

# Low Cholesterol Dangers Exposed; Heart Health Myths Shattered

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## STORY AT-A-GLANCE

- › Low cholesterol levels can actually harm heart health, challenging the idea that lower is always better
- › HDL (high-density lipoprotein) cholesterol, often called “good” cholesterol, might not protect against heart disease as much as we thought
- › Race plays a big role in how HDL cholesterol relates to heart disease risk, with different effects seen in White and Black adults
- › The “cholesterol paradox” shows that in some cases, higher cholesterol levels are linked to better survival rates, going against traditional beliefs
- › There’s no one-size-fits-all approach to cholesterol levels – what’s best depends on a person’s unique factors and overall health

I’ve long been fascinated by cholesterol’s role in our health, and research published over the last few years challenges what we’ve been told for decades. For example, a groundbreaking study of over 23,000 people reveals surprising, never-before considered findings about the impact of race and genetics on cholesterol and its links to heart disease.

## Is Lower Cholesterol Really a Good Thing?

You've been told that high cholesterol is bad and low cholesterol is good. But what if I told you that low cholesterol could actually harm your heart health? This might sound counterintuitive, but recent research has uncovered some surprising truths about cholesterol's role in our bodies.

Cholesterol is a crucial component of cell membranes and a precursor to many important hormones.<sup>1</sup> It's not just a harmful substance to be eliminated, but a vital part of our biology. In fact, cholesterol plays a key role in brain function, hormone production, and even vitamin D synthesis.

For decades, the medical community has focused on lowering cholesterol levels to prevent heart disease. This approach was based on studies like the Framingham Heart Study, which linked high cholesterol to increased cardiovascular risk. As a result, millions of people have been prescribed statins and told to follow low-fat diets.

However, new research is challenging this simplistic view. The REGARDS (REasons for Geographic and Racial Differences in Stroke) study<sup>2</sup> published in the Journal of the American College of Cardiology examined data from 23,901 participants over a median follow-up of 10.7 years.

The researchers found that the relationship between HDL cholesterol and heart disease risk actually varied depending on race. Low levels of high-density lipoprotein (HDL) cholesterol – often called "good" cholesterol – were only associated with increased risk of coronary heart disease in White adults. Even more surprisingly, high levels of HDL cholesterol didn't seem to protect against heart disease in either White or Black adults.

This revelation challenges decades of medical advice that has emphasized raising HDL cholesterol levels as a way to improve heart health. It also highlights the importance of considering racial differences in health research and treatment recommendations.

Another intriguing discovery is the "cholesterol paradox" observed in various health conditions.<sup>3</sup> In some cases, individuals with low cholesterol levels actually had worse health outcomes than those with higher levels – a finding that flies in the face of long-held beliefs about cholesterol and health. As noted in one 2023 scientific review:

*"On average, patients with a total cholesterol level of 232 mg/dl had a 25% higher survival rate than those with a total cholesterol level of 193 mg/dl who were suffering from heart failure. A total cholesterol level under 200 mg/dl is generally preferred."<sup>4</sup>*

These unexpected results raise important questions about how we assess cardiovascular risk and whether current treatment guidelines are appropriate for all populations. Clearly, the relationship between cholesterol and health isn't nearly as straightforward as we once thought.

## **Complex Interplay of Factors Influence Cholesterol's Effects**

Aside from race, individual genetics also play a big part in how our bodies handle cholesterol. Some people naturally make more cholesterol, while others make less. This is why two people eating the same diet can have very different cholesterol levels.<sup>5</sup>

Inflammation and oxidative stress in our bodies can also impact how cholesterol affects our health. When there's a lot of inflammation, cholesterol can act differently and cause problems that would not occur in someone that did not have the same level of inflammation. This is one reason why overall health is so important when thinking about cholesterol.<sup>6</sup>

This complex web of interactions makes it hard to predict exactly how cholesterol will affect each person's health.<sup>7</sup> Here's a short list of factors that influence cholesterol's effects:

1. Cellular energy production
2. Genetic factors
3. Inflammation and oxidative stress
4. Interaction with other metabolic processes

Understanding these relationships helps explain why low cholesterol isn't always good and high cholesterol isn't always bad.

