
Heart disease - know your risk

Summary

- There is no single thing that causes cardiovascular disease (CVD), but there are several risk factors that contribute to it.
 - You can reduce your risk of developing CVD by choosing healthy foods, quitting smoking, being physically active, managing conditions such as high cholesterol, high blood pressure, diabetes and depression, managing your weight and avoiding social isolation.
 - Take medicines as prescribed by your doctor.
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Heart disease (cardiovascular disease, or CVD) is the leading single cause of death in Australia. 19,077 deaths were attributed to heart disease in Australia in 2016.

Cardiovascular disease can occur when arteries that supply blood and oxygen to your heart muscle and other organs (such as the brain and kidneys) become clogged with fatty material called plaque or atheroma. This process is called atherosclerosis. It can start when you are young and be well advanced by the time you reach middle age.

If your arteries become too narrow, less blood can reach your heart muscle. This may lead to symptoms such as **angina** (chest pain). If a blood clot forms in the narrowed artery and completely blocks the blood supply to part of your heart, it can cause a **heart attack**.

There is no single thing that causes cardiovascular disease (CVD), but there are several risk factors that contribute to it. Risk factors for CVD include:

- unhealthy eating
- overweight or obesity
- physical inactivity
- smoking
- high cholesterol
- high blood pressure
- diabetes
- depression
- social isolation and lack of social support
- age
- being male
- having a family history of CVD.

Aboriginal and Torres Strait Islander peoples are also at increased risk of CVD.

Understanding your heart and stroke risk score

In the past, your doctor may have measured and treated each of your heart disease risk factors one at a time. It is now recommended that your overall risk be assessed to determine your personal **heart disease and stroke-risk score**.

Your risk score puts many of the risk factors together. This is a bit like putting all the pieces of a puzzle together so you can see the whole picture. By looking at the whole picture, your doctor can discuss ways you can reduce your risk of **stroke** or **heart attack**.

However, if you are already known to be at high risk (for example, if you have had a previous heart attack or

stroke, you have severe kidney disease, very high blood pressure or you have diabetes and you are over 60 years old), a risk score will not need to be calculated. Risk reduction strategies include medications, surgery and lifestyle changes.

Heart disease risk factors

There is no single cause for CVD, but there are risk factors that increase your chance of developing it. There are modifiable risk factors (ones that you can change) and non-modifiable risk factors (ones that you can't change).

Heart disease risk factors that you can change include:

- poor diet
- **smoking**
- high total **cholesterol**
- **high blood pressure**
- management of **diabetes**
- being physically inactive
- being overweight or **obese**
- management of **depression**.

Social isolation and lack of social support are risk factors for heart disease that are usually able to be changed, although it can seem challenging to do so. Read more about how you can take steps to improve your **social connections**.

Risk factors that you can't change include increasing age, being male and having a family history of heart disease. Aboriginal and Torres Strait Islander peoples are also at increased risk of CVD.

The good news is that you can reduce your overall risk of developing CVD by leading a healthy lifestyle and taking medicines as prescribed by your doctor.

Smoking and heart disease risk

As well as causing cancer, **smoking** affects the arteries that supply blood to your heart and other parts of your body. It reduces the amount of oxygen in your blood and damages your artery walls. Smoking increases your risk of heart attack, stroke and peripheral arterial disease (which can lead to gangrene and limb amputation).

Smoking makes your blood 'stickier', causing blood cells to clump together. This slows blood flow through your arteries and makes blockages more common. Blockages may cause heart attack and stroke.

Smoking also makes your artery walls sticky, causing them to become clogged with fatty material called plaque or atheroma. Smokers often have cold hands or feet as a result of clogged arteries, which may also lead to serious problems such as gangrene.

If your coronary artery becomes clogged, it can cause angina. If a blood clot forms in the narrowed coronary artery and completely blocks the blood supply to a part of your heart, it can cause a heart attack.

Cholesterol and heart disease risk

Cholesterol is a fatty substance produced naturally by your body (blood cholesterol). It is used for many different things in your body, but is a problem when there's too much of it in your blood.

High total cholesterol causes fatty material to gradually build up in coronary arteries, making it harder for blood to flow through. It is mainly caused by eating foods high in saturated fats and trans fats.

Your total cholesterol includes two types of cholesterol, which are:

- **low-density lipoprotein (LDL)** – also known as 'bad' cholesterol because it can add to the build-up of plaque in your arteries and increase your risk of getting CVD
- **high-density lipoprotein (HDL)** is also known as 'good' cholesterol because it helps to protect you against CVD.

Most of the total cholesterol in your blood is made up of 'bad' LDL cholesterol. Only a small part is made up of

'good' HDL cholesterol.

You should aim for low LDL cholesterol and higher HDL cholesterol.

Blood pressure and heart disease risk

Blood pressure is the pressure of the blood in your arteries (the blood vessels that carry oxygen and nutrients to your body) as it is pumped around your body by your heart. Blood pressure depends on two main things: the amount of blood pumped by your heart and how easily the blood can flow through your arteries.

Your blood pressure will go up and down throughout the day, depending on the time of day and what you are doing. However, high blood pressure is a condition where your blood pressure is consistently high.

