Reviewer's report

**Title:** Statins in hypercholesterolaemia: A dose-specific meta-analysis of lipid changes in randomised, double blind trials

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**Reviewer:** H T T Ong

**Level of interest:** A paper of considerable general medical or scientific interest

**Advice on publication:** Unable to decide on acceptance or rejection until the authors have responded to the compulsory revisions

**Compulsory revisions:**

Abstract conclusion: this meta-analysis does not address the issue of how statins exert their effect, and so the concluding remark that statins work because they reduce cholesterol is not a correct or accurate reflection of what the study addresses. The study does not touch on anti-inflammatory and plaque stabilisation, for instance.

Results: the use of supplementary files does not make for easy reading. It would be better for the reasons of inclusion and exclusion of various studies to be summarised and included in the results report.

The omission of references to the studies included in the meta-analysis again makes for difficult reading. References to the 91 studies included in the meta-analysis should be given report proper. Although there have been many statin studies, the statin mega-trials (4S, WOSCOPS, CARE, LIPID, AFCAPS/TEXCAPS, LIPS, MIRACL, HPS, PROSPER, ALLHAT-LLT, ASCOT-LLA) must surely be given extra prominence as each recruited several thousand patients. Thus the authors must state clearly why any of these have been excluded, and ensure that the reader is able to read clearly whether the others have been included in the study. It is at present very confusing and difficult to find out where these mega-trials stand in this study.

For this study to be useful and relevant, the authors must make a strong concluding statement about what equivalent doses are for the various statins—eg to lower total cholesterol by 20%, what dose of each statin would be needed? Also, it seems from their figures that increasing doses of drugs do not bring about equivalent lipid lowering effect—again clear statements on most effective and plateau dose should be given.

**CONCLUSION:** this meta-analysis has a potential to be informative and useful to many physicians treating dyslipidaemia. But it must be more clearly written, and the authors more forth-coming in drawing conclusions from their study. Otherwise, to say that different statins can lower lipid to different degrees at different doses is stating the obvious.

**Competing interests:**

None declared.