Author's response to reviews

Title: Effects of Lifestyle Modification on Metabolic Syndrome: A Meta-analysis

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Author's response to reviews: see over
COVER LETTER

August 13, 2012

RE: Effects of Lifestyle Modification on Metabolic Syndrome: A Meta-analysis

Dear Dr. Claire Tree-Booker:

We would like to express our deep appreciation for the comments and suggestions made by the new reviewer. Based on these recommendations, we have revised the manuscript and attached our responses to the reviewer’s comments.

The attached paper has been carefully reviewed by an experienced medical editor whose first language is English and who specializes in the editing of papers written by physicians and scientists whose native language is not English. Please find the attached proofreading certificate for English.

We are submitting a clean copy with Red font reflects areas where changes were made.

We hope that this revised paper is satisfactory and that our responses are clearly presented so that our revised manuscript will be accepted for publication in *BMC Medicine*. If you require further revisions that would make this paper acceptable, we would be glad to make them. We certainly have appreciated your very careful review and would be more than happy to follow any further suggestions.

Thank you again for considering our manuscript. We look forward to hearing from you.

Sincerely yours,

Kazue Yamaoka
For Dr. Rebecca Turner’s Comments:

Thank you very much for your valuable comments and suggestions concerning our manuscript. We found these most helpful and have re-revised the manuscript accordingly. We hope that the corrections are satisfactory. Responses to specific comments are as follows.

Reviewer’s Report
I've been asked to comment on the authors’ response to referee 1's comments, rather than reviewing the manuscript itself.
I agree with referee 1 that the current assessment of study quality is very poor. It is essential to use a standardised tool, preferably the Cochrane Collaboration's Risk of Bias tool as recommended by referee 1. The Risk of Bias table should be presented in full, for all studies, and the findings should be discussed in the results section. The authors commented that information needed for quality assessment is often lacking in the original papers. This can be represented as a judgement of "Unclear" in the Risk of Bias table, and does not justify omitting an assessment of study quality.

In addition, I agree that the process for completing quality assessments needs to be described more clearly. Assuming that the Risk of Bias assessments have yet to be done, I would recommend following the advice in the Cochrane handbook (available at www.cochrane-handbook.org). Risk of Bias tool as recommended by referee 1.

Following the reviewer’s suggestion, we summarized the assessment based on the risk of bias table from the Cochrane review as shown in the appendix figure. Furthermore, we added the result of subgroup analysis excluding two studies with 6 items assessed unclear. We added in the result, discussion sections, and the legends of table 2 as follows.
**Risk of bias section**
P10L1-2: “A summary assessment of risk of bias for studies in a Cochrane review of lifestyle modification in people with MetS is shown in Appendix figure.”
P10L7-9: “Because 6 items out of 7 were assessed unclear for 2 studies [22,23]. Excluding these 2 studies, subgroup analysis was conducted.”

**Difference in means for the components of MetS**
P11L9-10: “The results of the subgroup analyses using 4 interventions denoted similar significance levels.”

**Strengths and limitations section**
P14L11-14: “We assessed the studies based on the information reported in the papers mainly for the elements of risk of bias table in the Cochrane review [10]. Although the power was low, significance levels by the subgroup analyses were similar to those of the primary analyses.”

**Table 2 Legends:**
“The estimates by the subgroup analyses using 4 interventions [18,20,21] (random-effects model) denote -3.1 (-5.3 to -1.0) for Fasting glucose, -3.1 (-5.2 to -1.0) for Waist circumference, -5.1 (-8.8 to -1.9) for Systolic blood pressure, -2.3 (-3.3, -1.3) for Diastolic blood pressure, -11.5 (-22.4 to -0.6) for Triglyceride, and 1.5 (-0.6 to 3.47) for HDL.”

Additional changes were shown in Red font.