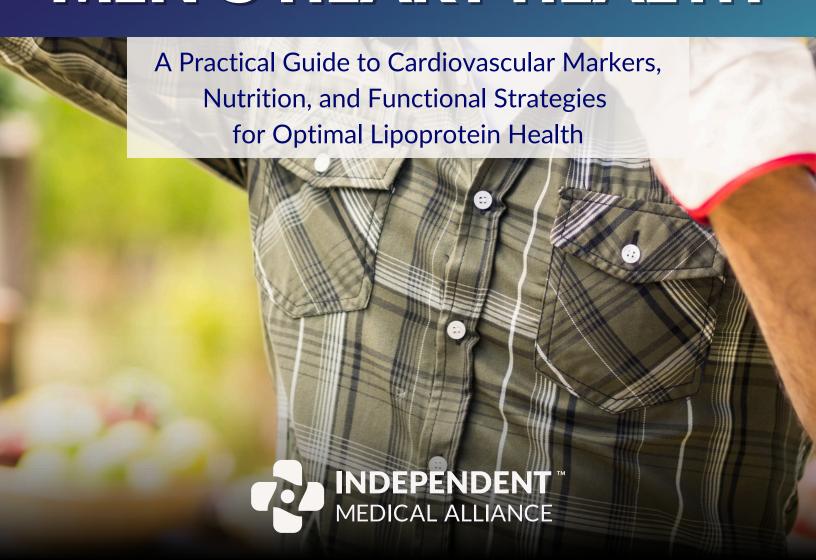


UNDERSTANDING MEN'S HEART HEALTH



Men's Cardiovascular Health: The Heart of the Matter

Heart disease remains the leading cause of death for men worldwide. It's responsible for 1 in 4 male deaths in the U.S. alone, yet an estimated 80% of cardiovascular events are preventable with lifestyle and dietary changes.

Despite decades of awareness campaigns, heart disease rates remain high—not because men don't care, but because they're often juggling stress, time constraints, and confusing or conflicting health information. Add to that cultural conditioning ("I feel fine, so I must be fine") and you have the perfect storm for silent progression of vascular disease.

Your heart health isn't defined by cholesterol numbers alone. It's about the resilience of your entire cardiovascular system—how your arteries function, how efficiently your mitochondria generate energy, and how your body handles inflammation and stress.



Understanding Key Markers

Blood Pressure: Ideal blood pressure sits around 115/75 mmHg. Even small elevations (e.g., 130/85) can increase long-term cardiovascular risk. Hypertension often reflects deeper issues, like insulin resistance, magnesium deficiency, high sodium-to-potassium ratios, stress, or sleep apnea.

Functional tips:

- Emphasize a mineral-balanced diet: Increase potassium-rich foods (avocado, leafy greens, sweet potato) while moderating refined salt and processed foods.
- Assess sleep and stress before jumping to medication-only strategies.

Cholesterol & Triglycerides: Cholesterol isn't the villain it's often made out to be—it's the building block for hormones and cell membranes. The issue lies in oxidized LDL, low HDL, and high triglycerides, which indicate inflammation and poor metabolic control.

Functional targets:

- Triglycerides <100 mg/dL
- HDL >55 mg/dL
- LDL particle number (ApoB) <90 mg/dL
- TG:HDL ratio <2:1 (a strong marker of insulin sensitivity)

Lifestyle & nutrition support:

- Omega-3 fatty acids (EPA/DHA) lower triglycerides and stabilize heart rhythm.
- Fiber-rich foods (beans, oats, flax, chia) help bind cholesterol in the gut.
- Minimize refined carbs and excess alcohol to reduce triglycerides.

Advanced Lipoproteins: Lp(a) and ApoB: Standard cholesterol panels (total, LDL, HDL, triglycerides) only tell part of the story. Many men with "normal" LDL cholesterol still experience cardiac events—because what truly drives risk is particle number, particle size, and oxidation potential.

Two markers—Lipoprotein(a) and Apolipoprotein B (ApoB)—offer a far more accurate picture of cardiovascular risk and are becoming gold standards in preventive cardiology.

