

VAP CHOLESTEROL TEST

EXPLANATIONS FOR PATIENTS



Your VAP® Cholesterol Test is a comprehensive lipid panel that shows risk factors that the routine lipid test cannot identify. Knowing these risk factors can help your physician create a treatment plan designed to reduce your risk of heart disease. The following definitions will help you understand each VAP measurement and what you can do to help avoid diabetes, stroke and heart disease.

Test	Test Description	Normal Values	Additional Lifestyle Suggestions
Total Low Density Lipoprotein (LDL) Cholesterol (Direct Cholesterol)	Your total “bad” cholesterol. There are three components: LDL ₄₊₃₊₂₊₁ , Lp(a) and IDL.	Patient at low risk: < 160 mg/dL Patient at moderate risk: < 130 mg/dL Patient at high risk: < 100 mg/dL Patient at highest risk: < 70 mg/dL (optional)	Choose: sterols and stanols, high-fiber foods
LDL₄₊₃₊₂₊₁	The amount of “bad” cholesterol carried by LDL particles.	< 100 mg/dL	Choose: sterols and stanols, high-fiber foods
Lipoprotein (a) (Lp(a))	An inherited risk factor. It is an LDL-like particle with Velcro®-like attachment, so it sticks to the walls of the arteries.	< 10 mg/dL	
Intermediate Density Lipoprotein (IDL)	A carrier of triglycerides that increases risk for heart disease.	< 20 mg/dL	Choose: high-fiber foods, omega-3 fatty acids Limit: refined carbs
Total High Density Lipoprotein (HDL) Cholesterol HDL₂ HDL₃	Your “good” or “protective” cholesterol. HDL ₂ is the protective form of HDL. Its role is to act like a garbage truck to take the “bad” cholesterol out of circulation. HDL ₃ is the least protective form of HDL.	HDL-C (Total): > 40 mg/dL HDL-C for Patients with Metabolic Syndrome: > 40 mg/dL (M) > 50 mg/dL (F) HDL ₂ : > 10 mg/dL (M) > 15 mg/dL (F) HDL ₃ : > 30 mg/dL (M) > 25 mg/dL (F)	Choose: healthy fats Limit: refined carbs Stop: smoking
Total Very Low Density Lipoprotein (VLDL) Cholesterol VLDL_{1&2} VLDL₃	Another type of “bad” cholesterol produced by the liver and the main carrier of triglycerides. It is a marker of prediabetes. VLDL _{1&2} includes the larger types of VLDL. VLDL ₃ is smaller and is a greater risk factor for heart disease.	VLDL (Total): < 30 mg/dL VLDL _{1&2} : < 20 mg/dL VLDL ₃ : < 10 mg/dL	Choose: omega-3 fatty acids, high-fiber foods Limit: refined carbs, alcohol Stop: smoking
Triglycerides	Another type of fat in the blood that can come from sugars and fats in your diet. It increases your risk of diabetes and heart disease.	< 150 mg/dL	Choose: omega-3 fatty acids, high-fiber foods Limit: refined carbs, alcohol Stop: smoking
Non-HDL Cholesterol	The sum of Total LDL and Total VLDL.	Dependent upon LDL (Direct) goal (Non-HDL-C goal = LDL goal + 30 mg/dL)	Choose: omega-3 fatty acids, high-fiber foods, sterols and stanols Limit: refined carbs, alcohol Stop: smoking
Remnant Lipoproteins	The sum of IDL and VLDL ₃ .	< 30 mg/dL	Choose: omega-3 fatty acids, high-fiber foods Limit: refined carbs, alcohol Stop: smoking
LDL Density (Pattern)	Pattern A: large and fluffy LDL is like popped popcorn. Pattern B: small LDL is like popcorn kernels and can mean higher risk of heart disease. Pattern A/B: is like a mix of popped popcorn and popcorn kernels.	Pattern A	Choose: omega-3 fatty acids Limit: refined carbs, alcohol
Apolipoprotein B (apoB)	The number of “bad” cholesterol LDL and VLDL particles. Fewer is better.	High risk: < 90 mg/dL Highest risk: < 80 mg/dL	Choose: omega-3 fatty acids, high-fiber foods, sterols and stanols Limit: refined carbs, alcohol Stop: smoking
Apolipoprotein A1 (apoA1)	The number of “good” HDL cholesterol particles in your blood. More are better.	> 118 mg/dL (M) > 145 mg/dL (F)	Choose: healthy fats Limit: refined carbs Stop: smoking
ApoB/apoA1 ratio	A ratio of the number of bad LDL cholesterol particles to the number of good HDL cholesterol particles. The lower the number, the lower the risk of heart disease.	< 0.92 (M) < 0.75 (F)	Choose: healthy fats, high-fiber foods, sterols and stanols Limit: refined carbs, alcohol Stop: smoking