# Shifting Paradigms in Cholesterol Management

The revelations about cholesterol's complex role in health are causing waves across the medical community and beyond. Importantly, these findings are prompting a reevaluation of cholesterol treatment guidelines that have been in place for decades.<sup>8</sup>

Healthcare providers are increasingly moving towards a more personalized approach to cholesterol management. Instead of relying solely on total cholesterol numbers, doctors are considering a wider range of factors including race, genetics, and overall health status when assessing cardiovascular risk.<sup>9</sup>

The pharmaceutical industry may need to adapt to new understandings of cholesterol's role in health. As research reveals the complex relationship between cholesterol levels and heart disease risk across different populations, drug development and marketing strategies really ought to shift to reflect more personalized approaches to cardiovascular health management.<sup>10</sup> Whether that will actually happen remains to be seen.

Public health messaging about cholesterol is also undergoing a transformation. The old mantra of "lower is always better" is being replaced with more nuanced advice. Dietary recommendations are shifting away from blanket low-fat guidelines to focus on overall diet quality and individual metabolic health.<sup>11</sup>

These changes are empowering patients to take a more active role in their health management. With a better understanding of cholesterol's complexities, you can make more informed decisions about your diet, lifestyle, and medical treatments.

Advanced lipid testing methods that provide more detailed information about cholesterol particle size and number are becoming increasingly important. These tests offer insights beyond standard lipid panels, allowing for more accurate cardiovascular risk assessment and targeted interventions.<sup>12</sup>

As our understanding of cholesterol continues to evolve, it's clear that its impact extends far beyond individual health. It's reshaping medical practice, influencing public

health policy, and even affecting economic sectors.

To better understand the real-world implications of these findings, let's look at some specific examples and case studies that illustrate the complexity of cholesterol management in different scenarios.

## **Real-World Scenarios Illustrate Complexity of Cholesterol Management**

Consider the case of John, a 55-year-old White male with low HDL cholesterol levels. Traditional medical wisdom would have flagged him as high-risk for heart disease, and indeed, the REGARDS study<sup>13,14,15,16,17</sup> confirmed that that low HDL cholesterol is associated with increased risk in White adults. So, for someone like John, a White male, the traditional wisdom about low HDL cholesterol increasing heart disease risk holds true.

In contrast, Maria, a 60-year-old Black woman with high HDL cholesterol, might have been considered at low risk for heart disease based on outdated guidelines. However, the new research suggests that high HDL levels aren't necessarily protective for Black adults, prompting a reevaluation of Maria's overall cardiovascular health beyond just her cholesterol numbers.

Another intriguing example is seen in highly trained, keto-adapted athletes. These individuals often display what appears to be paradoxically high cholesterol levels, yet they maintain excellent cardiovascular health.<sup>18</sup> This phenomenon highlights the complex interplay between diet, physical activity, and cholesterol metabolism.

These scenarios underscore the need for a more nuanced and individualized approach to cholesterol management. They demonstrate that relying solely on standard cholesterol numbers can lead to misclassification of risk and inappropriate treatment decisions.

Given these complex scenarios, what can be done to optimize cholesterol management and improve health outcomes? The answer lies in a more holistic and personalized approach to health assessment and treatment.

## Advanced Strategies for Optimizing Cholesterol Health

The takeaway is that improving cholesterol health goes beyond simply lowering your total cholesterol levels. A comprehensive approach that considers individual factors and overall metabolic health is key. Here are some strategies to promote optimal cholesterol balance. By embracing a more holistic strategy, you and your healthcare provider can work together to reduce your cardiovascular health risks.

- **Personalized risk assessment** — Healthcare providers should look beyond standard cholesterol numbers and consider factors like race, age, genetics, and lifestyle when evaluating cardiovascular risk.<sup>19</sup>
- **Advanced lipid testing** — This provides a more detailed picture of cholesterol levels than standard tests. These tests break down different types of LDL and HDL particles, giving you a clearer understanding of your individual heart disease risk.<sup>20</sup> Importantly, this detailed information helps identify individuals at risk even when their standard lipid panel appears normal.<sup>21</sup>
- **Diet** — Instead of focusing solely on lowering fat intake, focus on the quality of fats consumed. Incorporating foods rich in omega-3s, and saturated fats such as butter and coconut oil, will help you maintain a healthy cholesterol level while supporting your overall heart health.
- **Exercise** — Regular physical activity, especially a combination of aerobic exercise and strength training, helps improve lipid profiles and overall metabolic health.<sup>22</sup>
- **Targeted supplementation** — For some individuals, targeted supplementation might be beneficial. For example, nutrients like omega-3s, niacin, and plant sterols have shown promise in supporting healthy cholesterol levels.<sup>23</sup>

## Sources and References

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- <sup>15</sup> [NBC News, November 22, 2022](#)
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