**Reviewer's report**

**Title:** Validity and reproducibility of folate and vitamin B12 intakes estimated from a self-administered diet history questionnaire in Japanese pregnant women

**Version:** 1  **Date:** 25 November 2011

**Reviewer:** Regine Steegers-Theunissen

**Reviewer's report:**

Major compulsory revisions

The aim of the study is to validate folate and vitamin B12 intake from the DHQ with serum measurements in order to create reference values and to have a validated instrument available to be used during pregnancy.

The authors should motivate why they excluded patients with hyperemesis, anorexia, diabetes, hypertension, age ≥20 years and pregnant women enrolled in formal nutrition training.

How many of the women in the subgroup T 15-19 weeks were also included in the T group (19-23 weeks)?

It is not clear at which moment the blood samples have been collected in relation to the period in which the FFQ have been filled out.

It is puzzling that women using supplements were excluded but information on dietary supplements from the open-ended questionnaire was not used in the calculation?

Blood folate levels stored without preservations decrease. Information on preservatives and storage time in the two settings and measurements in one or separate batches are missing.

Weight and height were self-reported. Therefore BMI, is not very reliable especially in obese women. This should be addressed in the discussion.

**Statistics:**
- At 2 time points folate and vitamin B12 measurements have been analysed for reproducibility in the same persons. Therefore, Bland Altman correlation estimates should be calculated.
- The authors should have carried out also multivariable analyses in order to adjust for several confounders.
- The serum folate and B12 levels should be analysed also continuously.
- The energy adjustments were made with the density method. However, all data were log transformed to reach normality except energy intake. So how have the nutrient data been analysed?
- All analysis should be stratified analysis for patients of the private and university hospital or a multivariable analysis should be performed with adjustment for setting and may be gestational age.

Physiological nausea occurs normally before 16 weeks of gestation. Because short term measurements of folate and vitamin B12 in serum have been taken it is not to be expected that nausea may have affected those data between 19-23 and 24-27 weeks.

Why not include nausea in the MV analysis?

Discretionary revisions

Background typo ‘hyperhomoystemia’: hyperhomocysteinemia.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

NONE