

## **Cholesterol**

High blood Cholesterol means – alarm bells and immediate attention. But why?

Coronary Heart Disease (CHD) is the most common cause of death in the UK. Around one in five men and one in six women die from the disease. It is one of the government's health targets for the UK to reduce the death rate from CHD by at least two fifths by 2010. It is universally recognised that a diet, which is high in fat, salt and sugars, and low in fibre, fruit and vegetables, increases the risk of CHD. So, where does cholesterol fit in?

Cholesterol is a soft white waxy substance that is both essential and detrimental to health. Cholesterol is the building block for all cell membranes, bile salts, vitamin D and various hormones. There are two major sources of cholesterol. The majority of cholesterol is made in the body, in the liver from saturated fat. The other source of cholesterol is from foods.

Fat and cholesterol in the diet are broken down in the gut and then reassembled into complex lipid molecules. These fat-laden molecules, called chylomicrons are taken up by the liver where it mixes with new cholesterol which is made by the liver itself. Tiny "carriers" called lipoproteins transport cholesterol in the blood stream. They are classified by density. The two most relevant are low-density lipoprotein (LDL) and high-density lipoprotein (HDL).

Cholesterol is carried from the liver to the body's tissues by LDL cholesterol. It has been found that a high level of specifically LDL cholesterol increases the risk of heart disease, because the cholesterol can slowly build up in the walls of coronary arteries, which forms the fatty deposits that narrow the arteries. LDL cholesterol is also known as "bad" cholesterol and the lower this level, the better.

Cholesterol carried in the high-density lipoproteins is called HDL cholesterol and is also known as the "good" cholesterol. High levels of HDL cholesterol reduce the risk of heart disease and vice versa. HDL cholesterol has the ability to pick up excess free cholesterol from cells, including those accumulating in the arterial walls. HDL returns the excess cholesterol directly to the liver for excretion.

Foods high in saturated fat are found mainly in animal fats and are the major influence on the level of cholesterol in the blood. The amount of cholesterol made in the liver is directly linked to the amount of saturated fat we eat. Foods containing cholesterol, e.g. egg yolks, liver, prawns and shellfish, have very little effect on blood cholesterol levels.