Is very low LDL-C harmful?
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A major Cardiovascular (CV) risk factor is low-density Lipoprotein Cholesterol (LDL-C). A lot of evidence that was accumulated supports a linear association between LDL-C levels and CV risk. However, whether the lower limit of LDL-C might offer CV benefits without any safety concerns is still a topic of debate.

This review discusses data from studies of several safety events that have been associated with low LDL-C levels achieved with major lipid-lowering drug.

Commonly with the use of a combination of statins with ezetimibe or proprotein convertase subtilisin kexin 9 inhibitors, several large trials have evaluated the safety or reducing LDL-C to levels lower than 50 mg/dl or even lower than 25 mg/dl. Most of the trials showed CV benefits which were observed with LDL-C levels of 50 mg/dl or less compared with higher levels. Favorable results for LDL-C levels lower than 25 mg/dl are limited.

Of importance, cancer and hemorrhagic stroke incidences were not increased in patients attaining LDL-C lower than 40-50 mg/dl. In terms of safety, the reduction of LDL-C to such levels was not associated with any significant adverse event. Data regarding the impact of lowering LDL-C with neurocognitive disorders are contradictory; nevertheless, most studies stand in favor of neurocognitive safety with LDL-C reductions to low levels.


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