Reviewer's report

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

Version: 1 Date: 5 May 2008

Reviewer: Alan Wilson

Reviewer's report:

This is a small pilot study comparing the lipid/lipoprotein responses of pre- and post-menopausal women to 6 weeks of consuming 15g psyllium daily in the form of cookies containing 5g each, one with each meal. The main result reported is that the decrease in total cholesterol is observed in post-menopausal, but not pre-menopausal women - and that it is due primarily to an effect on lowering HDL-cholesterol. It is of note that the post-fiber concentration of Apo A-I (the major apolipoprotein of HDL) increased in both groups of women.

There may be a real phenomenon at play here - in our study of 40 men 28 women in which we added psyllium to simvastatin, we observed a reversal of the HDL-increase due to statin therapy. However the interaction of estrogen and dietary psyllium supplementation in HDL-cholesterol/triglyceride changes is not clear.

Major Compulsory Revisions

1. Notwithstanding this being a pilot study, it is under-powered and the number of subjects should be increased - consult your local statistician to estimate the appropriate number, but it should be at least 20 in each group.

2. State in the limitations of the study, that all the women in the post-menopausal group were Asian.

3. The problem with all cholesterol studies of this type is that the magnitude of the effect is close in value to the analytical error. In other words - the combination of individual, biological, sampling, and measurement errors can reach 6%. If they are still available, the authors should consider re-analysis of the samples and use the averaged results.

Minor Essential Revisions

1. On page 4, line 102 - change serum to plasma - You indicate that anticoagulant tubes were used.

2. On page 9, line 194 - include the clause beginning "Because" into the previous sentence.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:
I declare that I have no competing interests