

# Know Your Heart: All About Coronary Artery Disease

## What Is Coronary Artery Disease?

[Coronary artery disease](#) is a narrowing and hardening of your heart's coronary arteries.

Coronary artery disease restricts oxygen-rich blood from reaching your heart and lungs, a process called [ischemia](#).

This narrowing is primarily caused by plaque build-up inside your arteries, sometimes called [atherosclerosis](#).

Plaque is made up of fatty deposits (cholesterol, fat, calcium, and fibrin, a clotting material).

As plaque builds up inside the arteries of your heart, the blood vessels narrow and harden, placing increased stress on your heart.

## What Causes Coronary Artery Disease?

Coronary artery disease may first be diagnosed after a sudden, acute event, such as a heart attack. For example, a piece of plaque can break loose, form a clot, and immediately block blood flow in a major artery.

More commonly, coronary artery disease develops as a slower, chronic process, possibly beginning in childhood.

High cholesterol levels in children and teenagers have been [noted in studies](#); this risk may be passed along from a (biological) parent.

The [risk of disease](#) for men increases after age 45; for women, the risk of disease increases after age 55. It is likely, however, that the damage to the coronary arteries began many years earlier.

## Are You at Risk for Coronary Artery Disease?

You may be at risk for coronary artery disease if you have any of the following risk factors:

- High blood levels of cholesterol and triglycerides
- High blood pressure

- Smoking
- Diabetes
- Excess body weight (overweight)
- Physical inactivity
- Family history (especially if that family member's heart disease was diagnosed before age 50)

## Do You Know the Symptoms of Coronary Artery Disease?

Coronary artery disease symptoms are related to the lack of blood flow to your heart and lungs.

- Chest pain or discomfort (also called angina)
- Arm, back, and shoulder pain
- Feeling weak, light-headed, nauseous, cold sweats
- Shortness of breath

## How Is Coronary Artery Disease Diagnosed?

Coronary artery disease is diagnosed using several tests, depending on your unique situation. These tests are performed either outside the body (external) or inside the body (internal).

### External Tests

- **EKG or ECG (Electrocardiogram)** looks at the electrical activity of your heart using an external monitor
- **Echocardiogram (Echo)** looks at a 3-D picture of your heart using an external ultrasound.
- **Chest X-ray** is an external picture of your heart, lungs, and other chest organs.
- **A calcium scan** is a computed tomography (CT) external scan measuring calcium and plaque levels in your coronary arteries.

## Internal Tests

- **Cardiac catheterization** (“cardiac cath”) is a detailed, internal measurement of blockage in your coronary arteries. A long, narrow tube, or catheter, is inserted into a groin, arm, or neck artery until it reaches the coronary arteries.
- **Cardiac catheterization** procedures are usually performed in the **Cardiac Cath Lab** in a hospital.
- Measurements, pressures, and samples are then taken to determine the health status of your coronary arteries.
- Artery blockages are usually measured in percentages. For example, the report may state “the right coronary artery is 75% blocked”.
- **A coronary angiogram** may be performed during the cardiac catheterization. During this procedure, dye is injected into your arteries while X-rays are taken.

## What Is the Best Treatment For Coronary Artery Disease?

Your treatment program is tailored to your cardiac disease profile; you should plan to discuss your goals in detail with your physician.

Many physicians and practitioners recommend a combination of measures to treat existing coronary artery disease and to prevent the disease from worsening.

### **Treatment measures usually include diet and lifestyle changes, such as:**

- Regular exercise
- Healthy eating
- Maintaining a reasonable weight
- Quitting smoking
- Managing diabetes
- Monitoring blood pressure
- Taking prescribed medications

Surgical procedures, such as **coronary artery bypass graft (CABG) surgery**, may also be recommended by your physician.

If cardiac bypass surgery is an option, your physician will refer you to a cardiac surgeon for a detailed evaluation.

## **What Is Cardiac Rehabilitation?**

Your physician may recommend cardiac rehabilitation (“cardiac rehab”) to help you recover from a cardiac illness or event (heart attack, heart failure, or heart surgery).

Cardiac rehab is a supervised health maintenance outpatient program run by professional, licensed physical therapists.

Cardiac rehab programs include the following:

- Regularly supervised and monitored exercise training at a health center.
- Education about maintaining a healthy lifestyle
- Healthy eating and nutrition guidelines
- Taking appropriate medications ordered by your physician
- Managing your stress and mental health

To determine the best cardiac rehab program for you, your physician may first recommend an **exercise stress test**.

An **exercise stress test** measures your cardiac and respiratory function while walking or running on a treadmill.

## **Key Points for You: A Heart-Healthy Lifestyle**

You can reduce your risk for coronary artery disease by focusing on a heart-healthy lifestyle, which includes the following:

- Eating a heart-healthy diet

- Getting regular exercise
- Maintaining a healthy weight
- Taking medications prescribed by your doctor
- Managing your stress levels

Want to learn more about coronary artery disease and how to improve your heart health?

Check out the **American Heart Association website** ([heart.org](https://www.heart.org)) for more information.