Understanding Key Markers

Lipoprotein(a): The Genetic Wild Card

Lipoprotein(a), or Lp(a), is a unique, genetically inherited form of LDL cholesterol. It consists of an LDL particle bound to a sticky protein called apolipoprotein(a), which makes it more atherogenic (plaque-forming). Because it promotes both inflammation and clot formation, elevated Lp(a) levels can dramatically increase risk for:

- Coronary artery disease
- Stroke
- Aortic valve stenosis (calcification of the heart valve)

What makes Lp(a) particularly concerning is that it's not routinely tested, despite being high in up to 20–25% of the population. Men with a strong family history of early heart attacks, even with normal LDL, often have elevated Lp(a).

Functional insights & testing guidance:

- Lp(a) levels are largely genetic and remain stable throughout life—so one test in adulthood is typically sufficient.
- A result >30 mg/dL (or >75 nmol/L) is considered elevated; >50 mg/dL (125 nmol/L) significantly increases lifetime risk.
- Lp(a) is not easily reduced by diet or standard statins. However, lowering overall inflammation, LDL particle oxidation, and ApoB still helps offset the associated risk.

Supportive interventions:

- Niacin (Vitamin B3): May modestly reduce Lp(a) by 20–30% in some individuals, though use should be supervised (flushing and liver enzymes monitored).
- Omega-3 fatty acids (EPA/DHA): Improve endothelial health and reduce thrombosis risk.
- Lifestyle and diet: While they may not change Lp(a) directly, they profoundly affect how "sticky" and oxidized particles become.
- Emerging therapies: PCSK9 inhibitors and RNA-based drugs are being researched for their ability to lower Lp(a) more effectively.

Understanding Key Markers

Apolipoprotein B: The Better LDL Marker

Every atherogenic (plaque-forming) particle—LDL, VLDL, IDL, and Lp(a)—contains one molecule of Apolipoprotein B (ApoB). Measuring ApoB directly quantifies the total number of cholesterol-carrying particles, not just their cholesterol content. Why that matters:

- Two people can have the same LDL-C level, but if one has more LDL particles (higher ApoB), those particles are smaller and denser—far more likely to penetrate arterial walls and oxidize.
- ApoB gives a clearer picture of particle burden and cardiovascular risk, particularly in men with insulin resistance, metabolic syndrome, or high triglycerides.

Functional ranges & interpretation:

Optimal ApoB: <80 mg/dL

• Borderline: 80-100 mg/dL

High risk: >100 mg/dL

Key takeaways:

- ApoB correlates more strongly with atherosclerosis than LDL-C alone.
- It's especially useful when triglycerides are elevated or HDL is low.
- If both ApoB and Lp(a) are high, risk stratification should be considered very high, and more aggressive dietary and lifestyle strategies may be warranted.



Functional & Nutritional Strategies for Lipoprotein Health

While genetics influence Lp(a), epigenetics and environment determine how that risk plays out. A few key interventions can dramatically improve lipid particle quality and endothelial health:

1. Anti-Inflammatory Diet:

- Mediterranean-style, rich in omega-3s, extra-virgin olive oil, nuts, and polyphenols.
- Limit refined carbohydrates and industrial seed oils (soy, corn, canola).
- Emphasize fiber (25–35 g/day) to help clear bile acids and support microbiome balance.

2. Nutrient Support:

- Niacin (B3): Supports Lp(a) and HDL function.
- Omega-3s: Reduce VLDL and ApoB particle number.
- Magnesium: Improves vascular tone and lowers blood pressure.
- CoQ10: Enhances mitochondrial efficiency in cardiac muscle, especially important for men on statins.
- Curcumin & Resveratrol: Inhibit LDL oxidation and vascular inflammation.

3. Lifestyle Medicine:

- Resistance training and aerobic exercise improve HDL function and reduce triglycerides.
- Sauna therapy mimics cardio exercise, increasing nitric oxide and vascular flexibility.
- Stress reduction (via breathwork, meditation, or HRV training) lowers inflammatory cytokines.
- Sleep optimization: Poor sleep dysregulates lipid metabolism and increases insulin resistance.





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