

## **SHOULD STATINS BE USED FOR SECONDARY STROKE PREVENTION IN PEOPLE WITH NORMAL CHOLESTEROL LEVELS: CON**

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Although hypercholesterolemia is a known risk factor for atherosclerosis, the association between serum cholesterol and stroke risk is less established, and low cholesterol was even related to higher risk of hemorrhagic stroke. Statins decrease the progression of atherosclerosis, and a B-level evidence supports the recommendation of statins for secondary stroke prevention in patients with LDL-C level higher than 2.6 mmol/L (100 mg/dL). To date there is no completed large randomized trial evaluating the benefits of different LDL-C targets for secondary stroke prevention. Post-hoc analysis of the results of the SPARCL trial suggested that statin treatment reduces the risk of recurrent cardiovascular events regardless of the baseline LDL-C levels, and a target LDL-C level of 1.8 mmol/L (70 mg/dL) seems reasonable. However, as no RCTs addressed this issue, the current guidelines suggest intensive statin use for secondary stroke prevention in those with normal cholesterol levels only as a consensus recommendation (Level C). A recent meta-analysis of statin prevention trials of Boekholdt et al found that although a close to 60% decrease in risk appears when LDL-C is decreased to 3.9 – 4.5 mmol/L from the reference level of LDL-C > 4.5 mmol/L, no additional decrease of the hazard ratio for major cerebrovascular events can be found if LDL-C is decreased further, even to below 1.3 mmol/L. Similarly, when achieved non-HDL-C levels were analyzed, using 5.17 mmol/L as a reference value, the maximal risk reduction was already achieved in the range of 3.9 – 4.5 mmol/L, and no further decrease in hazard rate could be observed in the lower ranges down to below 1.9 mmol/L. It is also of importance that intensive statin use may be associated with considerable adverse events, and non-pharmacological (life style) interventions may be effective in decreasing lipid levels without taking the risks of side effects of intensive statin use. As currently there is no data from any large randomized controlled trial proving benefit of a specific cholesterol target after stroke or TIA, the use of any cholesterol target value in the secondary prevention of stroke has not been firmly established yet. Until results from the IMPROVE-IT and the TST (Treat Stroke to Target) trials become available, life style interventions should be primarily suggested for patients with normal cholesterol levels after stroke or TIA, statin should not be routinely prescribed but be decided patient-by-patient based on stroke subtype and the individual risk profile.