### Goal levels of cholesterol & triglycerides

<table>
<thead>
<tr>
<th></th>
<th>For people with no CVD, diabetes or kidney disease (mmol/L)</th>
<th>For people with established CVD, diabetes or kidney disease (mmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cholesterol</td>
<td>Below 4.5</td>
<td>Below 4.0</td>
</tr>
<tr>
<td>LDL Cholesterol</td>
<td>Below 2.5 †</td>
<td>Below 2.0*</td>
</tr>
<tr>
<td>HDL Cholesterol</td>
<td>Above 1.0 †</td>
<td>Above 1.0*</td>
</tr>
<tr>
<td>Triglycerides (fasting)</td>
<td>Below 2.0</td>
<td>Below 1.5*</td>
</tr>
</tbody>
</table>

CVD= Cardiovascular disease † Royal College of Pathologists of Australasia (2007) manual.

### Triglycerides

Triglycerides are another type of fat found in your body which provide a major source of energy. Any excess calories from foods that are not needed for quick energy are turned into triglycerides and stored in fat cells to be used later. Eating more calories than you burn could result in high triglycerides.

High levels of triglycerides have been linked to atherosclerosis (build up of fatty deposits in your arteries) and an increased risk for cardiovascular disease. By eating fewer calories, reducing saturated fats in your diet and exercising regularly, high triglycerides can be lowered.

Generally, men have higher blood cholesterol levels than women before menopause, but levels in women are higher than men after menopause.

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**Baker IDI Heart & Diabetes Institute**


Baker IDI Heart and Diabetes Institute is Australia’s leading health and medical research institute dedicated to reducing ill health and mortality caused by the effects of cardiovascular disease and diabetes, two insidious and complex diseases wreaking havoc in our community.

Our work extends from the laboratory to wide-scale community studies with a focus on diagnosis, prevention and treatment.

We are proud of our pledge to improve the quality of life for people now and safeguard the health of future generations. This mission drives everything we do.

**For more information contact**

Preventative Health:

Freecall: 1800 670 695
Email: preventativehealth@bakeridi.edu.au
Website: www.bakeridi.edu.au

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Baker IDI Heart and Diabetes Institute
75 Commercial Road, Melbourne 3004 VIC Australia
PO Box 6452, St Kilda Road Central, Melbourne 8008 VIC Australia

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The facts
Approximately half of adult Australians have a total blood cholesterol level higher than what is recommended safe! This makes high blood cholesterol a major health concern in Australia.

What is cholesterol?
Cholesterol is a type of fat that is essential to life and a vital part of every cell in the body. It is produced naturally by the liver and used by tissues in the body to build and maintain cells.

There are two types of cholesterol
LDL (low density lipoprotein) cholesterol is called the “bad” cholesterol because:
- It can help form plaques and contribute to atherosclerosis.
- Higher levels reflect an increased risk of heart disease.

HDL (high density lipoprotein) cholesterol is called the “good” cholesterol because:
- It helps to remove excess cholesterol from plaques and thus slow plaque growth.
- Lower levels reflect a higher risk of heart disease.

The negative effects of high cholesterol
The liver returns the cholesterol it cannot use to our bloodstream. An excess of cholesterol in our bloodstream can cause fatty deposits (“plaques”) to form in your arteries. This is a process that occurs over time called atherosclerosis. These deposits cause the arteries to narrow and can eventually block them completely, leading to a heart attack or stroke.

Reducing your cholesterol is therefore good for the prevention of:
- Coronary artery disease
- Heart attack
- Stroke
- Peripheral artery disease

Cholesterol and your diet
There is no need to eat foods high in cholesterol; your body can produce all the cholesterol it needs!

<table>
<thead>
<tr>
<th>Foods to improve cholesterol levels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To increase HDL-levels</strong></td>
</tr>
<tr>
<td>Include the following in your diet:</td>
</tr>
<tr>
<td>Olive oil *</td>
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<tr>
<td>Avocados *</td>
</tr>
<tr>
<td>Nuts (raw, unsalted) *</td>
</tr>
<tr>
<td>Citrus fruits</td>
</tr>
<tr>
<td>High-fiber foods</td>
</tr>
<tr>
<td>Red wine (with meals) *</td>
</tr>
<tr>
<td>Whole grains</td>
</tr>
<tr>
<td>Beans and lentils</td>
</tr>
<tr>
<td>Peanut butter *</td>
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<tr>
<td>Dark chocolate *</td>
</tr>
</tbody>
</table>

* Limited amounts only. Consult a dietitian or nutritionist for an individualised eating plan.

How is high cholesterol treated?
You may be able to lower your cholesterol levels by making dietary changes and by changing some of your lifestyle habits, including exercising more.

If diet and lifestyle changes are not enough to reduce cholesterol or if you have inherited genes that cause high cholesterol, you may also need medicines. Medicines called statins are commonly used to lower LDL cholesterol. Even if you are taking medicines, diet and exercise are still important to your health! Your doctor may also refer you to a specialist who treats cardiovascular disease.

Tips for improving cholesterol
For a healthy lifestyle try to:
- Exercise regularly (30 min per day of brisk walking), lose excess body fat, reduce your alcohol intake to two or less drinks per day (men) or one per day (women), quit smoking and minimise physical and emotional stress by relaxation and thinking positively.
- If you have diabetes, control your blood sugar levels.

The “bad” cholesterol (LDL cholesterol) in your body is raised by the amount of saturated fat in your diet. To control your LDL cholesterol it is more important to limit saturated fat intake than to limit foods containing cholesterol.

Foods high in cholesterol include eggs and seafoods such as prawns.