



Research Summary: Cholesterol #2

As featured in Dr. Kenny Mittelstadt's video:
"BEST Supplements To Lower Cholesterol Naturally | Doctor Explains"
Date of Publication: 02/26/2026

Research Context:

This week's topic explores a question many people ask after seeing their lab results: Is there one supplement that meaningfully lowers cholesterol? In the video, Dr. Kenny explains why that question can be misleading. Cholesterol is not a single isolated problem. LDL, HDL, and triglycerides reflect a broader pattern of how your body absorbs fats, produces cholesterol in the liver, processes inflammation, and regulates energy over time.

Rather than searching for a single "best" solution, the research below looks at three supplement categories that work at different checkpoints in this system. Some influence absorption in the digestive tract. Others affect how cholesterol is produced or recycled. Each tool interacts with a different part of the network.

Understanding these mechanisms matters because cholesterol does not rise randomly. It often shifts alongside changes in insulin signaling, metabolic regulation, inflammation load, and dietary patterns. This summary connects the human research to that bigger picture so you can better understand where a supplement may fit and where deeper regulation may need attention.

Key Findings from the Research:

Study 1 (PMID 39682955):

This randomized, double-blind, placebo-controlled trial studied adults with borderline high LDL cholesterol who took a standardized bergamot extract for four months. LDL dropped by about 11.5 percent, and total cholesterol decreased by about 8.8 percent compared to baseline. Some participants also saw improvements in triglycerides and markers of oxidative stress, which reflects cellular wear and tear in the bloodstream. In practical terms, that is roughly a one-tenth reduction in LDL over several months. Not pharmaceutical-level suppression, but a measurable shift. Bergamot appears to influence cholesterol production and metabolic processing in the liver rather than simply blocking absorption in the gut. The data is promising, though not yet as deeply replicated as fiber or sterols.

Study 2 (PMID 36796439):

This meta-analysis pooled results from more than 120 randomized controlled trials examining plant sterols and stanols. Across typical doses up to about 3 grams per day, LDL cholesterol dropped on average between 6 and 12 percent. These compounds resemble cholesterol structurally, which allows them to compete for absorption in the small intestine. When sterols occupy that space, less dietary cholesterol enters circulation. Because this pattern has been reproduced across many studies, sterols remain one of the most consistent non-prescription tools for modest LDL reduction. Their effect is specific to absorption, not metabolic signaling or inflammation regulation.

Study 3 (PMID 24780090)

Research on soluble fiber, including psyllium, shows modest but consistent reductions in LDL and total cholesterol when intake increases. Fiber forms a gel in the digestive tract that binds cholesterol and bile acids, helping escort them out of the body. This forces the liver to use circulating cholesterol to make more bile, gradually lowering LDL levels. Beyond binding, fiber also supports gut signaling and metabolic balance. While its LDL reduction may be smaller than sterols in percentage terms, its broader systemic benefits make it foundational rather than purely targeted.



Research Summary: Cholesterol #2

As featured in Dr. Kenny Mittelstadt's video:
"BEST Supplements To Lower Cholesterol Naturally | Doctor Explains"
Date of Publication: 02/26/2026

Functional Medicine Connections:

Cholesterol is not just a single number on a lab report. LDL, HDL, and triglycerides reflect how your body absorbs fats, produces cholesterol in the liver, clears bile acids, and regulates energy over time. Each supplement discussed works at a different checkpoint in that process, influencing either absorption, production, or elimination.

Plant sterols and stanols reduce absorption in the gut. Soluble fiber supports clearance by binding cholesterol and helping remove it from the body while also supporting gut signaling. Bergamot appears to influence how cholesterol is produced and processed in the liver, interacting with metabolic pathways.

Cholesterol patterns also tend to shift alongside insulin signaling, inflammation, and metabolic stress. When blood sugar regulation is strained, the liver may increase cholesterol production. In that sense, lipid markers often reflect broader system communication rather than a single isolated problem. The research gives us tools. Systems thinking helps us understand when and where they fit within your larger physiology.

Practical Reflections & Takeaways:

When you look at your lipid panel, pause before asking which supplement to take. Instead, ask what pattern is emerging. Is LDL elevated on its own? Are triglycerides climbing alongside blood sugar changes? Is HDL low in the context of stress, poor sleep, or low physical activity? These distinctions matter because they often point to different underlying mechanisms.

Think about timing and trends. Did your cholesterol numbers shift during a period of higher stress, disrupted sleep, weight gain, or reduced movement? Did dietary changes precede the change in your labs? Your lived experience is data. Patterns over time often tell a clearer story than a single snapshot.

Finally, consider whether you are targeting a checkpoint or the broader system. Supplements can influence absorption, production, or clearance. But if insulin signaling, inflammation, or metabolic regulation remain strained, the pattern may persist. The goal is not just to lower a number, but to understand what that number is reflecting about how your body is communicating.

Want Dr. Kenny's Eyes on Your Case?

**Book Your
Health Mystery Map Call**

In TX, CA, FL

References:

- Spina A, Amone F, Zaccaria V, et al. Citrus bergamia extract and cholesterol management: A randomized placebo-controlled trial. *Foods*. 2024;13(23):3883. doi:10.3390/foods13233883. PMID: 39682955.
- Ras RT, Geleijnse JM, Trautwein EA. LDL-lowering effects of plant sterols and stanols: A meta-analysis. *Br J Nutr*. 2014;112(2):214-219. doi:10.1017/S0007114514000750. PMID: 24780090.
- Abumweis SS, Barake R, Jones PJH. Soluble fiber and cholesterol reduction: Evidence review. *Nutr Rev*. 2008;66(4):188-205. PMID: 36796439.