

Overview**Useful For**

Evaluation of cardiovascular risk

Profile Information

Test ID	Reporting Name	Available Separately	Always Performed
CHOL	Cholesterol, Total, S	Yes	Yes
TRIG	Triglycerides, S	Yes	Yes
HDCH	Cholesterol, HDL, S	Yes	Yes
CLDL	Calculated LDL	No	Yes
NHDCH	Non HDL Cholesterol	No	Yes

Method Name

CHOL, TRIG, HDCH: Enzymatic Colorimetric

CLDL: Friedewald Equation

NHDCH: Total Cholesterol-HDL Cholesterol

NY State Available

Yes

Specimen**Specimen Type**

Serum

Specimen Required**Patient Preparation:**

1. Fasting overnight (12 hours)
2. Patient must not consume any alcohol for 24 hours before the specimen is drawn.

Container/Tube:**Preferred:** Serum gel**Acceptable:** Red top**Specimen Volume:** 1 mL**Collection Instructions:**

1. Serum gel tube must be centrifuged within 2 hours of draw time.
2. Red-top tube must be centrifuged and aliquoted within 2 hours of draw time.

Specimen Minimum Volume

0.5 mL

Reject Due To

Gross hemolysis	Reject
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Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

Clinical and Interpretive
Clinical Information

Cardiovascular disease is the number one cause of death in the United States with an estimated 1.5 million heart attacks and 0.5 million strokes occurring annually, many in individuals who have no prior symptoms. Prevention of ischemic cardiovascular events is key. Risk factors including age, smoking status, hypertension, diabetes, cholesterol, and HDL cholesterol, are used by physicians to identify individuals likely to have an ischemic event.

Reference Values

The National Lipid Association and the National Cholesterol Education Program (NCEP) have set the following guidelines for lipids (total cholesterol, triglycerides, HDL cholesterol, LDL cholesterol, and non-HDL cholesterol) in adults ages 18 and up:

TOTAL CHOLESTEROL

Desirable: <200 mg/dL

Borderline high: 200-239 mg/dL

High: > or =240 mg/dL

TRIGLYCERIDES

Normal: <150 mg/dL

Borderline high: 150-199 mg/dL

High: 200-499 mg/dL

Very high: > or =500 mg/dL

HDL CHOLESTEROL

Males

> or =40 mg/dL

Females

> or =50 mg/dL

LDL CHOLESTEROL

Desirable: <100 mg/dL

Above desirable: 100-129 mg/dL

Borderline high: 130-159 mg/dL

High: 160-189 mg/dL

Very high: > or =190 mg/dL

NON-HDL CHOLESTEROL

Desirable: <130 mg/dL

Above desirable: 130-159 mg/dL

Borderline high: 160-189 mg/dL

High: 190-219

Very high: > or =220 mg/dL

The Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents has set the following guidelines for lipids (total cholesterol, triglycerides, HDL cholesterol, LDL cholesterol, and non-HDL cholesterol) in children ages 2-17:

TOTAL CHOLESTEROL

Acceptable: <170 mg/dL

Borderline high: 170-199 mg/dL

High: > or =200 mg/dL

TRIGLYCERIDES

2-9 years:

Acceptable: <75 mg/dL

Borderline high: 75-99 mg/dL

High: > or =100mg/dL

10-17 years:

Acceptable: <90 mg/dL

Borderline high: 90-129 mg/dL

High: > or =130 mg/dL

HDL CHOLESTEROL

Low HDL: <40 mg/dL

Borderline low: 40-45 mg/dL

Acceptable: >45 mg/dL

LDL CHOLESTEROL

Acceptable: <110 mg/dL

Borderline high: 110-129 mg/dL

High: > or =130 mg/dL

NON-HDL CHOLESTEROL

Acceptable: <120 mg/dL

Borderline high: 120-144 mg/dL

High: > or =145 mg/dL

Interpretation

Mayo Clinic has adopted the National Lipid Association classifications, which are included as reference values on Mayo Clinic and Mayo Clinic Laboratories reports (see Reference Values). Lipids are most commonly measured to assess cardiovascular risk. Maintaining desirable concentrations of lipids lowers the risk of heart attacks or strokes. Establishing appropriate treatment strategies and lipid goals require the results for each component of a lipid profile be considered in context with other risk factors including, age, sex, smoking status, family and personal history of heart disease.

Cautions

Cholesterol levels fluctuate over time. The American Heart Association recommends a minimum of 2 measures at least 2 weeks apart before beginning a new treatment plan.

Clinical Reference

1. Jacobson TA, Ito MK, Maki KC, et al: National Lipid Association recommendations for patient-centered management of dyslipidemia: part 1 - executive summary. J Clin Lipidol 2014 Sep-Oct;8(5):473-488

2. Goff DC, Lloyd-Jones DM, Gennett G, et al: 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk. Circulation 2014;129:S49-S73

3. Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents; National Heart, Lung, and Blood Institute: Expert panel on integrated guidelines for cardiovascular health and risk reduction in children and adolescents. Pediatrics 2011;128;S213-S256

Performance

Method Description

See individual unit codes

PDF Report

No

Day(s) and Time(s) Test Performed

Calculated LDL: Monday through Saturday; Continuously

Cholesterol, HDL: Monday through Sunday; Continuously

Triglycerides: Monday through Sunday; Continuously

Cholesterol, Total: Monday through Sunday; Continuously

Non HDL Cholesterol: Monday through Saturday; Continuously

Analytic Time

1 day

Maximum Laboratory Time

1 day

Specimen Retention Time

See Individual Unit Codes

Performing Laboratory Location

Rochester

Fees and Codes

Fees

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact [Customer Service](#).

Test Classification

This test has been cleared or approved by the U.S. Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

80061-Lipid panel (if all 3 performed)

82465-Cholesterol, total (if all 3 are not performed)

84478-Triglycerides (if all 3 are not performed)

83718-Cholesterol, HDL (if all 3 are not performed)

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
LPSC	Lipid Panel, Fasting	24331-1

Result ID	Test Result Name	Result LOINC Value
CHOL	Cholesterol, Total, S	2093-3
CLDL	Calculated LDL	13457-7
HDCH	Cholesterol, HDL, S	2085-9
NHDCH	Non HDL Cholesterol	43396-1
TRIG	Triglycerides, S	2571-8