

Lower Is Better for LDL Even at Very Low Levels: New Meta-Analysis

Further reductions in low-density lipoprotein (LDL) cholesterol with more intensive statin regimens safely produce definite further reductions in vascular events, even down to very low LDL levels, lower than current targets, results of two new meta-analyses show [1]. There was no evidence of any lower threshold where the benefit is not seen.

The two meta-analyses, published online in the *Lancet*, were conducted by the **Cholesterol Treatment Trialists' (CTT) Collaboration**, which includes researchers from both University of Oxford, UK, and the **National Health and Medical Research Council Clinical Trials Centre (CTC)** at the University of Sydney, Australia.

By combining individual patient data from all the statin studies, a large group of people who started at the current LDL target level of 1.8 mmol/L (70 mg/dL) and got down to levels of around 1.3 mmol/L (around 50 mg/dL), this group showed a definite reduction in vascular events.

The researchers conclude: "Each 1-mmol/L LDL cholesterol reduction reduces the risk of occlusive vascular events by about a fifth, irrespective of baseline cholesterol concentration, which implies that a 2- to 3-mmol/L reduction would reduce risk by about 40% to 50%. These findings suggest that the primary goal for patients at high risk of occlusive vascular events should be to achieve the largest LDL-cholesterol reduction possible without materially increasing myopathy risk."

They add that in contrast to current therapeutic guidelines, which tend to emphasize particular LDL-cholesterol targets, these new results suggest that lowering of LDL cholesterol further in high-risk patients who achieve such targets would produce additional benefits, without an increased risk of cancer or nonvascular mortality. They also suggest that rather than using 80 mg of generic **simvastatin** to achieve these benefits, the more potent statins such as 80-mg **atorvastatin** or 20-mg **rosuvastatin** may be a better approach to avoid myopathy.

References

1. Cholesterol Treatment Trialists' (CTT) Collaboration. Efficacy and safety of intensive LDL-cholesterol-lowering therapy: A meta-analysis of data from 170 000 participants in 26 randomised trials. *Lancet* 2010; DOI:10.1016/S0140-6736(10)61350-5. Available at: <http://www.thelancet.com>.