What to know about Lipoprotein a Lp(a)

Lipoprotein(a) is a protein in your blood that carries cholesterol. It looks similar to low-density lipoprotein (LDL, often called the “lousy” cholesterol) but has an extra protein called apolipoprotein(a).

Why do we measure Lp(a)? *If elevated, Lp(a) can increase your risk of:*

- Heart attack: high Lp(a) can cause plaque buildup in the arteries, increasing the risk of blockages to the heart arteries.
- Stroke: Lp(a) can cause plaque buildup to the arteries, increasing the risk of blockage to the arteries in the brain.
- Aortic valve disease: high Lp(a) can contribute to the narrowing of the aortic valve (“aortic stenosis)
- Peripheral arterial disease: Lp(a) can cause plaque buildup in the arteries of your legs, decreasing blood flow to your legs.
- Heart failure: high Lp(a) can increase your risk of heart failure.

Who should get tested for Lp(a)?

- Everyone should have Lp(a) checked once in their life
- Anyone with a close family member with a high Lp(a)

What is an elevated Lp(a) level? >100 nmol/L

- Risk increases as your level increases

What changes my Lp(a) level?

- ~90% is determined by genetics

Can Lp(a) be treated?

Researchers are currently investigating whether it is more effective to treat the risks associated with Lp(a) or to directly reduce Lp(a). Reducing risk factors can help manage the risks associated with high Lp(a):

- Control other risk factors: treating high blood pressure, high cholesterol and diabetes can reduce your overall risk
- Medications: Starting cholesterol medications (statins, ezetimibe, PCSk9-inihibitors), blood pressure medications, or diabetes medications as necessary after counselling with your doctor can help lower your overall risk
- Healthy lifestyle: following a healthy diet, exercising regularly, and not smoking are foundational to reducing your overall
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Lp(a) nmol/L	Δ Lp(a) compared to median	Lp(a) percentile	Increased lifetime risk of major cardiac event from high Lp(a)	Intensification of LDL reduction needed to minimize the added risk of high Lp(a)			
				Begin age 30 y	Begin age 40 y	Begin age 50 y	Begin age 60 y
320	300	99	x2.56	1.2 mmol/L	1.4 mmol/L	1.7 mmol/L	2.3 mmol/L
270	250	97.5	x2.19	1.0 mmol/L	1.2 mmol/L	1.5 mmol/L	1.9 mmol/L
220	200	93.5	x1.87	0.8 mmol/L	0.9 mmol/L	1.2 mmol/L	1.5 mmol/L
170	150	90	x1.60	0.6 mmol/L	0.7 mmol/L	0.9 mmol/L	1.1 mmol/L
120	100	82.5	x1.37	0.4 mmol/L	0.5 mmol/L	0.6 mmol/L	0.8 mmol/L
70	50	75	x1.17	0.2 mmol/L	0.2 mmol/L	0.3 mmol/L	0.4 mmol/L
20	ref.	50	ref.	ref.	ref.	ref.	ref.

Modified from Kronenberg, F., Mora, S., Stroes, E.S., Ference, B.A., Arsenault, B.J., Berglund, L., Dweck, M.R., Koschinsky, M., Lambert, G., Mach, F. and McNeal, C.J., 2022. Lipoprotein (a) in atherosclerotic cardiovascular disease and aortic stenosis: a European Atherosclerosis Society consensus statement. European heart journal, 43(39), pp.3925-3946.