



7880
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LDL Cholesterol

Synonyms

Low Density Lipoprotein Cholesterol

Clinical Indication

Cholesterol circulates in blood bound to lipoproteins; the two main ones being low density lipoprotein (LDL) and high density lipoprotein (HDL). High levels of LDL are associated with a high risk of coronary disease.

Part of Profile / See Also

Lipids

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of

On request.

Analysis

Not measured directly, calculated result based on total cholesterol, HDL-cholesterol and triglycerides.

Turnaround Time

Same day

Patient Preparation

This test may be carried out on a fasting or non-fasting sample. If fasting, patients must fast for 10 hours prior to blood collection

Sample Requirements

Calculated parameter

Sampson equation (in mmol/L):

$$LDL = \frac{CHOL}{0.948} - \frac{HDL}{0.971} - \left(\frac{TG}{3.74} + \frac{TG \times Non_{HDL}}{24.16} - \frac{TG^2}{79.36} \right) - 0.244$$

Reference Range & Units

Acceptable levels depend on presence of other coronary risk factors.

LDL cholesterol is a calculated from other lipid parameters. It should be remembered that the variability in measurement of these individual parameters is compounded in the LDL calculation and that small changes in LDL (<0.5 mmol/L) are clinically insignificant. LDL cannot be calculated when triglyceride levels are > 9 mmol/L.

Calculated via the Sampson equation:

Interferences

If triglyceride levels are above 9 mmol/L, LDL will not be calculated.

Interpretation & Clinical

Decision Value (if applicable)

There is generally a consensus that non-HDL cholesterol (total cholesterol minus HDL cholesterol) or the total cholesterol to HDL cholesterol ratio is a better predictor of CHD risk than LDL cholesterol alone

References

NICE Clinical Guideline (CG181/NG238) Cardiovascular disease: risk assessment and reduction, including lipid modification.

Test code

Part of profile **LIP** and **FLIP**

Lab Handling