

# Heart diseases

Heart disease describes a range of conditions that affect your heart. Diseases under the heart disease umbrella include blood vessel diseases, such as coronary artery disease; heart rhythm problems (arrhythmias); and heart defects you're born with (congenital heart defects), among others. The term "heart disease" is often used interchangeably with the term "cardiovascular disease." Cardiovascular disease generally refers to conditions that involve narrowed or blocked blood vessels that can lead to a heart attack, chest pain (angina) or stroke. Other heart conditions, such as those that affect your heart's muscle, valves or rhythm, also are considered forms of heart disease.

Symptoms of heart disease in your blood vessels (atherosclerotic disease)

Cardiovascular disease symptoms may be different for men and women. For instance, men are more likely to have chest pain; women are more likely to have other symptoms along with chest discomfort, such as shortness of breath, nausea and extreme fatigue. Symptoms can include:

- Chest pain, chest tightness, chest pressure and chest discomfort (angina)
- Shortness of breath
- Pain, numbness, weakness or coldness in your legs or arms if the blood vessels in those parts of your body are narrowed
- Pain in the neck, jaw, throat, upper abdomen or back

You might not be diagnosed with cardiovascular disease until you have a heart attack, angina, stroke or heart failure. It's important to watch for cardiovascular symptoms and discuss concerns with your doctor.

Cardiovascular disease can sometimes be found early with regular evaluations.

Heart disease symptoms caused by abnormal heartbeats (heart arrhythmias)

A heart arrhythmia is an abnormal heartbeat. Your heart may beat too quickly, too slowly or irregularly. Heart arrhythmia symptoms can include:

- Fluttering in your chest
- Racing heartbeat (tachycardia)
- Slow heartbeat (bradycardia)
- Chest pain or discomfort
- Shortness of breath
- Lightheadedness
- Dizziness
- Fainting (syncope) or near fainting

Heart disease symptoms caused by heart defects

Serious congenital heart defects — defects you're born with — usually become evident soon after birth. Heart defect symptoms in children could include:

- Pale gray or blue skin color (cyanosis)
- Swelling in the legs, abdomen or areas around the eyes
- In an infant, shortness of breath during feedings, leading to poor weight gain

Less serious congenital heart defects are often not diagnosed until later in childhood or during adulthood. Signs and symptoms of congenital heart defects that usually aren't immediately life-threatening include:

- Easily getting short of breath during exercise or activity
- Easily tiring during exercise or activity
- Swelling in the hands, ankles or feet

Heart disease symptoms caused by weak heart muscle (dilated cardiomyopathy)

In early stages of cardiomyopathy, you may have no symptoms. As the condition worsens, symptoms may include:

- Breathlessness with exertion or at rest
- Swelling of the legs, ankles and feet
- Fatigue
- Irregular heartbeats that feel rapid, pounding or fluttering
- Dizziness, lightheadedness and fainting

Heart disease symptoms caused by heart infections

Endocarditis is an infection that affects the inner membrane that separates the chambers and valves of the heart (endocardium). Heart infection symptoms can include:

- Fever
- Shortness of breath
- Weakness or fatigue
- Swelling in your legs or abdomen
- Changes in your heart rhythm
- Dry or persistent cough
- Skin rashes or unusual spots

Heart disease symptoms caused by valvular heart disease

The heart has four valves — the aortic, mitral, pulmonary and tricuspid valves — that open and close to direct blood flow through your heart. Valves may be damaged by a variety of conditions leading to narrowing (stenosis), leaking (regurgitation or insufficiency) or improper closing (prolapse).

Depending on which valve isn't working properly, valvular heart disease symptoms generally include:

- Fatigue
- Shortness of breath
- Irregular heartbeat
- Swollen feet or ankles
- Chest pain
- Fainting (syncope)

