Reviewer's report

Title: The Influence of Gender on the Effects of Aspirin In Preventing Myocardial Infarction

Version: 1 Date: 13 July 2007

Reviewer: Daniel Hackam

Reviewer's report:

General:

This interesting meta-analysis provides some evidence suggesting that aspirin may have substantively greater efficacy for preventing myocardial infarction in men than in women. The authors have performed a PUBMED database search, included 23 relevant studies, and documented that about a quarter of the heterogeneity in effect between trials is due to sex mix.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1) The only revision that I would consider truly compulsory is a suggestion that the authors discuss further the implications of their findings - in particular for clinical care. It is unlikely that we will be screening for ASA resistance any time soon in routine practice - would the authors recommend wider user of alternative antiplatelet agents (eg plavix, dipyridamole-ASA) in women?

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1) In the last line of the Results section of the ABSTRACT, it would be helpful to insert the risk reduction in trials that predominantly included women, to compare with the risk ratio the authors have put there for men.

2) First line, Introduction, pg. 3 - this is a relatively minor point, but according to the authors own data (see Table 2), the maximum reduction in MI across any trial was actually more than 40% -- in VACS it was 55%. Thus I would change the "40%" to "55%" and cite VACS here.

3) The inclusion and exclusion criteria seem appropriate.

4) Page 8, the term "belying" should be changed to "underlying", since "belying" means undermining or negating.

5) On page 14, in the Juul-Moller study, the word "Chronic" should be lowercase (minor point).
Discretionary Revisions (which the author can choose to ignore)

n/a

**Which journal?:** Appropriate or potentially appropriate for BMC Medicine: an article of outstanding merit and interest in its field

**What next?:** Accept for publication in BMC Medicine after minor essential revisions

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

I declare that I have no competing interests.