A large iceberg floats in the ocean. The tip of the iceberg is visible above the water line, while the vast majority of the iceberg is submerged below the surface, illustrating the concept of hidden risks.

Cardio IQ[®]

Advanced Cardiovascular Testing

Providing Insights to
Your Cardiovascular Health

Information you and your doctor can use to develop the best plan to reduce your overall cardiovascular risk.

Cardio IQ Advanced Cardiovascular Tests



Getting a Better Picture of Your Heart Health

The results of your recently ordered blood tests are in the Cardio IQ Report contained in this folder. The report is designed to help you easily see what your results are and what those results mean in terms of your risk of having a heart attack or stroke sometime in the future.

These tests were ordered by your doctor to provide more information that can be used to understand your complete cardiovascular health. The tests go beyond the routine lipid panel that focuses on your low-density lipoprotein (LDL)* cholesterol and high-density lipoprotein (HDL)† cholesterol because sometimes patients have cardiovascular disease that cannot be detected by the traditional lipid panel.

Cardio IQ Tests Can Help Identify Your Cardiovascular Risks

The following Cardio IQ blood tests offered by Quest Diagnostics were developed to help uncover the possible hidden risks to your cardiovascular health. Using the results of your test(s), your doctor will be able to develop a plan to set goals and treatment strategies to help reduce your overall cardiovascular risk.



* Also called “bad cholesterol.”

† Also called “good cholesterol.”



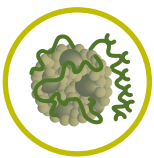
Lipoprotein Subfractionation

Subfractionation is the process of separating cholesterol particles into smaller pieces.

Lipoprotein Fractionation, Ion Mobility

This test separates, counts, and measures the particles that make up LDL-C and HDL-C. LDL-P is a strong predictor of cardiovascular risk beyond a basic lipid panel. A high number of small and medium LDL particles indicates an increased risk for heart disease. A low number of large HDL particles indicates increased risk for heart disease.

Knowing your particle number in addition to your traditional lipid panel can help your doctor better manage your medications to reduce your risk of cardiovascular events.



Apolipoproteins

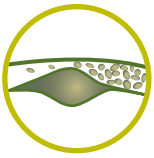
Apolipoproteins bind lipids (fats) in order to form lipoproteins. Lipoproteins carry lipids in the blood. Some of the lipids carried this way include cholesterol and triglycerides.

ApoB

ApoB is a type of apolipoprotein. It is the major protein found in certain lipoproteins. These are the ones most closely linked to heart disease. So high levels of ApoB are linked to a greater risk for heart disease. The level can be decreased by eating a healthy diet, exercising more, losing weight, and taking certain medications.

Lp(a)

Lp(a) is a combination of apolipoproteins and a lipoprotein. High levels are linked to heart disease and stroke. These levels may be influenced by genetics. Diet and exercise don't seem to help lower them, but certain medications do.



Inflammation

Coronary artery disease is associated with the severity of atherosclerosis, which is an inflammatory disease.

Fibrinogen

Fibrinogen is a part of the blood's clotting process that can be elevated due to inflammation. Continually high levels are linked to increased risk for heart disease. Fibrinogen levels can be lowered by stopping smoking and losing excessive body fat.

hs-CRP

High levels indicate inflammation due to infection or tissue injury. Moderately elevated levels may be associated with increased heart disease risk. If both hs-CRP and Lp-PLA₂ levels are high, your risk for a heart attack or stroke increases. Certain medications and food may have anti-inflammatory benefits.

Lp-PLA₂

High levels of Lp-PLA₂ may predict risk of a heart attack or stroke. When both hs-CRP and Lp-PLA₂ levels are high, risk for a heart attack or stroke increases significantly. Certain medications can reduce levels of Lp-PLA₂.



Heart Failure

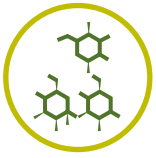
Heart failure occurs when the heart can no longer pump effectively enough to meet the body's needs for oxygen.

