

# What to know about cardiovascular disease

- [Types](#)
- [Symptoms](#)
- [Lifestyle tips](#)
- [Treatment](#)
- [Risk factors](#)
- [Causes](#)
- [Prevention](#)
- [Statistics](#)

The cardiovascular, or circulatory, system supplies the body with blood. It

consists of the heart, arteries, veins, and capillaries.

CVD is now the [most common cause of death](#) worldwide. However, there are many ways to reduce the risk of developing these conditions. There are also many treatment options available if do they occur.

The treatment, symptoms, and prevention of the conditions that are part of CVD often overlap.

In this article, we look at the different types of CVD, their symptoms and causes, and how to prevent and treat them.

## Types



There are many types of CVD.

CVD comprises many different types of condition. Some of these might develop at the same time or lead to other conditions or diseases within the group.

Diseases and conditions that affect the heart include:

- [angina](#), a type of chest pain that occurs due to decreased blood flow into the heart
- [arrhythmia](#), or an irregular heartbeat or heart rhythm
- [congenital heart disease](#), in which a problem with heart function or structure is present from birth
- [coronary artery disease](#), which affects the arteries that feed the heart muscle
- [heart attack](#), or a sudden blockage to the heart's blood flow and oxygen supply
- [heart failure](#), wherein the heart cannot contract or relax normally
- dilated cardiomyopathy, a type of heart failure, in which the heart gets larger and cannot pump blood efficiently
- hypertrophic cardiomyopathy, in which the heart muscle walls thicken and problems with relaxation of the muscle, blood flow, and electrical instability develop
- mitral regurgitation, in which blood leaks back through the mitral valve of the heart during contractions

- mitral valve prolapse, in which part of the mitral valve bulges into the left atrium of the heart while it contracts, causing mitral regurgitation
- pulmonary stenosis, in which a narrowing of the pulmonary artery reduces blood flow from the right ventricle (pumping chamber to the lungs) to the pulmonary artery (blood vessel that carries deoxygenated blood to the lungs)
- aortic stenosis, a narrowing of the heart valve that can cause blockage to blood flow leaving the heart
- [atrial fibrillation](#), an irregular rhythm that can increase the risk of [stroke](#)
- rheumatic [heart disease](#), a complication of [strep throat](#) that causes [inflammation](#) in the heart and which can affect the function of heart valves
- radiation heart disease, wherein radiation to the chest can lead to damage to the heart valves and blood vessels

Vascular diseases affect the arteries, veins, or capillaries throughout the body and around the heart.

They include:

- [peripheral artery disease](#), which causes arteries to become narrow and reduces blood flow to the limbs
- [aneurysm](#), a bulge or enlargement in an artery that can rupture and bleed
- [atherosclerosis](#), in which plaque forms along the walls of blood vessels, narrowing them and restricting the flow of oxygen rich blood
- renal artery disease, which affects the flow of blood to and from the kidneys and can lead to [high blood pressure](#)
- [Raynaud's disease](#), which causes arteries to spasm and temporarily restrict blood flow
- peripheral venous disease, or general damage in the veins that transport blood from the feet and arms back to the heart, which causes leg swelling and [varicose veins](#)
- ischemic stroke, in which a blood clot moves to the brain and causes damage
- venous blood clots, which can break loose and become dangerous if they travel to the pulmonary artery
- blood clotting disorders, in which blood clots form too quickly or not quickly enough and lead to excessive bleeding or clotting

- Buerger's disease, which leads to blood clots and inflammation, often in the legs, and which may result in [gangrene](#)

It is possible to manage some health conditions within CVD by making lifestyle changes, but some conditions may be life threatening and require emergency surgery.

# Symptoms

Symptoms will vary depending on the specific condition. Some conditions, such as [type 2 diabetes](#) or [hypertension](#), may initially cause no symptoms at all.

However, typical symptoms of an underlying cardiovascular issue include:

- pain or pressure in the chest, which may indicate angina
- pain or discomfort in the arms, left shoulder, elbows, jaw, or back
- shortness of breath
- nausea and [fatigue](#)
- lightheadedness or dizziness

- cold sweats

Although these are the most common ones, CVD can cause symptoms anywhere in the body.

## **Lifestyle tips**





Regular exercise can help prevent CVD.

People can take the following steps to prevent some of the conditions within CVD:

- **Manage body weight:** The National Institute of Diabetes and Digestive and Kidney Disorders advise that if a person loses [5–10%](#) of their [body weight](#), they may reduce their risk of developing CVD.
- **Get regular exercise:** The American Heart Association (AHA) recommend doing [150 minutes](#) of moderate-to-intense physical activity every week.
- **Follow a heart-healthy diet:** Eating foods that contain polyunsaturated fats and [omega-3](#), such as oily fish, alongside fruits and vegetables can support heart health and reduce the risk of CVD. Reducing the intake of processed food, salt, saturated fat, and added sugar has a similar effect.
- **Quit smoking:** Smoking is a key risk factor for almost all forms of CVD. Although quitting can be difficult, taking steps to do so can drastically reduce its damaging effects on the heart.

