

Heart Disease

Introduction:

Heart disease describes a range of conditions that affect the heart. Diseases under the umbrella term heart disease include:

- Cardiovascular disease.
- Heart arrhythmia.
- Congenital heart disease.
- Cardiomyopathy.
- Heart disease caused by heart infections.
- Heart valve disease.

Symptoms:

Heart disease symptoms vary depending on which type of heart diseases you have.

Cardiovascular disease:

Cardiovascular disease can result in narrowed or blocked blood vessels that restrict blood circulation to the heart, brain, or other parts of the body. Symptoms of cardiovascular disease include:

- Coronary artery disease - a disease affecting the major blood vessels that supply the heart with blood, oxygen, and nutrients.
- Cerebrovascular disease - a disease affecting the blood vessels supplying the brain.
- Peripheral artery disease - a disease affecting the blood vessels supplying the arms and legs.
- Rheumatic heart disease - damage to the heart muscle and heart valves resulting from rheumatic fever, which is caused by an infection from streptococcal bacteria.
- Congenital heart disease - heart defects that are observed at birth.

- Pulmonary embolism - blood clots that come from leg veins, which can dislodge and move to the heart and lungs.

Heart attacks and strokes are dangerous medical conditions that are mainly caused by a blockage that prevents blood from flowing to the heart or brain. The most common reason for this blockage is a build-up of fatty deposits on the inner walls of the blood vessels that supply the heart or brain. Strokes can also be caused by bleeding from a blood vessel in the brain or from blood clots.

What Are the Risk Factors for Cardiovascular Disease?

The most important behavioral risk factors leading to heart disease and strokes are:

- An unhealthy diet.
- Physical inactivity.
- Smoking.
- Alcohol consumption.
- High blood pressure.
- Diabetes.
- High blood cholesterol and fat levels.
- Obesity.

What Are Common Symptoms of Cardiovascular Diseases?

Often, there are no symptoms or warning signs that indicate that a person is suffering from a cardiovascular disease. A heart attack or stroke may be the first warning sign or indicator of the disease.

Symptoms of a Heart Attack Include:

- Pain or discomfort in the center of the chest.
- Pain or discomfort in the arms, the left shoulder, elbows, jaw, or back.

- The patient may experience difficulty in breathing or shortness of breath.
- Nausea .
- Light-headedness or fainting.
- Sweating.
- Women are more likely to experience shortness of breath, nausea, vomiting, and back or jaw pain.

Symptoms of a Stroke Include:

- Sudden weakness of the face, arm, or leg, most often on one side of the body.
- Numbness of the face, arm, or leg, especially on one side of the body.
- Difficulty in speaking or understanding speech.
- Difficulty in seeing with one or both eyes.
- Difficulty in walking, dizziness, loss of balance, or coordination.
- Severe headache with no known cause.
- Fainting or loss of consciousness.

Symptoms of Rheumatic Heart Disease:

- Symptoms of rheumatic heart disease include: shortness of breath, fatigue, irregular heartbeats, chest pain, and fainting.
- Symptoms of rheumatic fever include: fever, pain and swelling of the joints, nausea, stomach cramps, and vomiting.

Prevention:

You can help prevent cardiovascular disease by making some lifestyle changes and leading a healthy life. This includes:

- Avoiding smoking.
- Avoiding alcohol.



- Maintaining a healthy diet that is rich in fruits and vegetables while avoiding foods that are high in salt and fat.
- Exercising regularly.
- Avoiding high blood sugar, high blood pressure, and high fat levels in the blood.

For secondary prevention of cardiovascular disease in those with established disease, including diabetics, treatment with the following medications is necessary:

- Aspirin
- Beta-blockers.
- Angiotensin converting enzyme inhibitors (ACE inhibitors)
- Statins.

Common Treatments for Cardiovascular Disease:

Treatments for heart disease include:

- Medications.
- Surgical treatment, such as:
 - Coronary artery bypass grafting.
 - Vascular catheterization.
 - Valve replacement.
 - Heart transplant from a donor.
 - Artificial heart transplant.

