attack very soon. If your pain does not go away within 5 minutes after rest and/or medicine, or gets worse, call 9–1–1 immediately.



**Making lifestyle changes.** Adopting new habits, such as not smoking, following a heart healthy eating plan, maintaining a healthy weight, and becoming more physically active can go a long way in helping to reduce your risk for worsened heart disease. You may need to manage certain risk factors vigorously. For example, having heart disease means that if you have high levels of a type of cholesterol called low-density lipoprotein (LDL), the “bad” cholesterol, your goal should be to bring the level to below 100 mg/dL. With your doctor, go over your heart disease risk factors and discuss how to reduce or eliminate each one.

**Taking medication.** Sometimes, lifestyle changes alone aren’t enough to control heart disease and its risk factors. Medications are often used to treat high blood cholesterol, high blood pressure, or heart disease itself. For instance, medicine may be used to relieve angina, the chest pain that often accompanies heart disease. If you do take medications, it is vital to also keep up your heart healthy lifestyle, because it can help to keep doses of some medications as low as possible. Be sure to take your medication exactly as your doctor advises. (This includes aspirin and other over-the-counter medicines). If you have uncomfortable side effects, let your doctor know. You may be able to change the dosage or switch to another medication.

**Special procedures.** Advanced heart disease may require procedures to open an artery and improve blood flow. These procedures are usually done to ease severe chest pain or to clear blockages in blood vessels. Two common procedures are coronary angioplasty (or “balloon” angioplasty) and coronary artery bypass graft (or bypass surgery).

## Getting Help for a Heart Attack

If you have heart disease, you are at high risk for having a heart attack. But planning ahead so you know what to do if heart attack signs occur will help you get treatment fast—when it can save heart muscle and even your life.

### Know the Warning Signs

The main warning signs for both men and women are:

**Chest discomfort.** Most heart attacks involve discomfort in the center of the chest that lasts for more than a few minutes. It may feel like pressure, squeezing, fullness, or pain. The discomfort may be mild or severe, and it may come and go.

**Discomfort in other areas of the upper body**, including one or both arms, the back, neck, jaw, or stomach.

**Shortness of breath.** This may occur with or without chest discomfort.

**Other signs** include nausea, light-headedness, or breaking out in a cold sweat.

### Calling 9–1–1 Can Save Your Life

If you think you or someone else may be having a heart attack, calling 9–1–1 quickly can prevent disability or death. Emergency medical personnel can begin treatment even before you get to the hospital. They have the equipment and training to start your heart beating again if it stops. Wait no more than a few minutes—5 minutes at most—before calling 9–1–1.

Time is crucial because the clot-dissolving medicines and other treatments that can stop a heart attack work best when given within the first hour after a heart attack starts. Even if you're not sure if you're having a heart attack, call 9–1–1. If your symptoms stop completely in less than 5 minutes, you should still call your doctor.

When you get to the hospital, ask for tests that can show whether you are having a heart attack. Speak up. Don't let anyone tell you that you're overreacting. You have the right to be thoroughly examined for a possible heart attack.

### Prepare a Heart Attack Survival Plan

Be sure your family, friends, and coworkers know the warning signs and what to do if you should have a heart attack. Write down medications you take, any medicines you are allergic to, and phone numbers for your doctor and a person to contact in an emergency. Give this information to family members and keep a copy at home and at work.

### Recovering Well: The Importance of Cardiac Rehabilitation

Millions of people survive heart attacks or heart surgery and resume active, normal lives. The time it takes to recover from a heart attack or heart procedure will depend on many factors, including successful participation in a cardiac rehabilitation program. Cardiac rehabilitation programs include exercise training, education on heart healthy living, and counseling to reduce stress and help you return to an active life. Almost everyone with heart disease can benefit from some kind of cardiac rehabilitation. Women are helped

## Aspirin: Take With Caution



If you've had a heart attack or stroke, aspirin can help lower the risk of a second one. It can also help keep arteries open in individuals who have had a heart bypass or angioplasty. A recent, large study has found that among healthy women, taking low-dose aspirin every other day may help to prevent a first stroke, and among women over the age of 65, it may also help prevent a first heart attack.

But should you take it to prevent a heart attack? For most people, the answer is no. Aspirin is not approved by the U.S. Food and Drug Administration for the prevention of heart attacks and stroke for people who have never had one. Aspirin can cause serious side effects and mix dangerously with other medicines.

If you are thinking about using aspirin for heart problems, talk with your doctor first. If your doctor thinks aspirin is a good choice for you, be sure to take the recommended dosage.

by cardiac rehabilitation as much as men are. If your doctor does not talk to you about cardiac rehabilitation programs, speak up and find out about programs that might fit your needs.