When to see a doctor

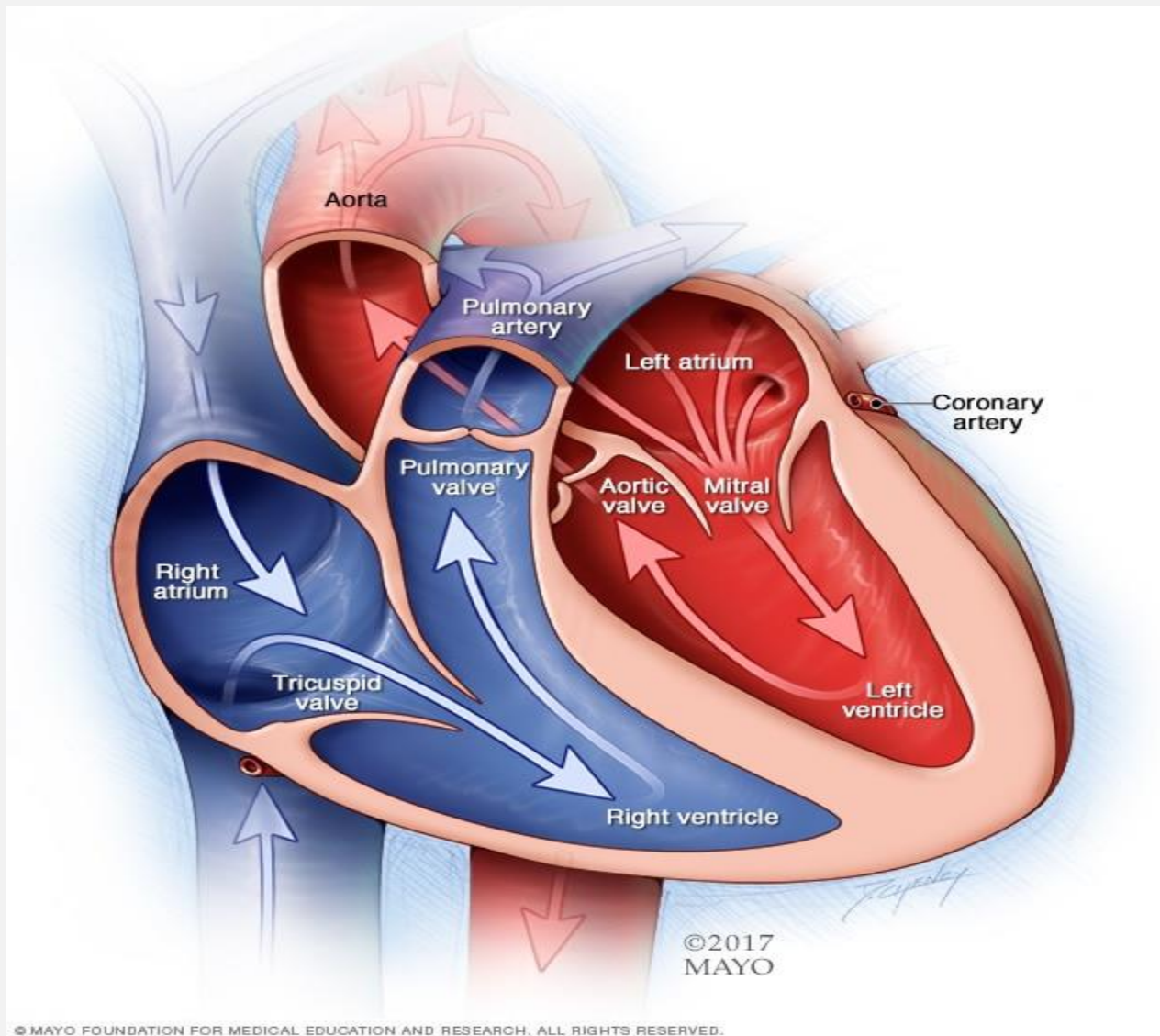
Seek emergency medical care if you have these heart disease symptoms:

- Chest pain
- Shortness of breath
- Fainting

Heart disease is easier to treat when detected early, so talk to your doctor about your concerns regarding your heart health. If you're concerned about developing heart disease, talk to your doctor about steps you can take to reduce your heart disease risk. This is especially important if you have a family history of heart disease.

If you think you may have heart disease, based on new signs or symptoms you're having, make an appointment to see your doctor.

Causes



### Chambers of the heart

Your heart is a pump. It's a muscular organ about the size of your fist, situated slightly left of center in your chest. Your heart is divided into the right and the left side. The division prevents oxygen-rich blood from mixing with oxygen-poor blood. Oxygen-poor blood returns to the heart after circulating through your body.

- The right side of the heart, comprising the right atrium and ventricle, collects and pumps blood to the lungs through the pulmonary arteries.
- The lungs refresh the blood with a new supply of oxygen. The lungs also breathe out carbon dioxide, a waste product.

- Oxygen-rich blood then enters the left side of the heart, comprising the left atrium and ventricle.
- The left side of the heart pumps blood through the aorta to supply tissues throughout the body with oxygen and nutrients.

### Heart valves

Four valves within your heart keep your blood moving the right way by opening only one way and only when they need to. To function properly, the valve must be formed properly, must open all the way and must close tightly so there's no leakage. The four valves are:

- Tricuspid
- Mitral
- Pulmonary
- Aortic

## Heartbeats



### The blueprints to your heart

A beating heart contracts and relaxes in a continuous cycle.

- During contraction (systole), your ventricles contract, forcing blood into the vessels to your lungs and body.
- During relaxation (diastole), the ventricles are filled with blood coming from the upper chambers (left and right atria).

### Electrical system

Your heart's electrical wiring keeps it beating, which controls the continuous exchange of oxygen-rich blood with oxygen-poor blood. This exchange keeps you alive.

