Reviewer’s report

Title: Effects of Pistachios on Body Weight and Risk Factors of Metabolic Syndrome

Version: 3 Date: 10 January 2012

Reviewer: Sarah Gebauer

Reviewer’s report:

There are many initial revisions that have still not been addressed. These should be addressed.

Minor Essential Revisions

1. Describe biochemical analyses for glucose, insulin, and liver function enzymes, including the company and location where assays were purchased.

2. Why were the analyses not adjusted for common covariates? State in the methods section that the values reported are non-adjusted values.

3. In the blood lipids section, add p-values for triglyceride and LDL concentrations (week 6 and week 12).

4. Since the liver enzyme data is still presented in the results, please discuss these results in the discussion section (comment as to why this effect may have been observed).

5. In the legend of Figure 1, define BMI.

6. The caption for Table 1 is missing. State that there are no differences between groups and describe the statistical analyses used.

7. Since body weight is now the major outcome of the study, please add information regarding how exercise/activity level was assessed or how it was controlled. If there was no information gathered or it was not controlled for, this should be addressed in the discussion as a limitation of the study.

8. IDF should be defined in the Methods section, as it is the first time it is mentioned in the body of the paper.

9. In the Subjects section of the Methods section, provide more details regarding what the 4-week run-in period consisted of. Was it a controlled diet? If not, what kind of dietary counseling was given for the run-in period? Were participants asked to avoid nuts during this period? It is stated that the run-in was used to determine compliance. How was compliance assessed for the run-in period?

10. In the Subjects section of the Methods section, it states that a 24-hour dietary recall was conducted every 2 weeks for dietary compliance? How was dietary
compliance assessed with this data? If this data was not used, explain how compliance was assessed. Please comment as to how compliant the participants were and how it was assessed. If it was not assessed, it should be stated as a limitation of the study.

11. In the Subjects section of the Methods section, please provide more details regarding how the participants were asked to incorporate the nuts in their diet (i.e., as a snack, as part of a meal, replacement for a particular food or food group).

12. In the second to last sentence in the Discussion section, the following should be revised or removed: "...blood lipid levels were not aggravated...". The data show that LDL cholesterol was increased compared to baseline at week 12 in the HSG group.

13. In the second sentence of the Blood Pressure section of the Results section, it states "...while there was an increase of 0.13+/-6.36 mmHg (p=0.685) in the control group (Figure 3)." This should be revised to say that there was no change in the control group since the p-value was not significant.

14. In the last sentence of the Blood Pressure section of the Results section, should this say there were no differences between groups?

15. In the Blood glucose and insulin levels section of the Results section, instead of saying blood glucose decreased from baseline in the RSG group, it should be re-worded to say there was no change from baseline in the RSG group (-0.77mmol/L, P=0.296), since the p-value is not significant. Alternatively, it could say there was a trend for a decrease. In addition, use blood glucose instead of blood sugar to be consistent.

16. In the legends for Figures 1, 2, and 3, remove "The SD was not shown for better view of the figure."

Discretionary Revisions

1. In the Discussion section, discuss what may be causing the findings (i.e., what nutrients or characteristics of pistachios), as opposed to just restating the results and summarizing past research.

2. In the Discussion section, where it states that the body weight data is consistent with results of previous studies and lists references of previous studies, only list references of free-living studies, since body weight is controlled in controlled-feeding studies.

3. The last sentence of the Discussion section could be reworded to say, "The results of this study demonstrate that pistachios do not cause weight gain in Chinese men and women at risk for metabolic syndrome". This would be more consistent with the objective stated in the Introduction.

4. Add the company and location for the statistical package used.
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: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.