

Cholesterol Information Sheet

Cholesterol and triglycerides occur naturally in your body and certain levels are vital as an energy source, for regeneration of cells and for normal hormone production and growth.

Cholesterol is a fatty substance in your blood. Cholesterol is mostly made in your liver from the saturated fat you eat. Only a small amount comes directly from cholesterol in food. Cholesterol is transported around your body in the bloodstream.

Cholesterol is carried in the blood by special molecules called lipoproteins. The three main forms of lipoproteins are:

- **Low-density lipoprotein (LDL).** This is often known as 'bad cholesterol' and is thought to promote arterial disease. It carries cholesterol from the liver to the cells and can cause harmful cholesterol build-up if there is too much to be used up by the cells.
- **High-density lipoprotein (HDL).** This is often referred to as 'good cholesterol', and may oppose arterial disease. It takes cholesterol away from the cells and back to the liver, where it's either broken down or excreted.
- **Triglycerides.**

The amount of cholesterol present in the blood can range from 3.6 to 7.8 mmol/litre. A level above 6 mmol/litre is regarded as high, and is a risk factor for arterial disease. Government advice recommends a target cholesterol level of under 5, but on average men in England have a level of 5.5, and women a level of 5.6.

The first steps in lowering cholesterol include having a low fat diet, giving up smoking, limiting alcohol intake and increasing exercise levels. If your blood test shows high lipid levels you should take steps to lower the levels.

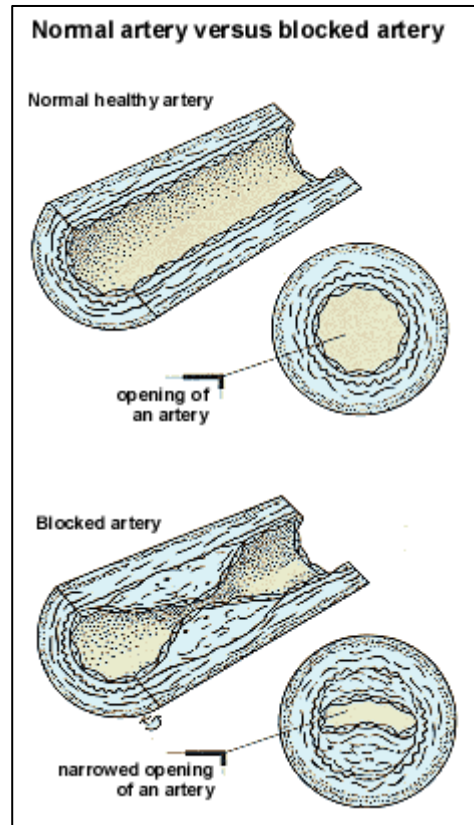
If lifestyle changes do not work your doctor may recommend that you start taking a lipid-lowering medicine.



Facts

Evidence strongly indicates that high cholesterol levels can cause narrowing of the arteries (atherosclerosis), heart attacks, and strokes. The risk of coronary heart disease also rises as blood cholesterol increases. When other risk factors, (i.e. high blood pressure and cigarette smoking), are present, this risk increases even more.

In atherosclerosis, deposits of fatty substances, cholesterol, cellular waste products, calcium and other substances build up in the inner lining of an artery. This build up is called plaque, and it usually affects arteries of small and medium size. The flow of blood through these arteries is restricted as the inside diameter is reduced. Clotting of the blood, which often happens in the coronary arteries during a heart attack, is most likely to develop when arterial walls are roughened by such plaques. High levels of HDL cholesterol appear to help to protect against the development of narrowing of arteries. Low levels of HDL may indicate that you may have a greater risk of atherosclerosis. In some people an increase in LDL cholesterol is accompanied by raised triglyceride levels.



Triglycerides are made in the body from the food you eat. People with high triglycerides often have high LDL cholesterol and low HDL cholesterol levels. Many people with heart disease have high triglyceride levels.

High levels of cholesterol or triglycerides can be caused by:

- Medical conditions such as diabetes mellitus, under active thyroid, kidney disease and liver disease.
- Having a gene that makes high lipids more likely.
- Certain medications including diuretics, blood pressure medications, prednisone, oestrogens and testosterone.
- A diet high in saturated fats.
- Taking no exercise.
- Excess alcohol intake.