

An Old Eagle is Better than a Young Crow

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Cardiovascular disease (CVD) is the leading cause of mortality and morbidity in all around world. The HMG-CoA reductase inhibitors (statins) are a class of lipid-lowering medications by inhibiting the enzyme 3-hydroxy-3-methyl-glutaryl coenzyme A reductase, which is involved in the rate-limiting step in the production of cholesterol. Statins reduce levels of LDL-C and total cholesterol and, to a lesser extent, triglycerides, and probably have plaque stabilization and anti-inflammatory effects as well. Statins are important drugs for the prevention of atherosclerotic conditions such as myocardial infarction, stroke, and limb ischemia. The prominent value of statins in atherosclerotic CVD risk reduction is well established, based on landmark secondary intervention as well as primary prevention trials during the past two decades. Current guidelines indicate that statins should be prescribed to all patients manifesting ischemia and to other patients at high risk, and that statins are among the most widely prescribed drugs overall. The practical significance of a modest absolute risk reduction in primary prevention of CVD is still debated. However, the recent long-term, global, multi-ethnic, primary prevention trial Heart Outcomes and Prevention Evaluation (HOPE)-3 has confirmed the benefits of a moderate dose of statin (rosuvastatin 10 mg) in subjects at an intermediate CVD risk, with a 24% reduction in primary CVD outcomes (hazard ratio 0.76; 95% confidence interval 0.64–0.91; $p=0.002$) over a mean follow-up of 5.6 years. Many randomized clinical trials of statin use for the primary prevention of CVD events have largely used low and moderate doses; under these conditions, statin use was not associated with serious adverse events such as cancer, severely elevated liver enzyme levels, or severe muscle-related harms. However, evidence concerning the association between statin use and diabetes mellitus is mixed with some prevention trials suggesting that there may be a small increased risk of developing diabetes with use of high-dose statins. This presentation will be discussed about recent cardiovascular outcome trials of statins.