



Lipoprotein (a) [Lp(a)] Testing

Understanding the Importance of Lipoprotein(a) [Lp(a)] Testing

Lipoprotein(a) - pronounced “*lipoprotein little a*” and abbreviated **Lp(a)** - is a cholesterol-carrying particle found in the blood. Unlike LDL (“bad” cholesterol), Lp(a) is **genetically determined**. About **1 in 5 adults** have elevated levels, and rates are even higher (**30–50%**) among individuals of African descent.

High Lp(a) is inherited and lifelong. If your level is elevated, it is likely that one of your parents also has high Lp(a), and each of your children has a **50% chance** of inheriting it. Elevated Lp(a) significantly increases the risk of **heart attack, stroke, and aortic valve stenosis**, sometimes occurring earlier in adulthood.



What Makes Lp(a) Different?

Lp(a) contains a distinctive apolipoprotein(a) component made of looped protein structures called ‘**kringles**.’ This unique *corkscrew-like* structure contributes to several potentially harmful effects, including:

- ⇒ **Pro-atherogenic** – promotes plaque buildup in arteries.
- ⇒ **Pro-inflammatory** – increases vessel wall inflammation.
- ⇒ **Pro-thrombotic** – raises the tendency for blood clots.



Because of these combined effects, elevated Lp(a) is a **strong, independent risk factor** for cardiovascular disease.

Why Testing for Lp(a) Matters

- ◆ **Genetic and stable:** Levels are determined at birth and remain relatively constant. **Most people need only one test in their lifetime.**
- ◆ **Not included in standard cholesterol panels:** You can have normal LDL cholesterol yet still have high cardiovascular risk from elevated Lp(a).
- ◆ **Powerful risk predictor:** High Lp(a) is linked to premature heart disease, stroke, and **calcific aortic valve disease**, especially when there is a family history of early cardiovascular events.

The **ACC and AHA recommend that all adults have their Lp(a) measured at least once**, particularly if there is a family history of early heart attack or stroke. Testing is simple - it is **not a genetic (DNA) test**, but a routine **blood test** your healthcare provider can order.

Understanding Your Lp(a) Results

- ◆ **Below 30 mg/dL** → generally considered **low risk**.
- ◆ **Above 50 mg/dL** → associated with **increased cardiovascular risk**.
- ◆ If reported in **nmol/L**, levels above **75–125 nmol/L** are considered elevated.

A high Lp(a) level means **increased baseline cardiovascular risk**, even if your LDL cholesterol is normal. Your healthcare provider may recommend more aggressive cholesterol management, strategies to reduce **ApoB**, lifestyle approaches that reduce inflammation, and periodic imaging of the **aortic valve** to monitor for stenosis.

