

Reviewer's report

Title: Serum lipid responses to psyllium fiber: differences between pre- and post-menopausal, hypercholesterolemic women

Version: 3 **Date:** 23 June 2008

Reviewer: Chew-Kiat Heng

Reviewer's report:

In my previous report, I had listed 4 major compulsory revisions. I apologize to the authors that I had missed the sentence in their text stating that smokers had been excluded from their study. As such, my first concern should not have been raised in the first place. However, the three remaining major concerns were not adequately addressed.

Major Compulsory Revisions

This study is most likely under-powered. Although the authors have acknowledged in the discussion that the lack of effect "might be due insufficient number of subjects recruited to observe statistically significant differences", such a speculative statement is unnecessary if they had done a power calculation, an exercise which I had suggested in my previous report. The power calculation would reveal more definitively whether their sample size was too small. In an earlier study by Vega-Lopez et al (ref 15), significant effect of psyllium fiber on LDL- cholesterol reduction was reported with a sample size about twice that of the authors' study. The two other concerns that I had raised in my earlier report were both dependent on this point. If a study is under-powered, no meaningful conclusion can be derived. Moreover, the data from this study seems to indicate that psyllium fiber has caused a significant reduction in HDL-cholesterol in post-menopausal women. The significant reduction of the total-cholesterol in this group of women was therefore due to lowering of HDL-cholesterol rather than LDL-cholesterol . To better gauge the net effect of this, I had compared the total-cholesterol/HDL-cholesterol ratios in this group of women before and after psyllium fiber consumption. There was a marginal increase from 3.55 to 3.74. Larger studies have all shown a reduction of this ratio despite an attendant lowering of HDL-cholesterol with psyllium consumption. The publication of this study might cause confusion to the general understanding of the psyllium fiber effect since it is conducted with an inadequate number of study subjects. The validity of the study's conclusion is therefore in doubt.

Level of interest: Reject as not of sufficient priority to merit publishing in this journal

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.