

# Heart Disease

## Overview

The human heart is the most important muscle in your body, pumping blood to all your organs. But when you develop heart disease, it doesn't perform the way it should and a number of problems can develop. There are different kinds of heart disease, but the most common is called coronary artery disease, or CAD. CAD affects about 13 million people in the US alone. Stretched hand to hand, they'd reach half way around the world.

What makes CAD so threatening, is that it tends to develop unnoticed over time. Each year, more than half a million Americans die from complications of CAD, making it the leading cause of death in both men and women.

Coronary artery disease is caused by a condition called "atherosclerosis" or, the gradual buildup of plaque in the blood vessels that feed your heart.

## Normal Arteries and the Process of Atherosclerosis

Here's what happens inside your body during everyday activities like walking...Arteries are blood vessels that carry oxygen-rich blood away from your heart, to all the tissues of your body. Healthy arteries are clean, smooth and slick, and can expand easily to let more blood flow through when you need it. Like any muscle, your heart needs a steady supply of oxygen- and nutrient-rich blood to function. Your coronary arteries encircle your heart like a crown and branch off into your heart muscle, supplying it with blood.

Atherosclerosis (also called "hardening of the arteries") is the slow, steady build up of deposits called plaque in your arteries, which can start as early as childhood. Plaque is made up of fat, cholesterol, calcium and other cellular matter circulating in your blood. Over time, this plaque will both narrow and harden arteries, including the coronary arteries that feed your heart. When the blood flow is restricted, angina, or chest pain, results. Even worse, the plaque can rupture into the blood vessel, forming blood clots that block the flow of blood in the heart's arteries and can cause a heart attack.

## Symptoms

It is possible to have coronary artery disease, but not experience any symptoms at all. But as it gets more severe, people typically develop symptoms.

If your arteries cannot supply enough blood to meet the oxygen demands of your heart, you may feel a pressure or tightness in your chest. This is usually brought on by physical activity or emotional stress, and usually ceases within a few minutes of stopping the stressful activity.

Shortness of breath is another symptom of CAD, along with extreme fatigue after physical exertion.

The most serious consequence of coronary artery disease is a heart attack. This happens when an artery that feeds your heart muscle becomes almost or completely blocked and not enough blood can flow through to distant muscle. This is usually caused by a blood clot or other debris in an already narrowed coronary artery. Pain from a heart attack is often described as a crushing or squeezing pressure in the chest and may feel similar to angina but lasts longer.

These symptoms may vary for women and men. In fact, women often feel no chest pain but may have a combination of the other symptoms, such as shortness of breath, weakness, dizziness, or cold sweats. Women also often experience warning signals a month or two before, like unusual fatigue, sleep disturbance and/or short of breath.

Unfortunately, some people are at greater "risk" than others. The risk increases with age and a family history of CAD. Race is a major risk factor as well—Hispanics, African Americans, American Indians and some Asian Americans are more at risk than other groups.

You are also more likely to develop CAD if you have high cholesterol, high blood pressure or diabetes.

On top of all that, lifestyle factors like smoking, poor diet, inactivity and weight gain increase your chances of developing CAD.