

BioReference  
LABORATORIES  
an **OPKO** Health Company

YOUR PATH TO BETTER HEALTH  
IS YOUR HEART HEALTHY?





## **What is Heart Disease?**

Atherosclerotic cardiovascular disease (ASCVD) can occur when fatty material builds up in the walls of arteries, also known as atherosclerotic plaque. As plaque builds, arteries narrow. Narrow arteries limit blood supply to the heart and create a risk for heart attack or stroke.

## **Why is it Important to Get a Basic Lipid Test?**

The American Heart Association recommends that beginning at age 20, when plaque usually begins to develop, a basic lipid test be performed. The follow-up frequency will depend on your level of risk, as determined by laboratory tests. The test includes a measure of your total cholesterol, HDL cholesterol (known as good cholesterol), LDL cholesterol (known as bad cholesterol) and triglycerides. Based on your test results and other factors, your doctor is able to determine your risk and manage your therapy accordingly.

## **Does a Basic Lipid Test Tell the Whole Story?**

The answer is no. Cholesterol content in LDL particles can vary, and about 20% of all cardiovascular events occur with no associated risk factors. Although LDL is an important factor, assessing cardiovascular risk solely from a basic lipid test may be inadequate. There are other laboratory tests that can further determine if you are at risk.

## **Why Does Heart Health from BioReference Provide a Better Picture?**

In addition to a basic lipid test, Heart Health from BioReference looks deeper to provide an accurate picture of ASCVD risk by testing for clinically relevant markers, such as lipoproteins and inflammation markers, as well as independent risk factors.

## **What Happens if I am at Risk for Heart Disease?**

The first step in reducing your risk for heart disease is to know your risk. The Heart Health report is easy to read and includes a patient friendly explanation



of all results. Based on the specific outcomes of your test, your physician may recommend medications to control certain risk factors and/or suggest lifestyle modifications through physical activity and healthy eating.

<b>MARKERS</b>	<b>RELEVANCE</b>
<b>HDL Cholesterol</b>	High Density Lipoprotein (HDL) slows arterial plaque buildup by transporting the cholesterol to the liver for disposal.
<b>HDL Particle Number</b>	The HDL particle number corresponds to the amount of bad cholesterol disposed by the liver. Therefore, the higher the number, the more cholesterol is disposed.
<b>HDL2b</b>	Elevated levels of HDL2b and HDL3 are cardioprotective and are an indicator of how well excess lipids are removed from cells and transported back to the liver. Women tend to have higher levels than men. Reduced levels are associated with a risk of development of diabetes.
<b>Hemoglobin A1c</b>	Hemoglobin A1c (HbA1c) measures the average amount of sugar in your blood over a 3-month period and is used in the diagnosis and monitoring of diabetes. Diabetics are at an increased risk of ASCVD events.
<b>hs-CRP</b>	C-reactive protein (CRP) is an inflammatory protein; it is associated with inflammation of blood vessels and is associated with ASCVD, even in the absence of an elevated total cholesterol.
<b>LDL Direct</b>	Low Density Lipoprotein (LDL) can slowly build up in the inner walls of arteries, causing them to narrow.
<b>LDL Particle Number</b>	LDL particles transport cholesterol. The higher the number of LDL particles, the more carriers of cholesterol, and a greater risk for developing ASCVD.
<b>LP(a) Excess</b>	Lp(a) excess is the most commonly inherited lipid disorder in patients with premature coronary heart disease. Very high levels of Lp(a) are associated with elevated vascular risk.
<b>Remnant Lipoprotein (RLP)</b>	RLP is an atherogenic lipoprotein composed primarily of Very Low Density Lipoprotein (VLDL) and Intermediate Density Lipoprotein (IDL), and is believed to be a building block of plaque.
<b>Small, dense LDL</b>	Small, dense LDL are atherogenic particles that can easily penetrate the arterial endothelium and cause plaque formation.

## HOW MUCH DOES THIS TEST COST?

Coverage for all laboratory tests depends on your particular insurance company. For those who do not have insurance, or who choose to pay out-of-pocket, BioReference offers Heart Health at an affordable price through our Community Health Advocacy Program. Ask the front desk at your doctor's office for more information.

## Did You Know?

- Approximately 50% of people who are at risk of heart disease are not identified by routine testing.
- About 600,000 Americans die each year from heart disease, which accounts for one quarter of all deaths.
- Heart disease doesn't discriminate. It is the leading cause of death in the U.S. for both men and women among most racial or ethnic groups.

## Where Can I Find More Information?

There is plenty of information online to learn more about heart disease and your risk factors, including the following sites:

American Heart Association:

[www.heart.org](http://www.heart.org)

Cardiovascular Research Foundation (CRF):

[www.crf.org](http://www.crf.org)

The Heart Foundation:

[www.theheartfoundation.com](http://www.theheartfoundation.com)

Centers for Disease Control (CDC):

[www.cdc.gov](http://www.cdc.gov)

ASK YOUR DOCTOR ABOUT  
HEART HEALTH TESTING FROM  
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