

What You Should Know About Heart Disease in Women

Coronary heart disease (CHD) is the leading killer of American women, claiming 500,000 lives annually compared with 44,000 deaths per year from breast cancer. But while CHD is a major threat to every woman, there are many options to prevent and treat it.

What is CHD?

Coronary heart disease affects the vessels carrying blood to the heart. With age, a fatty coating of *plaque* builds up in these vessels, reducing blood flow. This process, called *atherosclerosis*, deprives the heart of blood and oxygen, leading to chest pain, clot formation, heart attack, and stroke.

How common is CHD in women?

Heart disease accounts for 50% of deaths among women—more than the next eight leading causes combined. In addition, black women are 60% more likely to die of CHD than white women. However, both women and their doctors continue to underestimate the

prevalence of CHD in women. For this reason, women have a 50% risk of dying from a first heart attack, and even if they survive the first attack, they have a 38% risk of dying within the next year.

What are the risk factors for CHD?

Risk factors for CHD include:

Age.—One in 10 women aged 49 to 64 years develops heart disease, increasing to one in five after age 65 years.

Family history.—If your father, mother, or siblings have CHD, you are at increased risk.

Smoking.—Smokers have more than twice the average risk of heart disease, and are much more likely to die if they have a heart attack.

High blood pressure (hypertension).—Even slightly elevated blood pressure can double your risk of CHD.

Cholesterol.—Fat is carried in the blood vessels as *cholesterol*, which can turn into plaque. The main types of cholesterol are low-density lipoproteins (LDL), triglycerides, and high-density lipoproteins (HDL); LDL and triglycerides contribute to plaque build-up, while HDL helps to prevent it.

Sedentary life-style.—This can increase your likelihood of CHD even if you're not overweight; heart disease is almost twice as likely to occur in inactive women.

Menopause.—While a woman's body is producing estrogen, she has a much lower risk of CHD than a man. When estrogen production drops after menopause, however, her risk rises sharply to equal that in men.

Diabetes.—Diabetes that develops in adulthood (type 2 diabetes) contributes substantially to CHD risk. After age 45 years, twice as many women develop diabetes as men.

Obesity.—Obesity is a serious cardiac risk factor that often goes hand-in-hand with hypertension, high cholesterol, and diabetes.

Stress.—Stress at home and/or work can put considerable strain on your heart.

Remember, these risk factors act together; for instance, women who smoke and have high cholesterol and hypertension are eight times more likely to develop CHD.

SYMPTOMS OF CHD

Symptoms of CHD may not appear until it's fairly advanced, but they can include:

ANGINA, or brief chest pain that travels up the neck and down the left arm, and doesn't change with breathing.

ISCHEMIA (cramping of the heart due to reduced blood flow) that may be triggered by exertion, eating, excitement, or exposure to cold; this is seldom harmful unless it lasts for more than 10 minutes.

INDIGESTION Women should be especially alert to chronic fatigue, shortness of breath, and upper abdominal pain. Even without chest pain, these symptoms can indicate that you're having a heart attack.

This Patient Handout was prepared by Patricia L. Van Horn using materials from the American Heart Association (<http://www.americanheart.org/>), Family Doctor (<http://familydoctor.org/>), IntelliHealth (<http://www.intelihealth.com/>), the National Women's Health Resource Center (<http://www.healthywomen.org/>), and WebMD (<http://my.webmd.com/>).

How can I reduce my risk of CHD?

While advancing age and a family history of CHD are beyond your control, even modest changes in your life-style can do wonders in just a few months.

Smoking.—Quitting is essential. It may be the hardest thing you'll ever do, but don't give up—the payoff is huge.

Alcohol.—Limit your alcohol intake to one drink per day. If you don't drink, *don't* start; you may have heard that drinking red wine can help to prevent heart disease, but the risks of alcohol outweigh the possible benefits.

Hypertension.—A blood pressure reading of more than 140/90 is high. You can reduce your blood pressure through exercise, weight loss, and a low-salt diet, and your doctor can prescribe medication if necessary.

Cholesterol.—Your target levels are total cholesterol of 200 or less, LDL under 130, triglycerides of less than 150, and an HDL of 50. If you have CHD, you should try to get your LDL under 100. Start by cutting back on red meat, whole-milk dairy products, saturated fats, and “junk” food. Your fat intake should be less than 60 grams per day.

