

— Cardiovascular Health

The circulatory system, also known as the cardiovascular system (CVS), is a vast network of organs and vessels that are responsible for the flow of blood, nutrients, oxygen, other gases, and hormones to and from cells. Without the circulatory system, the body would not be able to fight disease or maintain a stable internal environment like a proper temperature and pH, referred to as homeostasis. The cardiovascular system is made up of three independent systems that work together: the heart (cardiovascular), lungs (pulmonary) and arteries, veins, coronary and portal vessels (systemic).

Hide

Cholesterol & Triglycerides

— CHOLESTEROL, T... **179**
(mg/dL)

Range: <200

CHOLESTEROL, TOTAL

(mg/dL)

Cholesterol is a waxy, fat-like substance that occurs naturally in all parts of the body. Your body needs some cholesterol to work properly. But if you have too much in your blood, it can combine with ... [See more](#)



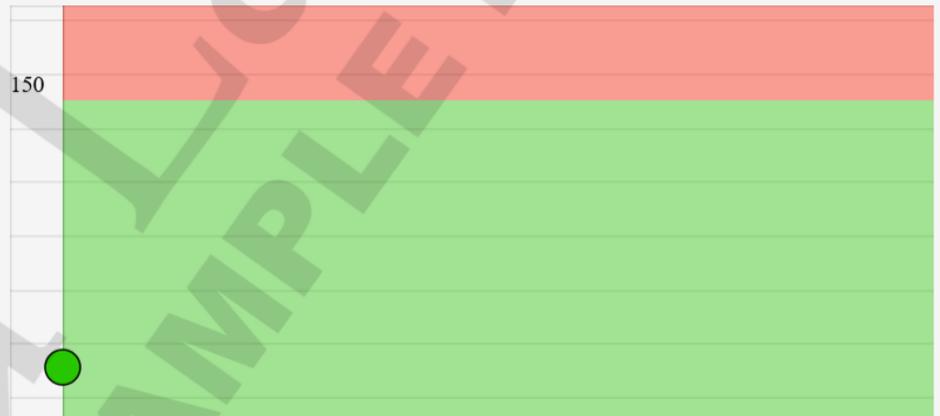
— TRIGLYCERIDES **51**
(mg/dL)

Range: <150

TRIGLYCERIDES

(mg/dL)

Triglycerides are a form of fat and a major source of energy for the body. This test measures the amount of triglycerides in the blood. Most triglycerides are found in fat (adipose) tissue, but some ... [See more](#)

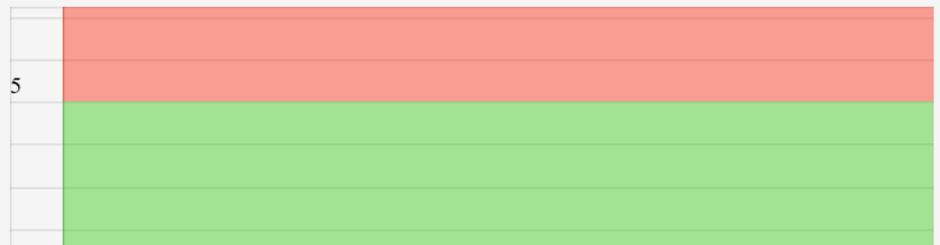


— CHOL/HDLC RATIO **2.0**
(calc)

Range: <5.0

CHOL/HDLC RATIO

(calc)



NON HDL CHOLE...
(mg/dL (calc))

88

Range: <130

NON HDL CHOLESTEROL

(mg/dL (calc))

130



Result Comments

For patients with diabetes plus 1 major ASCVD risk factor, treating to a non-HDL-C goal of <100 mg/dL (LDL-C of <70 mg/dL) is considered a therapeutic option.
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HDL Particles

High density lipoprotein (HDL) particles are often referred to as good cholesterol, because they are associated with a decreased risk of developing cardiovascular disease.

