Reviewer’s report

Title: Adherence to the USDA dietary recommendations for fruit and vegetable intake and risk of fatal stroke among ethnic groups: a prospective cohort study

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Reviewer: Linda JOude Griep

Reviewer’s report:

Sharma et al. examined associations between adherence to the USDA dietary recommendations for fruit and vegetable intake and risk for fatal stroke by ethnicity. They used valuable data from a large prospective cohort study of 174,888 Hawaiian and Los Angeles residents comprising different ethnic groups who were followed for eight years. Stroke mortality rates differ sizably per ethnicity and at present limited data is available about potential benefits of higher fruit and vegetable intake on fatal stroke risk among these ethnic groups. I have the following concerns about the study that may help the authors to further improve the paper:

Major compulsory comments

Statistics/results Section:

Please add average intakes of fruits and vegetables and numbers of participants’ adherent to the current dietary recommendations per ethnic group. The number of participants adhering to the fruit and vegetable recommendations is probably low and such binary analysis may limit the power of the analysis. Please present numbers of participants in each group. Adding categorical (tertiles/quartiles) or continuous (per serving) analyses by ethnic group may be more useful to detect associations.

Page 8, line 130: What is the reason for stratified analysis by gender? If there is no effect modification detected for gender, then there is no reason for showing results stratified.

Identification and validation of stroke:

* Please add data on fatal stroke data validation. Elaborate in the Discussion if potentially cases are missed due to misclassification of endpoints or loss to follow-up and its impact on the results.

* Please add data on censoring date. How are participants treated in the analyses that are lost to follow-up?

* Please add data on numbers of ischemic/haemorrhagic strokes; incidence may vary between ethnic groups and may explain results.

Table 1: Please present differences in risk factors according to ethnicity instead of by gender. If available, please include data on biomedical risk factors other
than BMI that may differ per ethnicity, e.g. prevalence of high blood pressure, cholesterol, and hyperglycaemia/DM.

Minor essential comments

Study population: Please elaborate in the discussion whether low response rates may have biased the results or had impact on the generalizability of the results.

Study population: How long have participants been in the US? In what proportion have they adapted towards a typical Western diet? Can you present more details on differences in dietary patterns between ethnic groups?

Dietary assessment: Was the FFQ self-reported or interview-based? Please describe the validation study of dietary intake in more detail; e.g., number of participants in sub cohort, which data are compared, etc. Please present correlation coefficients for fruit and vegetable intake measured by 24-hr recall and FFQ.

Page 5, line 69: It is here suggested that data is available on types of fruits and vegetables. Please include such data in this paper – at least intake levels per ethnic group - since associations with stroke risk may be explained by varying intake levels of types of fruits and vegetables per ethnicity.

Page 6, line 70: Please add information on the inclusion or exclusion of fruit juices (100% or not?) and other processed fruits and vegetables.

Page 6 line 72: Are number of servings per day summed?

Page 7, line 95: Please justify the adjustment for these food groups.

Page 7, line 106: Please add SD and some general informative data as mean intake per ethnicity.

Page 8, line 117 + Page 10, line 186: The aim suggests that only fruit and vegetable intake was examined in relation to stroke. Here, however, it is mentioned that five food groups were examined in relation to stroke. Please clarify.

Page 10, line 164: Please add more on potential mechanisms from other micronutrients or bioactive compounds than only vitamin C that may be beneficial in relation to stroke.

Page 10, line 170-172: Though results vary between men and women, there is no evidence for effect modification since 95% CIs are overlapping. There may be other explanations for this such as women are in general more health conscious than men and may tend to over report healthy food intake and residual confounding.

Page 10, line 184: total intake of what?

Page 10, line 188: please explain what has been done in this analysis more clearly in the Statistics and present results in the Results section.

Level of interest: An article of importance in its field
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