Reviewer's report

Title: Association of maternal omega-6 fatty acid intake with infant birth outcomes: Korean Mothers and Children's Environmental Health (MOCEH) study

Version: 2 Date: 21 Feb 2018

Reviewer: Mary Harris

Reviewer's report:

In the second revision, the authors have acknowledge the limitation of the 24 hour intake. However, I have more of an issue with fatty acid consumption as a % of energy on a 24 hour basis than as a representation of habitual intake since energy intakes vary widely from day to day. Additionally, there seems to be no indication of whether supplements included omega-3 DHA (most prenatal supplements in the US do contain 200 - 300 mg b-3 DHA; what is the nature of the supplements used by more than half of the women in this study sample?). Supplementation could easily have influenced the results since n-3 DHA in this range has been demonstrated rather routinely to decrease the risk of early (< 34 W) pre-term birth. Unless vitamin C was shown to be associated with birth length in this study sample as indicated in a univariate analysis of improvement of the model in a stepwise regression it should probably not have been included as a covariate in the relationship of FA with birth outcome (especially not preterm birth and age adjusted birth weight). Overall, the manuscript is greatly improved by the changes and since the major study limitation will never be able to be rectified and because it provides data on a relatively large number of women and is in general agreement with a number of other studies, I recommend publication to add to the existing body of knowledge.

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