Cholesterol

Synonyms	Total Cholesterol
Clinical Indication	High cholesterol levels are an important risk factor for atherosclerosis and interventions to lower elevated levels reduces the risk of coronary disease (primary prevention) and reduces risk of further events in individuals with existing disease (secondary prevention).
	Cholesterol circulates in blood bound to lipoproteins; the two main ones being low density lipoprotein (LDL) and high density lipoprotein (HDL).
Part of Profile / See Also	Lipids, Cholesterol.
Request Form	Combined Pathology manual Blood form or ICE form
Availability / Frequency of Analysis	On request.
Turnaround Time	Same day
Patient Preparation	If cholesterol is requested as part of a fasting lipid profile then patient must fast for 10 hours prior to blood collection (for follow up tests diabetic patients may not need to fast). Patients do not need to fast if cholesterol only (total cholesterol and HDL) is requested.

Sample Requirements

Specimen Type	Serum and plasma
Volume	2 ml
Acceptable Containers	

 Yellow top (SST) tube

 Green top (lithium-heparin) tube

 paediatric orange top (lithium-heparin)

 paediatric green top (lithium-heparin)

Plain serum samples may also be used.

Reference Range & Units	The concept of a reference range is flawed and acceptable levels depend on presence of other coronary risk factors. For patients with established coronary disease or diabetes, total cholesterol levels should be less than 5.0 mmol/L. For primary prevention in other patients use risk tables in the BNF.
	Unit Conversion: To convert from mmol/L to mg/dL multiply by 38.7
	To convert from mg/dL to mmol/L multiply by 0.026

Interferences

Interpretation & Clinical Decision Value (if applicable)	Critical Difference approximately 22% High total cholesterol may be genetic or acquired due to hypothyroidism, cholestatic liver disease, renal failure, nephrotic syndrome which should be excluded. A decision to treat should not be made on a single measurement or on results obtained from non-laboratory instrumentation. Cardiovascular Disease Risk Calculation charts are available in BNF

References

Test code	CHOL, LIP (part of the lipid profile) and FLIP (part of the fasting lipid profile).
Lab Handling	Analysed from primary tube and stored at 4°C Serum and plasma samples stable for 7 days at 2-8°C.