

What your lipid test means for you

This information sheet is designed to help you understand the results of your blood lipid ("cholesterol") test. It also describes some of the things you can do to improve your results and benefit your health.



When should I start testing?

Regular lipid testing is part of an overall heart health check and should begin for all **males aged over 45 years** and all **females aged over 55 years**. Your heart health checks might start earlier if you are of Māori, Pacific or South Asian ethnicity or have diabetes, a family history of heart problems or another health reason.



How often do I need to be tested?

This depends on other factors in your health. You will benefit from more regular checks if you have diabetes, heart or kidney disease, or are already taking a medicine to lower your cholesterol levels (e.g. a statin).

Your results

A lipid test shows results for multiple different values: the main ones we focus on are **total cholesterol**, **triglycerides**, **HDL cholesterol** and **LDL cholesterol**.

	Your result		General target*	Your target
Total cholesterol		mmol/L	< 5.0	
Triglycerides		mmol/L	< 2.0	
HDL cholesterol		mmol/L	> 1.0	
LDL cholesterol		mmol/L	< 3.4	
Total cholesterol/HDL ratio			< 4.5	
Non-HDL cholesterol		mmol/L	< 4.2	

* These targets are only a guide. There are many reasons why your personal targets might be higher or lower. If this is the case, your clinician will explain why and write them in the "Your target" column.

Notes:

What do your lipid results mean?

Cholesterol is a waxy, fat-like substance that is mostly made in the liver from the fats and oils we eat. It is stored in the walls of all cells in the body and is used for making hormones and bile. Cholesterol travels through the blood attached to carrier molecules called lipoproteins. The two most important lipoproteins are low-density lipoprotein (LDL) and high-density lipoprotein (HDL). We only need a small amount of cholesterol, and when too much is present, health problems such as heart disease can develop.

Total cholesterol is a measure of all the main types of cholesterol in your blood.

LDL cholesterol is often referred to as “bad cholesterol”. When too much LDL cholesterol is in the blood, it can slowly build up in the walls of the arteries that lead to the heart and brain. Over time, this can lead to thick, hardened areas forming, called “plaques”. Plaques increase the chance of a clot forming in the artery, which can cause a heart attack or stroke. For most people who need to improve their lipid levels, LDL cholesterol is the main result to focus on. It’s usually best to get your LDL cholesterol as low as possible.

HDL cholesterol is often referred to as “good cholesterol”. HDL carries cholesterol away from the arteries and back to the liver, where it can be removed from the body. HDL can also remove excess cholesterol from any developing plaques in the arteries, reducing build-up. In general, higher levels of HDL are better. However, it’s more important to lower your LDL cholesterol level than it is to increase your HDL cholesterol level.



A good way to remember the difference between LDL and HDL cholesterol is that **LDL** is better to be **lower** and **HDL** is better to be **higher**.

Triglycerides are the main type of fat in our food. The body also changes excess sugar and carbohydrates into triglycerides when large amounts are eaten. Triglycerides are an important source of energy, but high levels in the blood can increase the chance of a heart attack or stroke.

Non-HDL cholesterol is a measurement of the total amount of cholesterol in the blood that can build up in plaques. This includes LDL cholesterol, as well as the cholesterol carried by other lipoproteins that can build up inside arteries, i.e. other “bad” types of cholesterol. Your non-HDL cholesterol result provides more information about your chance of a heart attack or stroke, even if your LDL cholesterol is normal. Ideally, you want your non-HDL cholesterol to be as low as possible.

Total cholesterol/HDL ratio is a measurement of how much of the cholesterol in your blood is “good”. It is calculated by dividing your total cholesterol by your HDL cholesterol. A lower ratio means a lower chance of a heart attack or stroke, because less of your total cholesterol is “bad” non-HDL cholesterol, i.e. more HDL is “good”. The box below shows how three people with the same total cholesterol result (6 mmol/L) can have different chances of a heart attack or stroke, depending on the type of cholesterol they have, and how this changes their total cholesterol/HDL ratio.