Congenital Heart Disease:

Defects in the structure of the heart that is present at birth. Heart defect symptoms could include:

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

Cardiomyopathy:

Cardiomyopathy is a disease that affects the heart muscle. In early stages of cardiomyopathy, the patient may not have any symptoms, but as the condition worsens, symptoms may include:

- Shortness of breath with exertion or at rest.
- Swelling in the legs, ankles, and feet.
- Bloating of the abdomen due to fluid buildup.
- Fatigue.
- Irregular heartbeats that feel rapid, pounding, or fluttering.
- Dizziness, lightheadedness, and fainting.

Heart Disease Caused by Heart Infections:

There are three types of heart infections:

- Pericarditis (inflammation of the pericardium, which is the fibrous sac surrounding the heart).
- Myocarditis (inflammation of the myocardium, which is the thick middle layer of the heart muscle).
- Endocarditis (inflammation of the endocardium, which is the inner lining of your heart chambers and heart valves).

Heart infection symptoms can include:

- Fever.
- Shortness of breath.
- Fatigue.
- Swelling in the legs or abdomen.
- Heart rhythm irregularities.
- Dry or persistent cough.
- Skin rashes or unusual spots.

Heart Valve Disease:

The heart has four valves, they are:

1. The mitral valve: it lies between the left atrium and the left ventricle. In normal conditions, it allows blood to flow in one direction from the atrium to the ventricle.
2. The aortic valve: it lies between the left ventricle and the aorta. When opened, it allows the blood to flow in one direction from the left ventricle to the aorta.
3. The tricuspid valve: it lies between the right atrium and the right ventricle. It allows blood to flow in one direction from the right atrium to the right ventricle.
4. The pulmonary valve: it lies between the right ventricle and the pulmonary artery. It allows blood to flow in one direction from the right ventricle to the pulmonary artery and then towards the lungs.

Symptoms of Heart Valve Disease:

- Shortness of breath, particularly when the patient has been very active.
- Chest pain after physical exertion.
- Dizziness and fainting in advanced cases. This usually accompanies cases of heart valve stenosis, particularly aortic valve stenosis.
- Fatigue and lethargy.
- Heart palpitations.
- Coughing up of blood, particularly in the case of mitral valve disease.
- Swollen feet or ankles.

Medical Intervention:

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

- Chest pain.



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- Shortness of breath.
- Fainting.

Causes and Risk Factors of Heart Disease:

Risk factors for developing heart disease include:

- Advanced age.
- Family history of heart disease.
- Smoking.
- Malnutrition.
- High blood pressure.
- High cholesterol.
- Diabetes.
- Obesity.
- Inactivity.
- Constant stress.

Complications of Heart Disease Include:

- Heart failure.
- Heart attack.
- Stroke.
- Aneurysm.
- Sudden cardiac arrest.

Heart Disease Diagnosis:

Tests to diagnose heart disease can include:

- Blood tests
- X-ray scans
- Electrocardiogram (ECG).
- Holter monitoring.

- Echocardiography.
- Ultrasound imaging through the esophagus if the results of the echocardiogram are unclear.
- Cardiac catheterization.
- Cardiac biopsy.
- Cardiac computerized tomography (CT) scan.
- Cardiac magnetic resonance imaging (MRI).

Heart Disease Treatment:

Treatments for heart disease include:

- Adopting a healthy lifestyle (by maintaining a healthy diet and exercising regularly).
- Medications.
- Surgical treatment:

Heart Disease Prevention:

Certain types of heart disease, such as congenital heart disease, cannot be prevented. However, making some lifestyle changes can improve the health status of heart patients and help prevent many other types of heart disease. These changes include:

- Staying away from smoking.
- Maintaining normal levels of blood pressure, cholesterol, and blood sugar.
- Engaging in regular physical activity.
- Maintaining a healthy diet.
- Reducing and managing stress levels.

Clinical Health Education Department

For further questions kindly contact us via email:

Hpromotion@moh.gov.sa