Reviewer's report

**Title:** The effect of statins on testosterone in men and women, a meta-analysis of randomized controlled trials.

**Version:** 1  **Date:** 18 September 2012

**Reviewer:** Allan A Sniderman

**Reviewer's report:**

1. **Major Compulsory Revisions:**
   This paper comes across like someone whispering fire in a theatre. Could there be yet another major- and unanticipated- problem with statins? Please do not mistake my views- this is a well-written and, I think, so far it goes, a well-executed study, which may or may not be meaningful. And that is my concern. The authors identify a potential problem and they are, appropriately, careful and cautious in the conclusions that they draw. The differences in testosterone levels produced by statins are small. Moreover, they are the average differences and I presume the authors have no idea what the distribution of differences is. They assume they are normally distributed- and they may well be. If so, I suspect they may not matter. But the effect could also be more extreme in some rather than others. Drugs are like that sometimes. If so, then the consequences could be more important. I recognize the authors do not have access to the original data and so they cannot distinguish these alternatives. However, from the SD and from clinicians, can they suggest more clearly than they have whether the changes might be physiologically significant? I accept the answers can not be definitive but I think they need to try harder than they have. Clinical endocrinologists should have some sense of what these differences might mean and I think their insights need to be incorporated.

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare I have no competing interests.