Cardiovascular Risk Profile

Cardiovascular disease (CVD) is associated with more deaths than all cancers—and more deaths in women than breast cancer. This Comprehensive Cardiovascular Risk Profile evaluates a thorough battery of traditional and advanced biomarkers to aid in early detection and modification of risk factors. Doctor's Data measures oxidized LDL, small dense LDL and Lp(a), which are higher in CVD patients and correlated with the severity of CVD. A total of 17 primary and secondary risk factors are evaluated to provide actionable information at a tremendous value.

Turnaround Time

5 to 7 days

Analytes Tested

Analyte	CPT	ABN Required
Apolipoprotein, A1, serum	82172	No
Apolipoprotein, B, serum	82172	No
C-Reactive Protein; serum	86141	No
Cholesterol	82465	Yes
HDL, serum	83718	Yes
Homocysteine, serum	83090	No
LDL, serum	83721	Yes

Lipoprotein (a), serum	83695	No
Oxidized LDL, serum	83516	No
Small LDL, serum	84999	Yes
Triglycerides	84478	Yes

This test is useful for

- Cardiovascular Disease
- Lipid/Lipoprotein Profile
- Heart Attack
- Peripheral Arterial Disease
- Stroke
- Cardioprotective Nutrient Status
- Inflammation

Detailed Information

Cardiovascular disease (CVD) is associated with more deaths than all cancers—and more deaths in women than breast cancer. The Comprehensive Cardiovascular Risk Profile from Doctor's Data reviews a thorough battery of biomarkers to aid in early detection and reduction of risk factors before the disease progresses.

Risk Factors and Analysis

Lipoprotein-Related Biomarkers
Total and LDL cholesterol, total triglycerides and HDL cholesterol have traditionally been measured to gauge CVD risk. However, recent research indicates that more focused biomarkers can provide even greater insight.

For example, oxidized LDL is plaque-specific and directly involved in accelerated atherogenesis and late-stage atherosclerotic plaque instability and rupture. Small dense LDL exhibits greater penetration into the arterial wall and has a longer half-life as well as lower resistance to oxidation compared to that of large buoyant LDL. Circulating levels of these two markers are:
1. Strong independent CVD risk factors
2. Higher in CVD patients
3. Correlated with the severity of CVD
4. Not correlated with LDL cholesterol levels

In addition, levels of apolipoproteins A-1 and B, specific protein constituents of HDL and

LDL, are also strong indicators of risk.

Doctor's Data profiles evaluate each of these biomarkers as well as ratios of atherogenic to anti-atherogenic lipids, lipoproteins and apolipoproteins for further insight.

Inflammation
Arterial damage is associated with the infiltration of white cells into vessel walls and inflammation, which increases blood levels of two acute phase proteins, C-reactive protein and ferritin. For example, patients with moderately elevated CRP are more likely to develop stroke, myocardial infarction and severe peripheral arterial disease. Although not specific to CVD, analysis of high sensitivity to these two proteins is valuable in a comprehensive assessment of CVD risk.

Oxidative Stress, Glomerular Filtration and Blood Glucose
Because oxidative stress is a component of CVD, the Comprehensive Cardiovascular Risk Profile measures plasma levels of three primary antioxidants—coenzyme Q10 and α- and γ- tocopherol. The test also looks for elevated serum homocysteine, which has long been established as a risk factor.

Finally, because diabetes and chronic renal disease are also associated with markedly increased risk of CVD, long-term blood glucose homeostasis and glomerular filtration assessments round out the battery of risk factors analyzed.