HDL CHOLESTER...
(mg/dL)

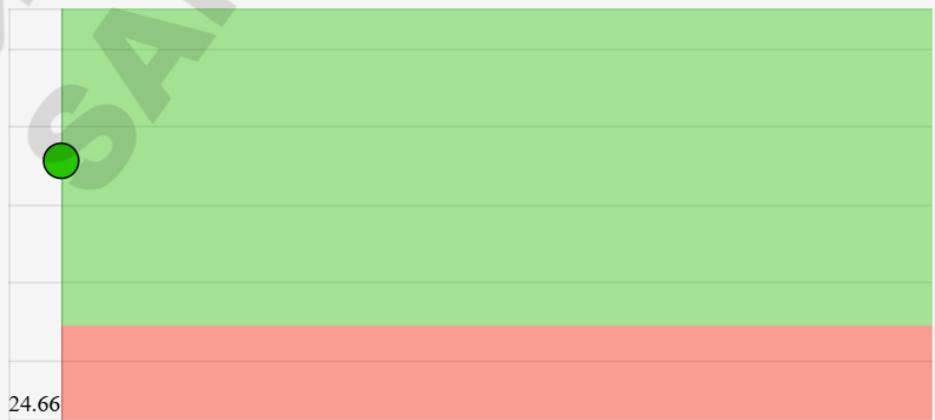
91

Range: >49

HDL CHOLESTEROL

(mg/dL)

24.66



HDL LARGE
(nmol/L)

8457

Range: >6729

HDL LARGE
(nmol/L)



Result Comments

Relative Risk: Optimal >6729; Moderate 6729–5353; High <5353. Male Reference Range: 4334 to 10815 nmol/L; Female Reference Range: 5038 to 17886 nmol/L.

LDL Particles

Low-density lipoprotein particle (LDL-P) testing evaluates LDL particles according to their number, size, density, and/or electrical charge. Low-density lipoproteins (LDL) are particles that transport lipids throughout the body. Each particle contains a combination of protein, cholesterol, triglyceride, and phospholipid molecules. Their composition changes as they circulate in the blood. Some molecules are removed and others are added, resulting in lipoprotein particles whose properties vary from large and fluffy to small and dense. LDL particle testing determines the relative amounts of particles of differing properties. Traditional lipid testing measures the amount of LDL cholesterol (LDL-C) present in the blood, but it does not evaluate the number of particles of LDL (LDL-P). Some studies have shown that increased numbers of small dense LDL particles are more likely to cause atherosclerosis than fewer light, fluffy LDL particles. An increased number of small, dense LDL could be one of the reasons that some people have heart attacks even though their total and LDL cholesterol concentrations are not particularly high."

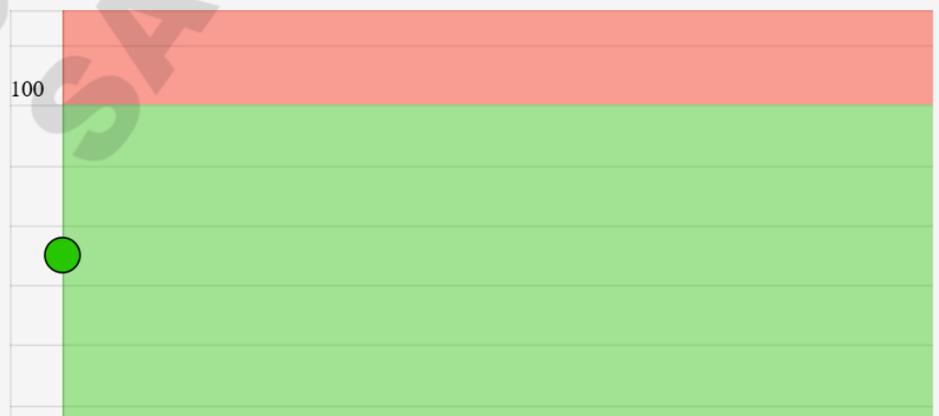
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LDL-CHOLESTEROL
(mg/dL (calc))

75

Range: <100

LDL-CHOLESTEROL
(mg/dL (calc))



Result Comments

Desirable range <100 mg/dL for primary prevention; <70 mg/dL for patients with CHD or diabetic patients with ≥ 2 CHD risk factors.

