

# 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 ordered 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.