Exercise training will help you learn to safely participate in physical activity to strengthen your heart and your muscles and improve your stamina. If you are still recovering from surgery, you may worry that exercise could be harmful. In fact, physical activity can help prevent future heart problems. Your cardiac rehabilitation team will plan a program for you that is safe and effective.

Cardiac rehabilitation programs will also help you learn new heart healthy habits, control your risk factors, and offer support to cope with the challenges of adjusting to life following a heart attack or heart surgery. Depending on your needs, a program may help you quit smoking, manage conditions such as diabetes, follow a heart healthy eating plan, lose weight, and manage stress.

# Tests for Heart Disease

After taking a careful medical history and doing a physical examination, your doctor may give you one or more of the following tests:

**Electrocardiogram (ECG or EKG)** makes a graph of the heart's electrical activity as it beats. This test can show abnormal heartbeats, heart muscle damage, blood flow problems in the arteries, and heart enlargement.

**Stress test (or treadmill test or exercise ECG)** records the heart's electrical activity during exercise usually on a treadmill or exercise bike. If you are unable to exercise, you can take a medicine instead that shows any problems in the blood flow to the heart.

**Nuclear scan (or thallium stress test)** shows the working of the heart muscle as blood flows through the heart. A small amount of radioactive material is injected into a vein—usually in the arm—and a camera records how much is taken up by the heart muscle.

**Echocardiography** changes sound waves into pictures that show the heart's size, shape, and movement. The sound waves also can be used to see how much blood is pumped out by the heart when it contracts.

**Coronary angiography (or angiogram or arteriography)** shows an x-ray image of blood flow problems and blockages in the coronary arteries. A thin tube called a catheter is threaded through an artery of an arm or leg up into the heart. A dye is injected into the tube, allowing the heart and vessels to be filmed as the heart pumps. A **ventriculogram**—a picture of the left ventricle of the heart—is sometimes taken as part of the coronary angiography procedure.

**Intracoronary ultrasound** uses a catheter to create a picture of the coronary arteries. It shows the thickness of the arteries and any blockages in blood flow.

## To Learn More

Contact the National Heart, Lung, and Blood Institute (NHLBI) for information on heart disease and heart health.

NHLBI Health Information Center  
P.O. Box 30105  
Bethesda, MD 20824-0105  
Phone: 301-592-8573  
TTY: 240-629-3255  
Fax: 301-592-8563

Also, check out these heart health Web sites and Web pages:

NHLBI Web site: [www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)

Diseases and Conditions A–Z Index:  
[www.nhlbi.nih.gov/health/dci/index.html](http://www.nhlbi.nih.gov/health/dci/index.html)

*The Heart Truth*: A National Awareness Campaign for Women About Heart Disease:  
[www.nhlbi.nih.gov/health/hearttruth](http://www.nhlbi.nih.gov/health/hearttruth)

Your Guide to Lowering High Blood Pressure:  
[www.nhlbi.nih.gov/hbp/index.html](http://www.nhlbi.nih.gov/hbp/index.html)

Live Healthier, Live Longer (on lowering elevated blood cholesterol): [www.nhlbi.nih.gov/chd](http://www.nhlbi.nih.gov/chd)

High Blood Cholesterol: What You Need To Know:  
[www.nhlbi.nih.gov/health/public/heart/chol/hbc\\_what.htm](http://www.nhlbi.nih.gov/health/public/heart/chol/hbc_what.htm)

Aim for a Healthy Weight:  
[www.nhlbi.nih.gov/health/public/heart/obesity/lose\\_wt/index.htm](http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/index.htm)

Act in Time to Heart Attack Signs: [www.nhlbi.nih.gov/actintime/index.htm](http://www.nhlbi.nih.gov/actintime/index.htm)

Portion Distortion: <http://hin.nhlbi.nih.gov/portion/>

Healthy Heart Recipes:  
[www.nhlbi.nih.gov/health/public/heart/other/syah/index.htm](http://www.nhlbi.nih.gov/health/public/heart/other/syah/index.htm)  
[www.nhlbi.nih.gov/health/public/heart/other/ktb\\_recipebk/](http://www.nhlbi.nih.gov/health/public/heart/other/ktb_recipebk/)

Smoking Cessation: For information from the National Cancer Institute on quitting smoking, call 1-800-QUITNOW (1-800-784-8669) or go to [www.smokefree.gov/](http://www.smokefree.gov/)

For still more information on heart health, see MedlinePlus:  
<http://medlineplus.gov/>



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
National Institutes of Health  
National Heart, Lung, and Blood Institute