LDL-C is now calculated using the Martin-Hopkins calculation, which is a validated novel method providing better accuracy than the Friedewald equation in the estimation of LDL-C. Martin SS et al. JAMA. 2013;310(19): 2061-2068 (<http://education.QuestDiagnostics.com/faq/FAQ164>)

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Martin SS et al. JAMA. 2013;310(19): 2061-2068 | (<http://education.QuestDiagnostics.com/faq/FAQ164>)

LDL PARTICLE NU... (nmol/L)

603

Range: <1138

LDL PARTICLE NUMBER

(nmol/L)



Result Comments

Relative Risk: Optimal <1138; Moderate 1138-1409; High >1409. Male and Female Reference Range: 1016 to 2185 nmol/L.

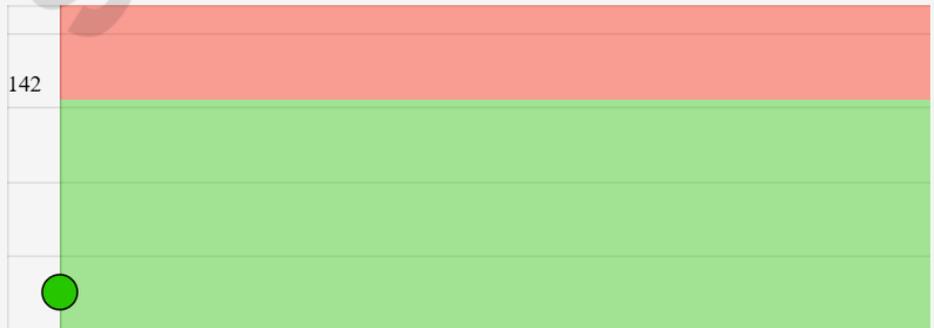
LDL SMALL (nmol/L)

90

Range: <142

LDL SMALL

(nmol/L)



Result Comments

Relative Risk: Optimal <142; Moderate 142–219; High >219.
Male Reference Range: 123 to 441 nmol/L; Female Reference
Range: 115 to 386 nmol/L.

LDL MEDIUM
(nmol/L)

96

Range: <215

LDL MEDIUM
(nmol/L)



Result Comments

Relative Risk: Optimal <215; Moderate 215–301; High >301.
Male Reference Range: 167 to 485 nmol/L; Female Reference
Range: 121 to 397 nmol/L.

LDL PATTERN
(Pattern)

A

Range: A

LDL PATTERN
(Pattern)

Result Comments

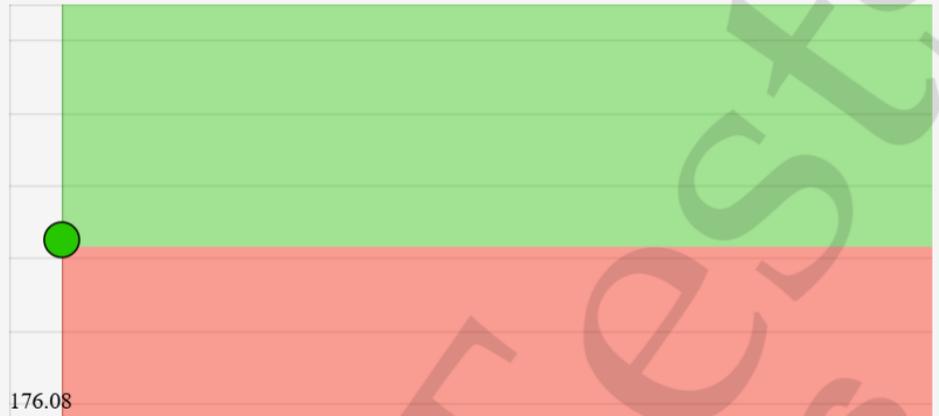
Relative Risk: Optimal Pattern A; High Pattern B. Reference
Range: Pattern A.

