Reviewer’s report

Title: The use of different reference foods in determining the glycemic index of starchy and non-starchy test foods

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Reviewer: Kai-Chow Choi

Reviewer’s report:

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Manuscript title: The use of different reference foods in determining the glycemic index of starchy and non-starchy test foods

Reviewer’s report:

This manuscript reports two studies to make between-group comparisons on glycemic indices of varieties of rice and breakfast cereals. The study addressed an interesting and important topic in the field of nutrition. The manuscript is generally well-written and can potentially raise concern about the influence of subject characteristics and reference foods on GI estimation.

Major compulsory revisions:

1. The study findings could perhaps be attributed to the lack of reliability of the measurements rather than the possibility that there were indeed a group difference. The authors should provide some reliability data, particularly repeatability of their GI measurements to support their conclusions.

2. The authors concluded that “A starchy reference may be more appropriate than a glucose beverage when attempting to derive universally applicable GI values of starchy foods.” Even though the starchy reference was used and the GI measurements were assumed to be reliable, there seems to have been considerable variation in the GI values of the testing foods among the participants, no matter within- or between-group, as shown in the tables. The authors should provide a logical argument to reach that conclusion.

3. The statistical analysis part was not detailed enough, in particular, how the group mean GIs were estimated (a mixed model was claimed being used), what the values in Tables 1 and 2 actually stand for and how they were compared?

Minor essential revisions:

1. In the Methods part: “The characteristics of the samples were compared using t- or chi-squared tests.”, please clarify what characteristics were compared by chi-square test in the studies.
2. Since the authors argued that ethnicity and age might influence the GI estimations, the participants’ characteristics of, at least, age and ethnicity should be disclosed and adjusted (if needed) in the studies of comparing GIs of rice and breakfast cereal respectively.

Discretionary revisions:

1. The authors may consider present some statistics showing the variability of participants’ iAUC values in different foods.

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.