

Cholesterol– the facts

What is cholesterol?

Cholesterol is the name given to a group of chemicals in the blood called lipoproteins. Cholesterol is manufactured in the liver from the saturated fat we eat. A small amount is found in a few foods including liver, kidneys, eggs and prawns. Whilst some is essential, high levels can lead to problems through deposits on the artery walls.

Total cholesterol (TC)

Total cholesterol is a combination of good and bad cholesterol and the proteins which carry the cholesterol in the blood. Whilst it is important to know your total cholesterol level, it is more important to know how this figure is made up.

High density lipoproteins (HDL)

HDL is known as the 'good' cholesterol. It helps 'mop up' excess bad cholesterol and carries it to the liver where it is broken down. The higher your HDL level the better.

Low density lipoproteins (LDL)

LDL cholesterol is known as the 'bad' cholesterol. High levels of LDL can lead to cholesterol being deposited in the walls of the arteries causing them to narrow and harden (atherosclerosis). A high level of LDL cholesterol combined with one or more risk factors increases your risk of a heart attack and stroke.

Triglycerides

Triglyceride levels are connected with the consumption of saturated fats in the diet. The more saturated fat you eat the higher the level of triglycerides in the blood. If you have high levels of triglycerides and cholesterol, your risk of coronary heart disease (CHD) increases.

TC/HDL Ratio

When looking at your cholesterol level it is important to measure the amount of good cholesterol as a proportion of the total e.g. if you have a TC of 5.5 and a HDL of 1.5 your ratio is 3.6 e.g., 5.5 divided by 1.5 = 3.6.

How can I manage my cholesterol?

There are a number of proactive things that you can do to increase your level of 'good' cholesterol and reduce your level of 'bad' cholesterol.

Diet

A healthy diet combined with physical activity and weight control can dramatically help reduce your cholesterol level.

You should aim to:

- Limit your intake of full fat dairy products and remove visible fat / skin from meat. Lowering your intake of saturated fat reduces your level of LDL 'bad' cholesterol. Polyunsaturated fats can help reduce LDL cholesterol but they also reduce the 'good' HDL cholesterol e.g. sunflower oil and safflower oil. Whereas monounsaturated fats lower LDL cholesterol without affecting HDL cholesterol e.g. olive oil and walnut oil.
- Choose plenty of fruit and vegetables, whole grain breads and cereals.
- Check the label of convenience foods. Choose low in saturated fat and salt and high in fibre.
- Avoid deep fried foods, butter, hard or visible white fat and hydrogenated fats. Always check the label.
- Avoid salty foods or adding salt during cooking or at the table.

Exercise

30 minutes of moderate activity 3 to 5 times per week will significantly improve your health and increase HDL 'good' cholesterol but does not affect your LDL cholesterol. Brisk walking is just as beneficial as some of the more vigorous type of exercise. Build up slowly and enjoy what you do.

Lifestyle change

Cutting down or stopping smoking, increasing your exercise levels, managing your blood pressure and if you're overweight, losing weight will all help reduce your risk and improve your cholesterol level. These are particularly important if you are diabetic.

Know your numbers

Client ref	
Test date	
Total cholesterol	mmol/l
HDL cholesterol	mmol/l
LDL cholesterol	mmol/l
Triglycerides	mmol/l

Ratio

Blood pressure

mmHg

Resting heart rate

bpm

Test	Targets for people at risk of CVD	Healthy adults standards
Total cholesterol	Less than 4.0 mmol/l	Less than 5 mmol/l
HDL (good) cholesterol	Greater than 1.0 mmol/l (ideally above 1.2 mmol/l)	Greater than 1.0 mmol/l (ideally above 1.2 mmol/l)
LDL (bad) cholesterol	Less than 2.0 mmol/l	Less than 3.0 mmol/l
Triglycerides	Less than 1.5 mmol/l	Less than 1.5 mmol/l
TC/HDL ratio	Less than 4	Less than 5

The new guidelines detailed here were released by the Joint British Societies in January 2006. The new cholesterol levels are primarily targets for people diagnosed with cardiovascular disease (CVD), people with diabetes or individuals at high risk of developing CVD. Healthy adults, with no other risk factors, should aim to keep their cholesterol below the standard levels.

It is important that your cholesterol results are not looked at in isolation. Your risk of suffering from cardiovascular disease is increased if you have one or more additional risk factors. The factors used in the calculation of cardiovascular risk include:

- Age
- Gender
- Systolic blood pressure
- Total cholesterol
- HDL cholesterol
- Diabetes
- Smoking status

In addition to the risk factors listed above, scientific research links being overweight and inactive to an increased risk. Whilst these are not factors used in the calculation, losing weight and taking regular moderate activity can improve your cholesterol levels and therefore lower your risk.

Should your cholesterol level remain high despite adopting or having a healthy lifestyle, you may be prescribed cholesterol lowering medication. It is important that if you are prescribed cholesterol lowering medication, it is not seen as a substitute for a healthy lifestyle.

If you have any health concerns always check with your doctor.

For further information visit:

Asset Health Centre: www.assetchemist.org

Healtology : www.healthology.com

