

Statins are equivalent for cardiovascular disease prevention

Clinical question Are there differences in outcomes among major statins?

Bottom line The overall effectiveness of statin therapy on the most important outcomes — decreasing mortality, heart attacks and strokes — is not different among the three major statins, a meta-analysis shows; no study has directly compared equivalent doses of two statins.

Synopsis The researchers conducted this analysis of the research on the benefit of statins in the prevention of cardiovascular disease (CVD). The statins under consideration were pravastatin, simvastatin and atorvastatin (Lipitor). The authors identified, through a search of MEDLINE and the Cochrane Controlled Trials Register databases, all randomised controlled trials of at least 1,000 participants that evaluated CVD or mortality as an outcome over the course of at least one year. They used only English language studies. They took other short cuts in the systematic review process that likely had little effect on their conclusions; they did not perform duplicate searching or data abstraction. They identified eight studies enrolling almost 64,000 people that compared one of the statins

with either placebo or usual care. The authors did not include the single study that directly compared two statins since the goal of that study was to compare the intensity of treatment rather than the relative effectiveness of the two drugs. All studies showed a similar degree of reduction in lipid levels. There was no difference among the statins in reducing fatal coronary heart disease, non-fatal myocardial infarctions, fatal and non-fatal strokes, all cardiovascular deaths, or mortality due to any cause.

Level of evidence 1a (systematic review of randomised controlled trials)

Reference Zhou Z, Rahme E, Pilote L. Are statins created equal? Evidence from randomized trials of pravastatin, simvastatin, and atorvastatin for cardiovascular disease prevention. *American Heart Journal* 2006;151:273-81.

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