- Electrical impulses begin high in the right atrium and travel through specialized pathways to the ventricles, delivering the signal for the heart to pump.
- The conduction system keeps your heart beating in a coordinated and normal rhythm, which keeps blood circulating.

Various heart disease causes

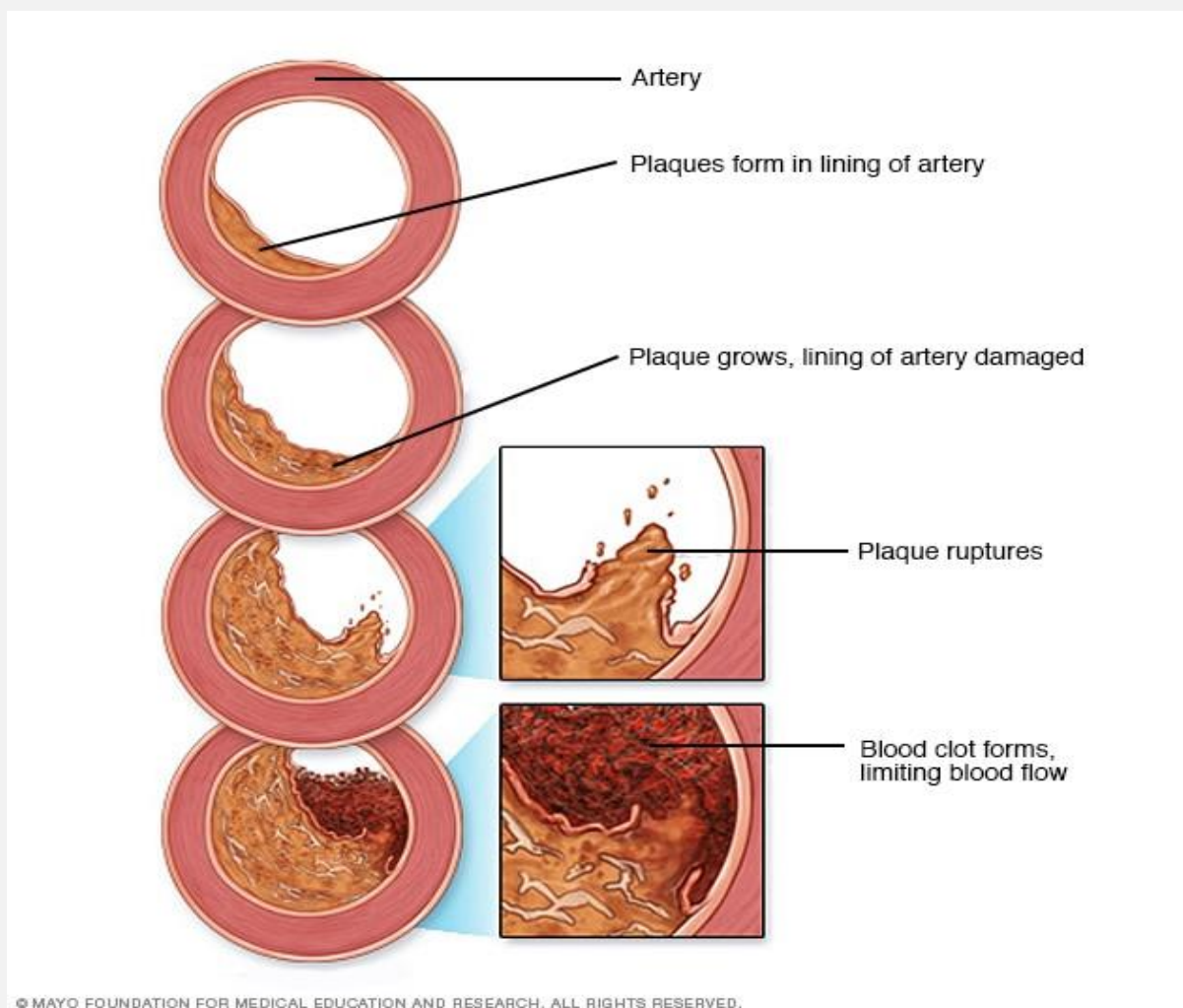
The causes of heart disease vary by type of heart disease.

Causes of cardiovascular disease

While cardiovascular disease can refer to different heart or blood vessel problems, the term is often used to mean damage to your heart or blood vessels by atherosclerosis (ath-ur-o-skluh-ROE-sis), a buildup of fatty plaques in your arteries. Plaque buildup thickens and stiffens artery walls, which can inhibit blood flow through your arteries to your organs and tissues.

Atherosclerosis is also the most common cause of cardiovascular disease. It can be caused by correctable problems, such as an unhealthy diet, lack of exercise, being overweight and smoking.





## References

mayoclinic.org