Total Cholesterol, HDL and LDL Tests

General Information
In the body, cholesterol comes from two main sources:
- foods in the diet, or
- made by the liver in the body.
Cholesterol is essential to proper body function. However, there is a link between blood cholesterol levels and the risk of heart disease.

Cholesterol cannot travel alone in the blood and is transported by lipoproteins. There are two kinds of lipoproteins: Low density lipoproteins (LDL) and High density lipoproteins (HDL). LDLs take cholesterol from the liver and distribute it to the rest of the body. LDL-cholesterol has a tendency to collect inside the arteries to block them. Therefore, LDL is often called “bad cholesterol”. High levels of LDL are a risk factor for heart disease. HDLs take cholesterol collected in the arteries and take it back to the liver. HDL is often called “good cholesterol”.

Levels of LDLs are not measured, but calculated from an equation that takes into consideration HDL and total cholesterol levels. The ratio of total cholesterol to HDLs is calculated. If it is too high, it is considered as another risk factor for heart disease.

<table>
<thead>
<tr>
<th>Why this test is done</th>
<th>This test is part of a normal check-up. It is used to assess the risk of heart disease. It is also used to diagnose cholesterol level anomalies.</th>
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<tbody>
<tr>
<td>How to prepare</td>
<td>Do not drink alcohol in the 24 hours prior to the test. Eat a light meal the night before. Fast for 12 to 14 hours before the test. A blood sample is taken for the test.</td>
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</table>
| Target values         | HDL > 0.90 to 1.55 mmol/L  
LDL < 2.59 to 4.91 mmol/L  
Total cholesterol 5.17 to 6.18 mmol/L  
Your doctor must take age, gender and other risk factors for heart disease into consideration when interpreting the results. |
| Associated tests      | Triglyceride tests, complete blood count and other tests your doctor orders as part of a complete check-up are also done. |

What does an abnormal test result mean?
Increased blood cholesterol levels can cause heart disease (angina pectoris, blocked arteries). It is one of the major risk factors along with high blood pressure, diabetes and smoking.

Increased total cholesterol can be caused by family history, diabetes, hypothyroidism or chronic kidney failure.

Increased LDL levels can be caused by certain kidney or liver diseases and hypothyroidism.

Increased triglyceride levels can be caused by drinking too much alcohol.

Usually, high levels of HDL are beneficial.

What can affect the results of the test?
Age, gender, weight, smoking, alcohol consumption, diet and exercise must be considered when analyzing the results of the test. Medicines that can increase cholesterol levels include, for example corticosteroids (prednisone), oral contraceptives and some blood pressure medicines (beta-blockers).

Before going for blood tests, a procedure or other examination, bring a list of all the medicines (prescription, non-prescription or natural/herbal products). Unless told otherwise, take your medicines as usual on the days of the test. If in doubt, ask your doctor or pharmacist for information.