

What your **lipid test** means for **you**

Your results

This info sheet is designed to help you understand the results of **your blood lipid test** and to describe some things **you can do** to improve your lipid results and **benefit your health**.

All men aged over 45 years and all women aged over 55 years should have their lipids checked at least once every 10 years. People of Māori, Pacific or Indo-Asian ethnicity should start having their lipids checked 10 years earlier than this. Some people will have their lipids checked more frequently because, for example, they are on lipid lowering medicine, have diabetes or have other reasons that mean they will benefit from more regular checking.

The results of the lipid test we will focus on here are **total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides**.

	Your result	Your target level
Total cholesterol	<input type="text"/>	<input type="text"/>
LDL cholesterol	<input type="text"/>	<input type="text"/>
HDL cholesterol	<input type="text"/>	<input type="text"/>
Triglycerides	<input type="text"/>	<input type="text"/>
HDL/cholesterol ratio	<input type="text"/>	<input type="text"/>

Ask your GP to write your results in the above table, also include your target levels. This also provides a good opportunity for you to discuss your lipid results.

What do your results mean?

Total Cholesterol. Cholesterol is a waxy, fat-like substance made in the liver from the fats and oils we eat. It is important for the production of hormones and bile, and is incorporated into the cell wall of all cells. The body requires only a small amount of cholesterol to meet these needs, and when too much is present health problems such as heart disease may develop.

Cholesterol travels through the blood attached to special proteins called lipoproteins. Lipo-proteins are classified as high density, low density or very low density.

LDL Cholesterol (low density lipoprotein) is often called "bad cholesterol". When too much LDL cholesterol circulates in the blood, it can slowly build up in the inner walls of the arteries that lead to the heart and brain. This can eventually form a thick, hard deposit called a 'plaque'. This increases the chance of a clot forming in the artery, which may then 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, and it is usually best to get it as low as possible.

HDL Cholesterol (high density lipoprotein) is often known as "good" cholesterol, because high levels of HDL help to protect against heart attack. Medical experts think that HDL carries cholesterol away from the arteries and back to the liver, where it can be removed from the body. It is also thought that HDL removes excess cholesterol from any developing plaque in the arteries and slows its build-up.

Higher levels of HDL are therefore better. However, it is usually easier to lower your LDL levels than it is to increase your HDL levels.

A good way to remember the difference between LDL and HDL is that **LDL** is better to be **Lower** and **HDL** is better to be **Higher**.

Triglycerides are the main sort of fat we eat. They are an important source of energy but excess triglycerides can increase the likelihood of heart attack, stroke or obesity.

Cholesterol/HDL ratio is used to help calculate a person's risk of a heart attack or stroke. Once the risk has been determined, it is the LDL-cholesterol, HDL-cholesterol and triglyceride levels, which are more important.

Cholesterol and triglyceride levels are strongly influenced by the foods we eat, in particular fats and oils.

Dietary fats affect your lipid results



REDUCE

All fats and oils in our diet are high in calories and eating too much of them contributes to becoming overweight or obese. Fats and oils increase triglyceride levels and decrease levels of HDL-cholesterol. Most of us need to reduce the amount of oils and fats we eat.



AVOID

Trans fats are man-made fats and are the worst type of fat to eat and should be avoided. They increase LDL cholesterol levels and decrease HDL cholesterol levels: exactly the opposite of what we want to happen.



AVOID

Saturated fats are also a bad form of fat to eat. They cause obesity and raise the LDL cholesterol level. Most of us need to considerably reduce the level of saturated fats in our diet.



CHOOSE

Monounsaturated fats, if eaten in moderation, are one of the best sources of fat, especially if they are used to replace saturated fats. Monounsaturated fats can help lower LDL cholesterol.



CHOOSE

Polyunsaturated fats can be divided into:

- **Omega 6** helps to lower LDL cholesterol when consumed in moderation. When omega-6 fats are consumed in very large amounts, they can sometimes decrease HDL cholesterol.
- **Omega 3** can reduce triglycerides but have a variable effect on LDL cholesterol.



CHOOSE

Sterols block absorption of cholesterol into the bloodstream from the intestine and can be useful in lowering LDL cholesterol levels.

Making healthy choices

If you want to make healthy choices about the fats you eat, there are a number of practical things that can be easily incorporated into your diet. To reduce the amount of fat you eat:

- Add as little fat as possible when preparing meals
- Remove visible fat from meat prior to cooking
- Replace full fat milk ('blue milk') with lower fat milks – 'light blue' or 'green' top
- Replace butter with monounsaturated or polyunsaturated margarines and choose margarines with the Heart Foundation tick – they have less than 1% trans fats
- Avoid foods that contain 'hydrogenated vegetable oil' or 'partially hydrogenated vegetable oil' – these are alternative names for trans fats.
- Be aware: fat is often 'hidden' in pies, pastries, cakes and biscuits

Regular exercise is also important in helping to reduce cholesterol levels.

Read the nutritional information on products

Food sold in New Zealand must be labelled in accordance with the Food Standards Code. For most foods, this means a nutrition information panel must be included. The manufacturers are required to state the total fat and saturated fat, but many manufacturers will also include amount of polyunsaturated, monounsaturated and trans fats. It is worthwhile becoming familiar with these panels, as they can help you make healthy food choices. By examining the panels on similar foods, you can choose the item with the lower levels and better type of fats.

Nutrition Facts	Amount/Serving	Amount/Serving	Amount/Serving
Serving Size 1 Bar (50g)	Total Fat 7.9g	Sodium 50 mg	Added Sugars 0.4g
Kilojoules 868 (2007 Calories)	Sat. Fat 1.3g	Total Carb. 30.1g	Protein 4.2g
	Polyunsat. Fat 3.3g	Total Sugars 24.9g	Omega-6 3.2g
	Monounsat. Fat 2.5g	Fruit Sugars 24.5g	

Ingredients: Pineapple, Papaya, Eggs, Hazel Nuts, Wheat Flour, Ginger, Sunflower Seeds, Apricot, Nectarine, Sultanas, Dates, Almonds, Walnuts, Brown Sugar, Baking Soda.

Type of Fat	Dietary Sources	Effect on LDL-cholesterol	Effect on HDL-cholesterol	Effect on Triglycerides
Trans Fats	Commercially fried foods, snacks and baked goods	Increases	Slight decrease	No effect
Saturated Fat	Red meat, cheese, butter, fried foods and baked goods, palm oil and some other vegetable oils	Increases	No effect	No effect
Monounsaturated Fats	Nuts, olives, avocados, olive and canola oils	Decreases	No effect	No effect
Polyunsaturated Fat: Omega-6	Corn, soybean and safflower margarine & oils	Decreases	May decrease	Unknown
Polyunsaturated Fat: Omega-3	Salmon, mackerel, herring, flaxseed, walnuts, walnut oil, soybean and soybean oil	Variable	No effect	Decreases
Sterols	Margarines with added plant sterols	Decreases	No effect	No effect