CVD and metabolic syndrome

**086 STATINS FOR THE PRIMARY PREVENTION OF CARDIOVASCULAR DISEASE: CAUTION REQUIRED**

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**Background:** Reviews of the effects of statins highlight the benefits of their use, leading expert committees to promote statin treatment on a global scale. However, most reviews have not distinguished between findings in primary and secondary prevention. Of the reviews which have attempted to look at the evidence for primary prevention, the role of statins is contradictory, leading to some scepticism among the cardiovascular community.

**Objectives:** To assess the effects, both benefits and harms, of statins in people without a history of CVD.

**Methods:** Systematic review of randomised trials comparing statins with usual care or placebo where duration of treatment was one year and follow up was six months. We searched Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE and EMBASE, until 2007. Data were extracted by two reviewers independently. Relative risk (RR) was calculated for dichotomous outcomes.

**Results:** Thirty trials (14 arms) dating from 1995–2005 were located. A total of 45 150 participants were observed for up to 5.3 years; the mean age was 57 years (range 28–50 years), 71.7% were male, 92.8% were Caucasian. Three of the larger trials were stopped prematurely because significant reductions in primary outcomes between the intervention and placebo had been observed. Total mortality was reduced with the use of statins RR 0.84 (95% CI 0.75 to 0.94) as were all of the combined outcomes: fatal and nonfatal CVD events; RR 0.80 (95% CI 0.71 to 0.90); fatal and non-fatal CHD events RR 0.72 (95% CI 0.66 to 0.79) and fatal and nonfatal stroke events RR 0.78 (95% CI 0.67 to 0.91). However, there was no strong evidence of benefit when single outcomes were evaluated. Of the seven trials reporting on adverse events, statins posed little harm. The majority of trials received industry sponsorship.

**Conclusion:** Composite endpoints were reported in preference to single end points and adverse events outcomes were not fully reported. Trials that were stopped prematurely may have contributed to an over-estimation of treatment effects. It is possible but unlikely that the results may not be generalisable to women, non-white people and those in old age. Caution in interpreting the results is required.