



Cholesterol is a waxy, fat-like substance that is made in the body by the liver. Cholesterol forms part of every cell in the body and serves many vital functions. The body needs cholesterol to: -

- Maintain healthier cell walls
- Help produce hormones
- To produce vitamin D
- Make bile acids, which aid in fat digestion.

Having too much cholesterol in the blood is not a disease, but can lead to the hardening and narrowing of the arteries (atherosclerosis) in the major vascular system.

THERE ARE TWO TYPES OF CHOLESTEROL

1. HIGH-DENSITY LIPOPROTEINS (HDL) are the 'good' cholesterol in our blood stream. HDL help to reduce tissue cholesterol and take it back to the liver where it belongs. HDL also helps to protect against atherosclerosis.

2. LOW-DENSITY LIPOPROTEINS (LDL) are the 'bad' cholesterol. These contribute to disease of the arteries leading to cardiovascular diseases.

It is the proportion of LDLs to HDLs that influence the degree to which, atherosclerosis is likely to cause problems.

LDL can be lowered by eating a low-fat diet and if required taking medication.

HDL cholesterol can be raised, by exercising regularly.

HOW IS CHOLESTEROL MEASURED?

Measuring blood cholesterol level involves a simple blood test usually taken after the patient has fasted for several hours. Cholesterol levels do tend to rise slightly with age and women have a higher HDL level than men do.

- In the UK, the average total cholesterol level is 5.7mmol/l.
- Ideal cholesterol in the blood is less than 5mmol/l.
- Mildly high cholesterol is between 5–6 mmol/l.
- Moderately high cholesterol is measured between 6.5–7.8mmol/l.

Your cholesterol levels can vary from day to day and even throughout the day. Usually, a series of tests are taken before medication is prescribed to anyone.

WHAT ARE THE SYMPTOMS OF HIGH CHOLESTEROL AND HOW CAN IT IS PREVENTED?

You cannot tell if you have a high or low cholesterol level, but a high level in conjunction with other adverse factors increase the risk of developing atherosclerosis and cardiovascular disease.

Atherosclerosis results in narrowing of the arteries. This happens over a length of time where particles of fat and cholesterol are deposited in the vessel walls. From this the arteries become constricted and they harden, the blood flow is reduced causing a build-up of pressure.

Regular exercise and a balanced diet can help prevent and/or lower your cholesterol levels. Exercise can increase the number of HDL's you have but do not in any way affect the LDL count.

High cholesterol is only one of many risk factors in the development of hardening of the arteries. These factors include:

SMOKING

Recent research shows that middle-aged women and men who smoke have a much higher risk of suffering a heart attack. The risk drops in the years following.

DIET

Food is another important factor. A Mediterranean diet made up of bread, fruits, vegetables and small amounts of lean meat, fish, and olive oil is recommended.

Cholesterol

HEALTH
HUB

ALCOHOL

Moderate consumption reduces the negative effect of the LDL-cholesterol and increases HDL-cholesterol. Too much raises blood pressure and damages the liver, having an adverse overall effect.

EXERCISE

Even on a small scale can reduce the chance of coronary artery disease. Hard physical exercise increases the blood's ability to break up blood clots. Exercise also helps to keep our weight at a healthy level where as people who are obese are more likely to have high cholesterol.

BODY WEIGHT

It is important to avoid obesity especially around our main bodily organs.

WHAT CAUSES HIGH CHOLESTEROL LEVELS?



Cholesterol levels can run in families. If the inherited cholesterol levels are very high, this is called familial hypercholesterolaemia (FH) or familial combined hyperlipidaemia (FCH) where the triglyceride levels are very high also. Levels can be influenced due to where in the world you live.

Cholesterol levels in northern European countries are higher than in southern Europe and much higher than in Asia. It is known that the relationship of food is significant, but there is no doubt that genes also play a part.

High cholesterol is also seen in connection with other known diseases, such as reduced metabolism (due to thyroid hormone problems) kidney diseases, diabetes, and alcohol abuse.

WHAT IS ATHEROSCLEROSIS?

Atherosclerosis is a condition where our arteries get blocked with fatty deposits. The fatty material is called atheroma. In time the artery can become so narrow that it cannot deliver enough oxygenated blood to the heart muscle when it needs it, e.g., when you are doing exercise.

This is angina. The pain of angina is due to the heart muscle becoming short of oxygen. Coronary heart disease can become more serious if a narrowed coronary artery becomes blocked by a blood clot.

This causes a heart attack. High blood pressure puts added strain on the heart and can make coronary heart disease worse.