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Article Details

Title: Statins for the prevention of dementia.

Authors:

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Relevance Rating: 6.00

Newsworthiness Rating: 5.00

Abstract:

BACKGROUND: This is an update of a Cochrane review first published in 2001 and then updated in 2009. Vascular risk factors including high cholesterol levels increase the risk of dementia due to Alzheimer`s disease and of vascular dementia. Some observational studies have suggested an association between statin use and lowered incidence of dementia. **OBJECTIVES:** To evaluate the efficacy and safety of statins for the prevention of dementia in people at risk of dementia due to their age and to determine whether the efficacy and safety of statins for this purpose depends on cholesterol level, apolipoprotein E (ApoE) genotype or cognitive level. **SEARCH METHODS:** We searched ALOIS (the Specialized Register of the Cochrane Dementia and Cognitive Improvement Group), The Cochrane Library, MEDLINE, EMBASE, PsycINFO, CINAHL, LILACS, ClinicalTrials.gov and the World Health Organization (WHO) Portal on 11 November 2015. **SELECTION CRITERIA:** We included double-blind, randomised, placebo-controlled trials in which statins were administered for at least 12 months to people at risk of dementia. **DATA COLLECTION AND ANALYSIS:** We used standard methodological procedures expected by Cochrane. **MAIN RESULTS:** We included two trials with 26,340 participants aged 40 to 82 years of whom 11,610 were aged 70 or older. All participants had a history of, or risk factors for, vascular disease. The studies used different statins (simvastatin and pravastatin). Mean follow-up was 3.2 years in one study and five years in one study. The risk of bias was low. Only one study reported on the incidence of dementia (20,536 participants, 31 cases in each group; odds ratio (OR) 1.00, 95% confidence interval (CI) 0.61 to 1.65, moderate quality evidence, downgraded due to imprecision). Both studies assessed cognitive function, but at different times using different scales, so we judged the results unsuitable for a meta-analysis. There were no differences between statin and placebo groups on five different cognitive tests (high quality evidence). Rates of treatment discontinuation due to non-fatal adverse events were less than 5% in both studies and there was no difference between statin and placebo groups in the risk of withdrawal due to adverse events (26,340 participants, 2 studies, OR 0.94, 95% CI 0.83 to 1.05). **AUTHORS` CONCLUSIONS:** There is good evidence that statins given in late life to people at risk of vascular disease do not prevent cognitive decline or dementia. Biologically, it seems feasible that statins could prevent dementia due to their role in cholesterol reduction and initial evidence from observational studies was very promising. However, indication bias may have been a factor in these studies and the evidence from subsequent RCTs has been negative. There were limitations in the included studies involving the cognitive assessments used and the inclusion of participants at moderate to high vascular risk only.

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