[Here, learn more about the benefits of exercise.](#)

## Treatment

The treatment option that is best for a person will depend on their specific type of CVD.

However, some options include:

- medication, such as to reduce low density lipoprotein [cholesterol](#), improve blood flow, or regulate heart rhythm
- surgery, such as coronary artery bypass grafting or valve repair or replacement surgery
- cardiac rehabilitation, including exercise prescriptions and lifestyle counseling

Treatment aims to:

- relieve symptoms
- reduce the risk of the condition or disease recurring or getting worse
- prevent complications, such as hospital admission, heart failure, stroke, heart attack, or death

Depending on the condition, a healthcare provider may also seek to stabilize heart rhythms, reduce blockages, and relax the arteries to enable a better flow of blood.

## **Risk factors**



High blood pressure is a risk factor for CVD.

Researchers reported in the journal *JAMA* that the lifetime risk of CVD is more than 50% for both men and women.

Their study paper notes that even among those with few or no cardiovascular risk factors, the risk is still higher than 30%.

Risk factors for CVD include:

- high blood pressure, or hypertension
- atherosclerosis or blockages in the arteries
- [radiation therapy](#)
- smoking
- poor sleep hygiene
- high blood cholesterol, or hyperlipidemia
- [diabetes](#)
- a high fat, high [carbohydrate](#) diet
- physical inactivity
- [obesity](#)
- sleep apnea
- excessive alcohol consumption
- [stress](#)
- air pollution
- chronic obstructive pulmonary disorder or other forms of reduced lung function

People with one cardiovascular risk factor often have more. For example, obesity is a risk factor for high blood pressure, high blood cholesterol, and type 2 diabetes. A person may have all four conditions at the same time.

[Find out ten ways to stop smoking. Read on to learn more.](#)

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## Causes

Many types of CVD occur as a [complication of atherosclerosis](#).

Damage to the circulatory system can also result from diabetes and other health conditions, such as a virus, an inflammatory process such as myocarditis, or a structural problem present from birth (congenital heart disease).

CVD often results from high blood pressure, which produces no symptoms. It is therefore vital that people undergo regular screening for high blood pressure.

# Prevention

Many types of CVD are preventable. It is vital to address risk factors by taking the following steps:

- reducing the use of alcohol and tobacco
- eating fresh fruit and vegetables
- reducing salt, sugar, and saturated fat intake
- avoiding a sedentary lifestyle, particularly for children

Adopting damaging lifestyle habits, such as eating a high sugar diet and not getting much physical activity, may not lead to CVD while a person is still young, as the effects of the condition are cumulative.

However, continued exposure to these risk factors can contribute to the development of CVD later in life.

**Does aspirin protect a person from CVD?**

Many people will have taken an [aspirin](#) a day as a routine measure to protect against CVD. However, [current guidelines](#) no longer recommend this for most people, as it can lead to bleeding. This risk outweighs any benefit it may have.

That said, a doctor may suggest aspirin if a person has a high risk of experiencing a cardiovascular event, such as a heart attack or stroke, and a low risk of bleeding. Doctors may also recommend it to those who have already had a heart attack or stroke.

Anyone taking a daily dose of aspirin to reduce their risk of CVD should ask their doctor whether or not they should continue.

[Learn more about aspirin here.](#)

## Statistics

According to the World Health Organization (WHO), CVD is the leading cause of death worldwide.

In 2016, around [17.9 million people](#) died from CVD, accounting for 31% of all registered premature deaths.



Of these, 85% resulted from a heart attack or stroke. These conditions affect equal numbers of men and women.

The WHO estimate that by 2030, [23.6 million people](#) will die from CVD conditions annually — mostly due to stroke and heart disease.

Although these conditions remain prevalent in global mortality rates, people can start taking steps to prevent them.

**Q:**

Can I receive regular screenings to prevent CVD if I have no symptoms?

**A:**

Yes. Everyone, even those with no symptoms, should receive regular screenings for CVD, starting from the age of 20 years.

The frequency of screening and the type of screening will depend on the current risk factors and any other medical problems. Discuss screening with a doctor, as it's never too early to start.

*Dr. Payal Kohli, MD, FACC* Answers represent the opinions of our medical experts. All content is strictly informational and should not be considered medical advice.

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- [Heart Disease](#)
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- [Stroke](#)
- [Cardiovascular / Cardiology](#)