Obesity.—The dietary recommendations for reducing blood pressure and cholesterol will give you a good start on losing weight, and your doctor can refer you to a dietician who can tailor a program to your individual needs and tastes.

Exercise.—Aim for *at least* 30 minutes of aerobic exercise per day. You don't need a class or special machines; activities like walking and swimming are excellent choices.

Diabetes.—If you're eating a healthier diet, losing weight, and exercising, you're well on your way to reducing your risk of type 2 diabetes.

Stress.—Exercise is a great antidote for stress, and you might want to consider classes in yoga or relaxation techniques as well. If you still feel tense, ask your doctor about counseling and/or medication.

How is CHD diagnosed?

Regular checks of your blood pressure and cholesterol can pick up early signs of CHD. More specific tests include:

Electrocardiography (ECG or EKG) to measure the heart's electrical activity and detect irregular beats, muscle damage, blood flow, and enlargement.

Stress test (treadmill or exercise ECG) to reveal problems that might not be evident with regular ECG; this test may be more useful in men than women.

Chest x-ray.

Echocardiography to evaluate the heart's size, shape, and movement with ultrasound.

Nuclear scan to evaluate heart contractions using a small injection of radioactive material.

Coronary angiography or *arteriography* to assess blood flow to the heart using a flexible tube (catheter) threaded through a vein in the arm or groin; this is also called *cardiac catheterization*.

What treatments are available for CHD?

If improving your diet and life-style aren't enough, options for drug therapy include:

Diuretics.—furosemide (Lasix), spironolactone (Aldactone).

Blood thinners. heparin, warfarin (Coumadin).

Antiplatelet drugs.—aspirin, clopidogrel (Plavix); low-dose aspirin therapy is a common strategy for preventing heart attack and stroke.

Cholesterol-lowering drugs.—atorvastatin (Lipitor), cholestyramine (Questran), colestipol (WelChol), gemfibrozil (Lopid), lovastatin (Mevacor), nicotinic acid (niacin, vitamin B₃, Nicolar, Niaspan), pravastatin (Pravachol), simvastatin (Zocor).

Angiotensin-converting enzyme (ACE) inhibitors.—captopril (Capoten), enalapril (Vasotec), lisinopril (Prinivil, Zestril), ramipril (Altace).

Beta-blockers.—atenolol (Tenormin), labetalol (Normodyne, Trandate), meto-

prolol (Lopressor), propranolol (Inderal). Calcium-channel blockers diltiazem (Cardizem), nifedipine (Procardia), verapamil (Calan, Isoptin, Verelan).

Cardiac stimulators digitoxin (Crystodigin), digoxin (Lanoxin).

Vasodilators.—hydralazine (Apresoline), isosorbide dinitrate (Isordil, Sorbitrate), isosorbide mononitrate (Imdur).

Thrombolytic “clot busters”.—tissue plasminogen activator (tPA), TNKase (Tenecteplase), urokinase (Abbokinase); these are reserved for emergency use in the hospital.

If tests show a serious blockage in your coronary arteries, you may require a medical procedure. This may involve angioplasty (threading a balloon into the artery and expanding it to “flatten” the blockage; a stent (inserting a mesh tube into the artery to hold it open); rotoablation (using a diamond-tipped probe to clean the artery walls); or coronary artery bypass surgery (taking a vessel from the leg or elsewhere in the chest to “bypass” the damaged vessel).

Can hormone therapy help to prevent CHD?

While experts once thought that women could lower their risk of CHD by using estrogen replacement therapy (ERT) or estrogen-progestin hormone replacement therapy (HRT) after menopause, this is now in doubt. In fact, a National Institutes of Health study found that women who use HRT may actually have a higher risk of heart disease and stroke. Therefore, the American Heart Association no longer recommends HRT to prevent or treat CHD in women. It advises that women consider HRT only if they have severe menopausal symptoms like hot flashes and sleep problems, or if they have a high risk of thinning bones (*osteoporosis*); and they should probably limit HRT use to five years. Even in these cases, it might be preferable to try soy products and other bone medications first.