Reviewer’s report

Title: A randomized longitudinal dietary intervention study during pregnancy: effects on fish intake, serum fatty acids and body composition

Version: 1 Date: 8 June 2014

Reviewer: Juliana Vaz

Reviewer’s report:

The authors are to be commended for their attention to fish intake consumption in pregnancy; undoubtedly a very important issue.

I have some comments on the manuscript:

1. What was the sample size calculated?

2. In table 1 and 2, please, include the mean of gestational week of each group. Despite having followed a visit protocol women may have a small difference in gestational weeks; it is important to readers look at these numbers.

3. Page 12. "Gestational weight gain and body composition": Authors described a correlation of FM and FFM with fish and meat intake, but data were not shown. Please, show these values on the manuscript (if not in table, provide a description in the text). This description is especially important because authors highlight this as a main result on abstract, discussion and conclusion. It is also not clear if this result was significant or borderline:

   - Abstract states: “Intake of meat in early pregnancy may increase the gain in fat-free mass.”
   - Conclusion states: “Meat intake in the first trimester is positively associated with gain in FFM”.

4. Regarding possibility of over estimation fish intake by participants, it is also important to highlight 2 issues:

4a) Did authors calculate the food composition of specific fish (specie) reported by women in the food questionnaire?

4b) Considering that authors estimated intake of fish using a dietary questionnaire and applied a standardized portion size (150 grams) it may be overestimated the intake of fish.

Thus, a concern regarding the dietary method applied in the study should be addressed by authors in the discussion section. A food questionnaire with a standardized portion of fish may be not the best approach for a clinical dietary investigation. A weighed food diary would possibly be the best method.

5. In tables, Please insert a column for P values and don’t summarize all significant P values as “<0.05” or “<0.01”.
6. The significant result of baseline intake of meat and gestational weight gain could be better investigated by authors; maybe with a different statistical approach.

7. A different statistical approach, rather than correlation, may be better (as regression or dose-response). Did authors try to examine the frequency of consumption rather than estimate portion size and grams of intake?

**Quality of written English:** Acceptable

**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.