

DYSLIPIDEMIA STATINS AND RISK OF DIABETES MELLITUS

New analyses have assessed the link between statin use and the risk of new-onset diabetes mellitus in the 'real world' and in the setting of a randomized, controlled trial, respectively. Investigators from both studies concluded that the cardiovascular and mortality benefits of statins outweigh the increased risk of diabetes in some groups of patients.

A group of investigators from Taiwan studied the effects of statin use in the 'real world' in a retrospective cohort study. Median follow-up was 7.2 years for the 8,412 included patients receiving one or more statins, and the 33,648 controls. Statins were associated with a 15% increase in the risk of diabetes, but a 9% decrease in the risk of myocardial infarction or ischemic stroke, and a 39% decrease in the risk of in-hospital death. The risk–benefit profiles were similar for patients at low cardiovascular risk (HR 0.98, 95% CI 0.91–1.06, $P=0.587$) and for use in primary prevention (HR 0.97, 95% CI 0.90–1.04, $P=0.372$), but favored statin use in patients at high cardiovascular risk (HR 0.89, 95% CI 0.83–0.95, $P=0.001$) and in secondary prevention (HR 0.89, 95% CI 0.83–0.96, $P=0.002$).

A prespecified secondary analysis of data from the JUPITER trial of statin use in primary prevention focused on patients with no history of diabetes. During follow-up (up to 5 years) in individuals with at least one risk factor for diabetes ($n=11,508$), daily rosuvastatin (20 mg) was associated with a 28% increase in the risk of incident diabetes, but a 39% reduction in the risk of nonfatal myocardial infarction, nonfatal stroke, unstable angina or revascularization, or death. In individuals with no risk factors for diabetes at trial enrollment ($n=6,095$), no difference in incident diabetes was noted, but statin-treated patients had a 52% decrease in the risk of nonfatal myocardial infarction, nonfatal stroke, unstable angina or revascularization, or death. On the basis of their findings, the investigators from Harvard Medical School concluded that the statin-associated risk of diabetes in the setting of primary prevention might be limited to people who already have a high baseline risk of diabetes but that, even in this group of patients in the JUPITER trial, the benefits exceeded the risk of diabetes.

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Original articles Wang, K.-L. *et al.* Statins, risk of diabetes, and implications on outcomes in the general population. *J. Am. Coll. Cardiol.* doi:10.1016/j.jacc.2012.05.019 | Ridker, P.M. *et al.* Cardiovascular benefits and diabetes risks of statin therapy in primary prevention: an analysis from the JUPITER trial. *Lancet* **380**, 565–571 (2012)