LDL PEAK SIZE
(Angstrom)

224.8

Range: >222.9

LDL PEAK SIZE (Angstrom)



Result Comments

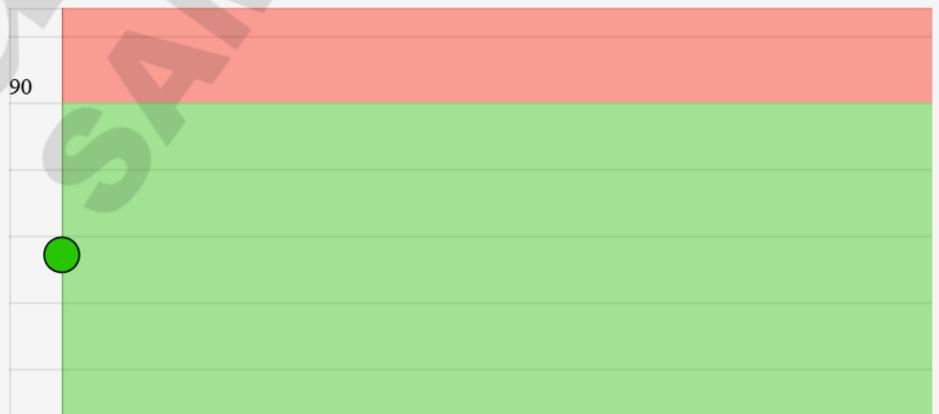
This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Cardiometabolic Center of Excellence at Cleveland HeartLab. It has not been cleared or approved by the U.S. Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. Relative Risk: Optimal >222.9; Moderate 222.9-217.4; High <217.4. Male and Female Reference Range: 216 to 234.3 Angstrom. Adult cardiovascular event risk category cut points (optimal, moderate, high) are based on an adult U.S. reference population plus two large cohort study populations. Association between lipoprotein subfractions and cardiovascular events is based on Musunuru et al. ATVB.2009;29:1975. For additional information, please refer to <http://education.QuestDiagnostics.com/faq/FAQ134> (This link is being provided for informational/educational purposes only.)

APOLIPOPROTEIN...
(mg/dL)

67

Range: <90

APOLIPOPROTEIN B (mg/dL)



Result Comments

Reference Range <90

Risk Category:

Optimal <90
Moderate 90-129
High > or = 130

A desirable treatment target may be <80 mg/dL or lower depending on the risk category of the patient including patients on lipid lowering therapies, patients with ASCVD, diabetes with >1 risk factors, Stage 3 or greater CKD with albuminuria, or heterozygous familial hypercholesterolemia. ApoB relative risk category cut points are based on AACE/ACE and ACC/AHA recommendations (Grundy SM, et al. 2019. doi:10.1016/j.jacc.2018.11.002; Handelsman Y, et al. 2020. doi:10.4158/CS-2020-0490).

LIPOPROTEIN (a)
(nmol/L)

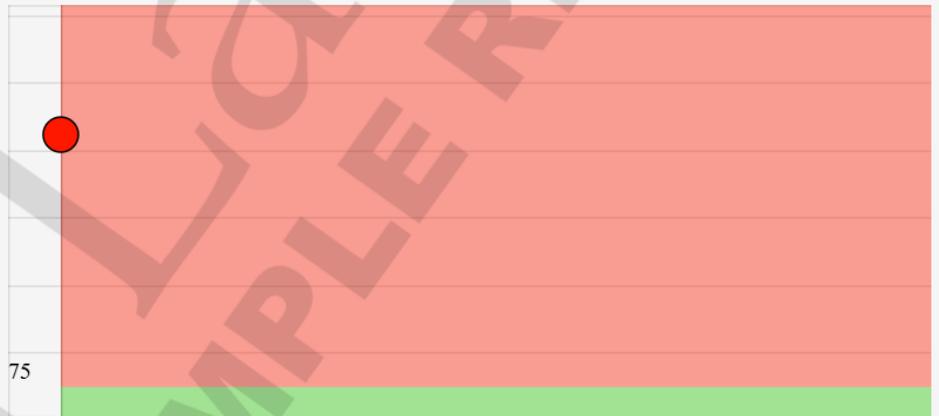
261 H

Range: <75

LIPOPROTEIN (a)

(nmol/L)

Lipoprotein-a, or Lp(a) are molecules made of proteins and fat. They carry cholesterol and similar substances through the blood. A high level of Lp(a) is considered a risk factor for heart disease. ... [See more](#)



Result Comments

Verified by repeat analysis.

Risk: Optimal <75 nmol/L; Moderate 75-125 nmol/L; High >125 nmol/L. Cardiovascular event risk category cut points (optimal, moderate, high) are based on Tsimika S. JACC 2017;69:692-711.