

Prevention

The best preventative measures that can be taken to reduce your risk of developing cardiovascular disease are simple lifestyle changes.

Diet

There is no question that the level of total cholesterol and LDL cholesterol is linked to the amount of saturated fat and cholesterol in the diet. The National Heart Foundation recommends the following:

- choose lean meat and eat more fish more often
- remove visible fat from meat and skin from chicken
- use low-fat dairy products
- use poly-unsaturated and mono-unsaturated oils and margarines
- cut down on fatty fried foods, biscuits, cakes and pastries
- go easy on 'fast foods'
- eat more fruit, vegetables, bread and cereal products

Attention to these points will also help to keep your weight within its appropriate limits.



Exercise

Regular moderate exercise will help to keep you healthy, control your weight and lower your blood pressure.

Become a non-smoker

Not only is smoking one of the major risk factors for atherosclerosis, but when reduced or eliminated, the risk decreases dramatically.

The Role of the Pathologist

The most successful strategy in dealing with heart disease lies in adequate prevention, before this becomes life-threatening. Previously it was thought that there was no effective treatment for atherosclerosis, so treatment was aimed at reducing complications. However, there is now evidence that aggressive treatment can actually reverse atherosclerosis. The role of the pathologist is to assist your own doctor in determining your level of risk, so that the most appropriate treatment can be determined.

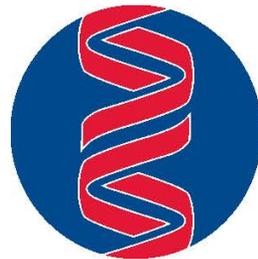
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The Heart at Risk



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The Heart

The main function of the heart is to pump oxygen and nutrient-rich blood to all parts of the body through many kilometres of blood vessels (arteries). All cells in the body need this supply of blood in order to grow and remain healthy. Once the cells have taken what they require and have expelled waste, the blood returns through blood vessels (veins) to the heart. To carry blood efficiently and effectively, all blood vessels need to be unclogged and elastic.

If deposits of fat and fibrous plaque build up inside a blood vessel, they cause the vessel to harden and narrow. This is called atherosclerosis. The term coronary heart disease (CHD) is used specifically when deposits have built up in the blood vessels supplying the heart.

The term for the combination of diseases of the blood vessels and of the heart is cardiovascular disease (CVD). This is still the major cause of death in Australia.

Heart Disease Facts & Figures

from the National Heart Foundation of Australia

Cardiovascular disease remains the major public health problem for Australia. It caused just over 50,000 deaths, or 36% of all deaths in Australia in 2004.

This means that one Australian dies every 10 minutes from cardiovascular disease.

Coronary heart disease, which is an important type of cardiovascular disease, is the single major problem and responsible for 21% of all deaths in Australia.

Cardiovascular disease is largely preventable if current knowledge is put into practice.

About 80% of the adult population have at least one of the following preventable or treatable cardiovascular risk factors:

- tobacco smoking
- physical inactivity
- high blood pressure
- overweight



Who is at risk of heart disease?

Contributing factors include:

High blood cholesterol

A small percentage of people have an inherited disorder that raises their cholesterol levels. However, for most of us, levels are raised because we eat too many foods that are rich in saturated fat.

Male sex

This factor is diminishing in significance. Heart disease is now the biggest killer of both men and women in Australia. In women it occurs much later in life (over 70 years of age). It is likely that oestrogen plays a role in protecting women against heart attack.

Hypertension (High Blood Pressure)

The underlying factors that cause most cases of high blood pressure are still not well understood. In many people, being overweight, excess alcohol and/or salt intake, smoking and lack of exercise increase the tendency to high blood pressure.

Smoking

Inhaled smoke contains nicotine (which temporarily decreases the size of the blood vessels) and carbon monoxide (which reduces the amount of life-giving oxygen available for the body's cells). However, the main effect of smoking is to increase the development of atherosclerosis, although the mechanism is not yet understood. People who smoke a pipe or cigars have a lower risk (although it is still raised), probably because they inhale less smoke.

Obesity

Being overweight plays an important part in increasing the risk of hypertension, diabetes mellitus, high cholesterol and high triglycerides. These are all associated with an increased risk of CHD.

Diabetes mellitus

It would appear that diabetics (both insulin-dependent and non-insulin-dependent types) show at least a two-fold increase in atherosclerosis, but the exact reason for this is unknown.

Physical inactivity

This usually co-exists with other risk factors. However, being fit keeps the whole body well, including the heart.

Assessment of Cardiac Risk

Blood Tests

When assessing the risk of developing cardiovascular disease, all of the risk factors must be taken into account since the occurrence of more than one risk factor worsens the effect of each factor present.

High blood levels of fats contribute to the formation of the plaques of atherosclerosis. Elevated blood cholesterol levels, in particular, have been shown to lead to an increased risk of heart disease (as discussed earlier). Therefore, a blood cholesterol level is very useful to assess the risk of cardiovascular disease.

Cholesterol is carried in the blood in two major forms: low density lipoprotein (LDL) cholesterol and high density lipoprotein (HDL) cholesterol. HDL cholesterol is recognised as 'good' cholesterol, as it is cholesterol that is being moved from the body's cells to the liver. LDL cholesterol is associated with movement of cholesterol from the liver (where it is produced) to other parts of the body.

Therefore, if your cholesterol is elevated, your doctor will ask for an HDL cholesterol level in order to determine which type of cholesterol is causing the increase. A high HDL level decreases your risk of atherosclerosis.

Diabetes is a risk factor for heart disease, and blood glucose testing to exclude diabetes is indicated in high-risk people. Type 2 diabetes is common in older people and can be present for years without any obvious symptoms.

