Reviewer's report

Title: Niacin consumption and the prevalence of diabetes and obesity among the US adults: population based ecological study

Version: 2 Date: 2 May 2010

Reviewer: Jackeline Lobato

Reviewer's report:

The authors used an ecological approach to investigate the correlation between niacin consumption and the adult obesity and diabetes prevalence in the US. The topic is of clear interest in Public Health. However, the presentation of the following items should be improved in the manuscript:

Major Compulsory Revisions

Methodology:
1. Include detailed description of sampling;
2. Improve description of nutrient data. It is not clear how it was calculated the grain contribution to niacin and how these data were collected.
3. Identify the characteristics of your sample: person (age, sex etc.), place and time.
4. Improve description of obesity and diabetes prevalence.

Results:

Minor Essentials Revisions
1. Take off the figure 1 G-H. There is not a diabetes prevalence data for 18-44 y to replace this figure?
2. Figure 3: Take off figures 3 E-F. Why it was presented only data for female?

Major Compulsory Revisions
3. Figure 5: Also present data on sugar contribution to carbohydrates and prevalence of obesity.

Discussion:

Major Compulsory Revisions
1. Improve discussion.
2. You must discuss the association already observed by Gross et al. 2004 (reference 8 of the manuscript) between refined grain and diabetes in US.
3. The authors should improve the discussion of the limitations of the study related to the study design, sampling and the statistical analyses used.

Conclusion:

Minor Essentials Revisions
1. A softer tone is recommended for the associations found.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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' below. If your reply is yes to any, please give details below.