Reviewer’s report

Title: Determinants of serum levels of vitamin D: A study of reproductive history, life-style, dietary intake, serum calcium, and PTH

Version: 2 Date: 10 May 2013

Reviewer: Tamar Gur

Reviewer’s report:

Minor essential revisions:
1. The question posed by the authors is well defined, and he authors do a good job delineating lifestyle and biochemical factors that are related to vitamin D levels. Furthermore, this cohort has already been characterized, and results presented in the literature, reflecting the appropriate and well defined methods. In addition, their samples are well characterized, their data cleanly and clearly presented, and their interpretations are sound. The authors largely do a good job discussing each finding, providing relevant citations, and addressing limitations and contradictions with the literature. The title and abstract are an accurate reflection of the findings within the paper. Finally the paper is well written and and easy to follow.

2. However, I would like them to comment on any recommendations that could be made based on their findings. i.e- should one conclude that OC and moderate alcohol intake would be recommended based on their findings? Age is not modifiable, neither is the status of being born outside of Sweden, but some of the other factors are modifiable (weight, etc). It would be important to broaden their discussion to include any health or diet recommendations that can (or cannot) be made based on their findings.

3. It would be useful for the authors to further discuss the findings of an association of moderate alcohol use and vitamin D, as they do with their other findings.

4. Sub-optimal should be spelled: Suboptimal (Page 2 and elsewhere in document).

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:

I declare that I have no competing interests