Your family history, eating patterns, alcohol intake, weight and level of physical activity have a strong influence on blood pressure. In some people, medicines, including the oral **contraceptive pill**, **contraceptive 'depot' injections**, steroids (cortisone-like medicines) and arthritis medicines, can also raise blood pressure.

High blood pressure can overload your heart and coronary arteries, and speed up the artery-clogging process. This can lead to problems such as heart attack and stroke.

High blood pressure can also affect arteries to other parts of your body, such as the eyes, kidneys and legs.

If high blood pressure is not treated, your heart may weaken because of the constant extra demand. This may cause **'heart failure'**, a serious condition with symptoms such as tiredness, shortness of breath and swelling of the feet and ankles.

Diabetes and heart disease risk

People with diabetes are at greater risk of heart attack, angina and stroke. Similarly, people with CVD are more prone to type 2 diabetes. For people with both diseases, the risk of heart attack and stroke is higher than for those without them.

The reported increase in diabetes in Australia is thought to be associated with more people being physically inactive, having bad eating habits and being overweight. The two main types of diabetes are:

- **type 1** – previously known as insulin-dependent or juvenile-onset diabetes
- **type 2** – previously known as non-insulin-dependent or mature-onset diabetes.

If you have diabetes, it is important that you manage your condition by being physically active, choosing healthy foods and maintaining a healthy weight.

If you have type 2 diabetes, you may need to take medicines to help you to maintain normal blood-glucose levels, as well as making lifestyle changes.

It is also important to stop smoking, reduce your total cholesterol, manage your blood pressure and regularly see your doctor for diabetes reviews.

Being overweight and heart disease risk

Being overweight or **obese** increases your risk of a number of health problems, including:

- CVD
- diabetes
- high blood pressure
- high cholesterol
- gall bladder disease
- joint problems, such as gout, arthritis and joint pain
- sleep problems, such as sleep apnoea
- certain types of cancer.

Carrying extra weight around your middle (being 'apple-shaped') is more of a health risk, so it is especially important for you to lose weight if this is the case.

To achieve a healthy body weight, balance the energy (kilojoules) coming into your body through food and drinks, with the energy (kilojoules) being used up by your body through regular physical activity.

Healthy eating and heart disease risk

Eating a variety of foods promotes good health and can help reduce the risk of disease, including heart disease. The best starting point is to eat a wide variety of foods from each of the five food groups, in the amounts recommended. This helps maintain a healthy and interesting diet, and provides a range of different nutrients to the body.

The five food groups are:

- fruit
- vegetables and legumes/beans
- lean meats and poultry, fish, eggs, tofu, nuts and seeds, legumes/beans
- grain (cereal) foods, mostly wholegrain and high fibre varieties
- milk, yoghurt, cheese and alternatives, mostly reduced fat.

To reduce heart disease risk, the Heart Foundation recommends:

- eating a variety of foods from the five food groups, and limiting sugary, fatty and salty take-away meals and snacks
- including vegetables, wholegrains, fruit, nuts and seeds every day
- choosing healthier fats and oils such as olive or canola oil, nuts, seeds, fish and avocado
- using herbs and spices for flavour instead of salt
- drinking mainly water.

Physical activity and heart disease risk

Physical activity is an important part of looking after your health and reducing your risk of CVD. Regular physical activity will:

- improve your long-term health
- reduce your risk of heart attack
- give you more energy
- help you to manage your weight
- help you to achieve healthier total cholesterol
- lower your blood pressure
- make your bones and muscles stronger
- make you feel more confident, happy and relaxed
- help you to sleep better.

If you have had a heart attack, regular physical activity will help you to recover more quickly. If you have diabetes, it will also help you to manage your blood-glucose levels.

Physical activity doesn't have to be strenuous. Moderate-intensity physical activity, such as brisk walking, is great for your health. It is recommended that you do 30–45 minutes of moderate-intensity physical activity on most, if not all, days of the week. You can do this in smaller bouts, such as three 10-minute walks, if it is easier.

Depression and heart disease risk

Studies have shown that people with depression, people who are socially isolated, and people who do not have quality social support are at greater risk of developing CVD.

Depression can be treated with medical and non-medical therapies. If you think that you have depression, talking to your health professional is the best first step.

Family history and heart disease risk

A person's family history of disease (their genes) can increase their tendency to develop:

- high blood pressure
- high cholesterol

- diabetes
- a particular body shape.

Although having a family history of CVD is a risk factor, it does not mean that you definitely will develop it. However, if you do have a family history of CVD, it is important to reduce or remove your other risk factors. For example, limit the amount of saturated fats and trans fats you eat, do not smoke, and lead an active, healthy lifestyle.

Gender, age and heart disease risk

Generally, men have a higher risk than women of developing CVD in middle age. The risk rises as they get older.

However, the risk of developing CVD is an important issue for women, especially as they get older. It is not clear why women tend to get CVD at a later age than men, although it is likely that hormonal changes after menopause, combined with changes in their risk factors, play a role.

Despite your gender and age, you can reduce your risk of developing CVD if you follow a healthy lifestyle and take medicines as prescribed by your doctor.

Where to get help

- Your **GP (doctor)** or other health professional
- **Heart Foundation** Helpline Tel. **13 11 12**
- Community health centre
- **Diabetes Victoria** Tel. **1300 437 386**

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Heart Foundation

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