Reviewer's report

Title: Vitamin supplement use and risk of total cancer and cardiovascular disease among the Japanese general population: A population-based survey

Version: 1 Date: 4 February 2011

Reviewer: Kaye Brock

Reviewer's report:

1. Is the question posed by the authors well defined?
   yes but need work on updating referencing

2. Are the methods appropriate and well described?
   needs work and extra analysis

3. Are the data sound?
   yes

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?
   no needs more discussion of the relevant literature

6. Are limitations of the work clearly stated?
   yes

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   no need more updated referencing

8. Do the title and abstract accurately convey what has been found?
   yes

9. Is the writing acceptable?
   no needs English editing

- Major Compulsory Revisions

The major ask is for a rewrite of the whole paper with an update of recent and past non-cited publications. I have added at the end a small example of relevant papers not included after a quick survey of the literature.
Background
Paragraph 1
As stated above, you need to update your references up to 2010 references and include relevant consensus statements and Cochrane reviews (as per references 2, 4, 6, 11, 17, 18).

Paragraph 2
You state that there are no data for a prospective cohort study in Asia. Maybe, but there has been an intervention trial in China in 1996 – this needs to be stated (references 11, 12). There are also other intervention trials (references 8, 9, 19)

Methods
Paragraph 1
Need to talk about the characteristics of your 16% drop outs

Paragraph 3
Need to update your follow up – it is now 2011, some 5 years since the last update.

Paragraph 5
Why did you not adjust for vitamin E, vitamin C, and vitamin D?

Results
Paragraph 1
Give number as well as percentages

Paragraph 2
Please give p values in Table 1 and convert proportions in this paragraph to odds ratios with 95% confidence intervals as follow up to your statement of differences. Table 1, there was an error in number of 'never use'

Paragraph 3
Table 2 and 3 I think have been mixed up. Need to be switched as they don’t correlate with text (males, females). At the end of this paragraph, you are reporting risks that are not significant as well as significant – need to clarify this

Paragraph 4
Need to say whether these findings are significant or not.

Why didn’t you adjust for vitamin C and E?

Paragraph 5
You need to report significant interactions before you stratify; this is the statistical reason for stratification

Discussion
Paragraph 2
Need to update with relevant references and need to give details of relevant studies, as well as in the 2 you have given you need to give more details eg number of people in study and number of cases of CHD and cancer in each study.

Paragraph 3

Need to discuss ATBC results as this is really relevant to vitamin and cancer, and there has been huge debate in the literature.

Also, if you think the results are due to selection bias, need to give more detail of this from your study.

Paragraph 4

What do you mean by characteristics of the subjects, which ones?

Paragraph 5

Need to talk about drop out rates

Paragraph 6

Not true. Losonczy, Harris & Havlik compared CVD and cancer in the same study (your reference 19)

A small selection of relevant references


concentrations of vitamin E are associated with lower total and cause-specific mortality in the Alpha-Tocopherol, Beta-Carotene Cancer Prevention Study." American Journal of Clinical Nutrition 84: 1200-1207.


Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:
'I declare that I have no competing interests'