

# The Impact of Hyperlipidemia on Cardiovascular Health: A Comprehensive Review

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**Abstract:** *Hyperlipidemia, characterized by elevated levels of lipids in the bloodstream, is a significant risk factor for cardiovascular diseases (CVD), which are leading causes of morbidity and mortality worldwide. This review provides a comprehensive examination of the pathophysiological mechanisms linking hyperlipidemia to cardiovascular health, highlighting the roles of low-density lipoprotein (LDL), high-density lipoprotein (HDL), and triglycerides in atherosclerosis development and progression. Evidence from epidemiological studies demonstrates a clear correlation between hyperlipidemia and increased incidence of coronary artery disease, stroke, and heart failure. Furthermore, this review discusses current management strategies, including lifestyle modifications and pharmacological interventions such as statins, PCSK9 inhibitors, and emerging therapies, which aim to mitigate lipid levels and improve cardiovascular outcomes. Understanding the complex interplay between lipid metabolism and cardiovascular health is crucial for developing effective prevention and treatment strategies. This review emphasizes the need for continued research into personalized approaches to managing hyperlipidemia, ultimately aiming to reduce the burden of cardiovascular diseases*

**Keywords:** Hyperlipidemia, cardiovascular diseases, cholesterol and triglycerides, atherosclerosis, management of hyperlipidemia