Reviewer’s report

Title: Whole grain food diet slightly reduces cardiovascular risks in obese/overweight adults: a systematic review and meta-analysis

Version: 1 Date: 17 Oct 2019

Reviewer: Stefano Omboni

Reviewer's report:

In this meta-analysis the authors show that a whole grain diet may have a significant, though negligible, lowering effect on body weight and PCR.

Unfortunately, the work suffers from several methodological flaws which undermine its integrity.

Methods. The authors must specify whether they used a fixed or random effect (I guess they used the second).

Results. Looking at Table 1 I realize that there are several missing data among the primary outcomes of the study. These data may be the general clinical data and not the the real outcome data presented in the tables. Since results are presented for these studies without mentioning in the methods whether there was missing information and whether this was treated in some way, this must be specified.

Results. Figures 2, 3 and 4 are split in two sections. What is the meaning of these subgroups?

The authors claim that a whole grain diet significantly reduces LDL-cholesterol, though the p value is =0.05, which is not significant. The study is able to show only a negligible effect on body weight and PCR. Thus, the conclusion that whole grain had a moderate effect on these variables may be excessive. Conclusions should be smoothed.

Discussion. Given the modest results of the meta-analysis, there is too much speculation about the possible origin of the outcomes. The discussion should focus on the results.
Discussion. Limitations of the study should be discussed. Why authors did not plan a sensitivity analysis, for instance according to study duration and type of diet?

Discussion. The authors discuss results of subgroup analysis. However, these data are never shown in the results.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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