Reviewer's report

Title: Does the ingestion of a 24 hour low glycaemic index Asian mixed meal diet improve glycaemic response and promote fat oxidation? A controlled, randomized cross-over study.

Version: 0 Date: 09 Apr 2017

Reviewer: Carol Johnston

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This investigation examined the glycemic response to popular Asian foods with either a high or low glycemic index (GI). A recently published paper presented the glycemic index (GI) and glycemic load data for popular foods in Southeast Asia, and the authors utilized these data to construct 24-h menu plans with either high or low GI. Participants were slender, young, normoglycemic males. Using a cross-over design, participants consumed each diet plan with a 5-day washout between testing. A continuous glucose monitor was used to assess glucose concentrations, and energy expenditure was determined during a 10-hour stay in a whole body calorimeter. The study was well designed and orchestrated. The use of the continuous glucose monitor and the WBC are strengths of this research. The paper is well written, and the data are effectively presented. A major limitation of this work, however, is that the study sample is not representative of obese individuals at risk of type 2 diabetes in Southeast Asia. The study premise is that 'this information can be relevant not only to plan diabetes diets but also to reduce the risk to develop type 2 diabetes and obesity in this region'. The authors need to defend their sample selection in this regard and must also justify the exclusion of women from the sample. Actually, in the discussion the authors cite work suggesting that the results observed in slender individuals are not necessarily relevant in obese subjects (reference 41) hinting of the limited generalizability of their data.

Specific comments:

1. Abstract (p.2 line 20-22): Clarify the study groups linked to the data - is the high GI value the -0.033 value or the +0.050 value? This is not clear.
2. p. 4 line 43-45: do not use first person in this context
3. p. 5 line 65: the rise in obesity likely precedes the rise in type 2 diabetes - reverse this order.
4. p. 6 line 74: use past tense when discussing this research
5. p. 1- line 199: the '2' is a subscript not superscript when defining oxygen and carbon dioxide. This should be corrected throughout the text.
6. p. 11 line 231: iAUC (not IAUC)
7. p. 12 line 240: please explain the reason 2 participant data points were dropped from the data analyses for the WBC.
8. p. 12 line 242: please justify the use of a one-tailed t-test for the glucose data. It is recommended not to use one-tailed t-tests.
9. p. 13 line 256: p=0.140 does not represent a statistical trend. This language needs to be removed from the text.
10. p. 15 line 290-292 and p. 16 line 318: poor grammar - noun and verb do not match
11. p. 15 line 297-298: since insulin was not measured in this study, this statement is inaccurate and should be rewritten or deleted.
12. p. 16 line 314: a reference should be cited to support the statement 'of specific clinical relevance'.

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