NT-proBNP

NT-proBNP is a hormone released from heart muscle cells in response to stress or strain on the heart. A high level of NT-proBNP is a warning that the heart is being overworked. Early identification of high levels may help your physician decide on a treatment plan to lower the risk of a cardiac event.

ST2

ST2 is a specific type of protein. If heart failure has already been diagnosed, an ST2 test monitors its progression. High levels of ST2 may mean heart failure is getting worse, and that a change in therapy is needed.



Metabolic Markers

Your metabolism is the result of all the processes in your body working together to create the energy that helps you each day.

Hemoglobin A1c

The hemoglobin A1c test is used to help figure out who may have diabetes either now or in the future by measuring blood sugar levels over the past 90 days. High levels may indicate pre-diabetes or diabetes.

Glucose

Glucose testing measures sugar levels in the blood. High glucose levels may mean you are not responding to the insulin your pancreas is making, so sugar is not getting to the cells where it is needed. Diabetes is the most common disease that causes irregular glucose levels.

Homocysteine

High levels of homocysteine can cause injury to blood vessel walls, increasing the risk for heart disease and stroke. Eating more foods that contain vitamin B and folic acid plays an important part in reducing homocysteine levels.

Insulin

Constant high levels of insulin increase risk for heart disease, diabetes, and other health conditions. High insulin levels can be improved with proper nutrition, exercise, stress management, or certain medications.

Omega-3 and -6 Fatty Acids, Plasma

Lower omega-3 index is linked to an increased risk of cardiovascular disease, including sudden cardiac death. Eating foods high in omega-3 fatty acids or taking omega-3 supplements can increase omega-3 fatty acid levels.

Vitamin D

Low vitamin D levels are linked to an increased risk of heart disease, stroke, diabetes, hypertension, and heart failure. Vitamin D levels may be low for many reasons, such as not enough sun exposure, not eating a balanced diet, and obesity. Taking vitamin D supplements is one way to increase vitamin D levels.



Cardiovascular Genetics

Every individual is unique. The genes that you are born with may impact your heart health. Our genetic tests may help doctors assess the risk for heart disease.

KIF6 Genotype

People who are KIF6 carriers may have a higher risk of heart disease events (such as a heart attack).

CYP2C19 Genotype

The CYP2C19 genotype test evaluates how well your body processes the medication clopidogrel (Plavix®). If you are a poor or intermediate metabolizer, Plavix may be less effective at preventing blood clots.

LPA-Aspirin Genotype

The LPA-aspirin genotype test can give insight into your risk of heart disease, as well as your response to aspirin. If you are an LPA-aspirin carrier, you may have a higher risk of heart disease events (such as a heart attack). However, if you are an LPA-aspirin carrier, low-dose aspirin may help reduce your risk.

4q25-AF Risk Genotype

The 4q25-AF genotype test evaluates your risk for atrial fibrillation (AF [irregular heartbeat]) and your risk for stroke caused by AF. If you are a 4q25-AF risk carrier, you may have a higher risk for AF and stroke caused by AF.

LPA-Intron 25 Genotype

The LPA-Intron 25 genotype test assesses your risk for heart disease. If you are an LPA-Intron 25 carrier, you may have a higher risk of heart disease.

9p21 Genotype

The 9p21 genotype test determines risk levels for certain types of heart disease. If you are a 9p21 carrier, you may have a higher risk of a heart attack (myocardial infarction) before the age of 60 if you are female, and 50 if you are male, or abdominal aortic aneurysm (AAA), blocked coronary arteries, or a heart attack at any age.

ApoE Genotype

The ApoE genotype test assesses your risk of heart disease, as well as your response to different amounts of dietary fats. There are six ApoE genotypes: 2/2, 2/3, 3/3, 2/4, 3/4, and 4/4. If you have the 3/4 or 4/4 genotype, you may have a higher risk of heart disease.



For more information about
Cardio IQ Advanced Cardiovascular
Testing, speak to your doctor or
visit 4myheart.com.

QuestDiagnostics.com

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