

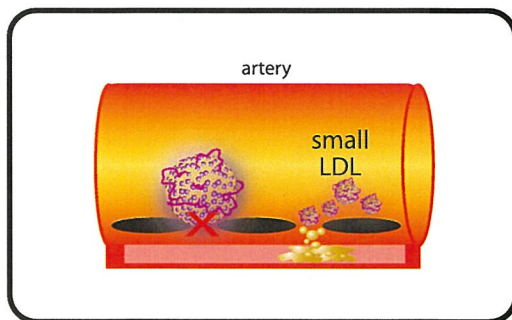
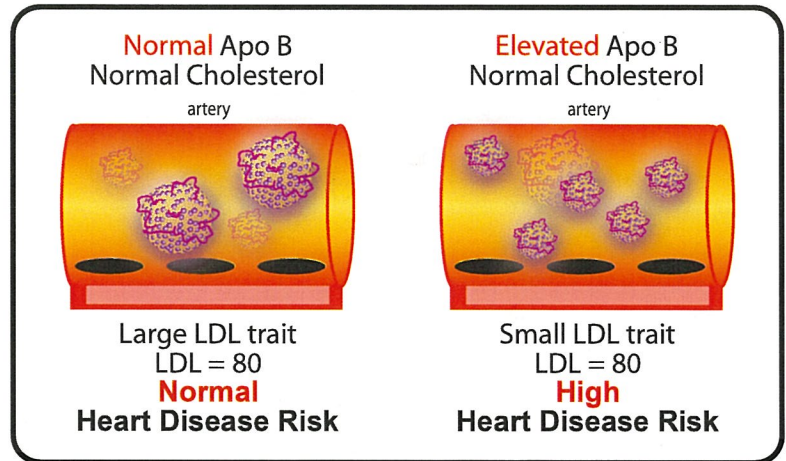
Patient Information

Berkeley HeartLab's Advanced Cardiovascular Tests

Your physician has recommended Berkeley HeartLab's Advanced Cardiovascular tests. These tests go beyond standard lipid (cholesterol) tests in identifying other factors, many of which are inherited, that increase your risk for cardiovascular disease, stroke and/or diabetes. The results of these tests will help your doctor develop a treatment plan to include the best nutritional and exercise recommendations. With this personalized plan, the success of the treatment will be monitored over time, and you and your doctor will be able to see your continued progress in **disease risk reduction**. Even inherited traits, once identified, can be treated successfully!

Apo B

- Measures the number of LDL ("bad" cholesterol) particles
- Increases your risk for heart disease and stroke when levels are high
- Can be lowered with improved nutrition, exercise, and medication

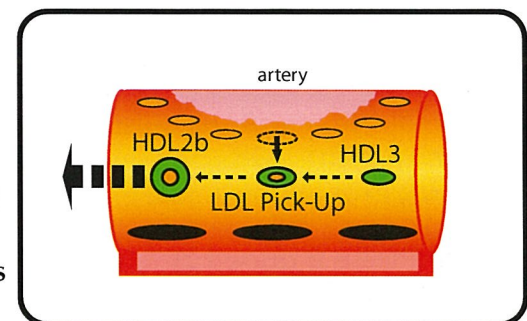


LDL-S₃GGE

- Determines the size of the LDL particles. Low numbers of large LDL particles are best
- Small LDL particles are bad because:
 - ▷ They enter the artery wall much faster than large LDL particles causing plaque build-up
 - ▷ Heart disease risks increase 300% if you have too many small LDL particles
 - ▷ Diabetes risk increases with small LDL particles
- Medications, the right kinds of food and exercise can change LDL particle size from small to less risky large particles. Re-testing will show this change
- You may have inherited tendencies to have small LDL particles

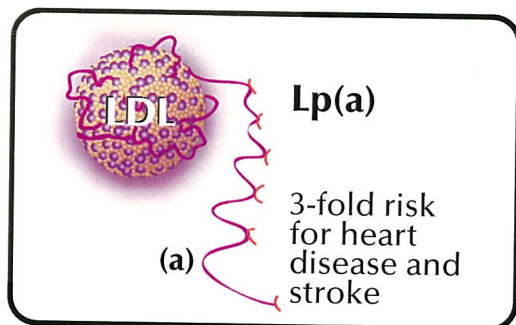
HDL-S₁₀GGE

- Determines the size of the HDL ("good" cholesterol) particles
- Large HDL particles do the best job in removing excess cholesterol from your body. The most effective HDL is called HDL2b
- Coronary artery disease is increased 200% – 300% in presence of small HDL
- Medications, specific food types, and exercise can increase levels of HDL and HDL2b. Re-testing will show this change
- You may have inherited tendencies to have low numbers of HDL2b



Apo E

- An inherited trait that never changes
- Determines how your body processes lipids and how it responds to dietary fat
- Helps to determine the right nutrition plan that will correct your lipid abnormalities and minimize your risk for heart disease and/or diabetes

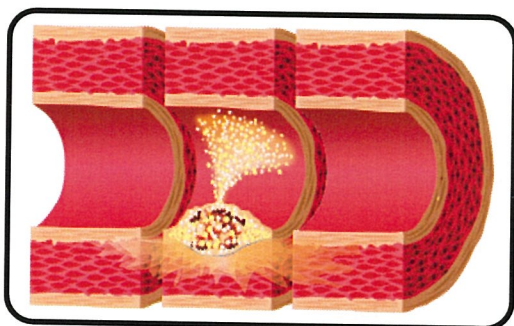


Lp(a) – Extended Range

- An LDL particle with an abnormal protein “corkscrew” attached
- Increases risk for rapid plaque buildup in arteries
- Increases risk for blood to clot too easily
- Can be lowered with specific medications
- Increases risk for heart disease 300%
- If elevated, testing family is encouraged to assess their risk
- Not affected by diet and exercise

Fibrinogen

- Measurement of blood’s ability to clot too easily
- Smoking and being overweight can cause levels to be high
- Reduced with medications, weight loss, exercise and/or stopping smoking



Lp-PLA₂

- Associated with inflammation in artery wall linked to plaque buildup
- Can be predictive of heart disease and/or stroke
- Can be treated with medications to decrease inflammation

C-Reactive Protein-hs

- Associated with inflammation in the body
- Can be a predictive of heart disease
- If elevated along with high levels of LpPLA₂, risk for heart attack or stroke **doubles**

Homocysteine

- If elevated can cause injury to blood vessel walls
- Potential for heart disease increases if elevated
- Certain foods can help to reduce high levels

Insulin

- A hormone that regulates blood sugar levels
- Risk for diabetes is increased with high levels
- Risk for heart disease is increased with high levels
- Lowered with specific medications and weight loss

For many patients, reducing sweets and other foods high in sugar content may be needed. Obtaining proper nutritional guidance is recommended since individual needs vary.



Cardiac disease is caused by inherited and environmental components. With the additional information provided by these tests, your physician can better determine the most effective medication, dietary and exercise plan for you. The overall goal is to minimize your risk for heart disease and stroke.