Reviewer’s report

Title: Dietary patterns and physical activity in the metabolically (un)healthy obese: The Dutch Lifelines Cohort Study

Version: 0 Date: 16 Nov 2017

Reviewer: Heinz Freisling

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NUTJ-D-17-00330

This study aims to evaluate cross-sectional associations of dietary patterns and physical activity with metabolic health in obese individuals. This is currently a hot topic in obesity research. The study is well conducted and based on a high-quality dataset. I only have a few minor suggestions that the authors may consider in a revised version.

In the introduction you may wish to refer to a recent Eur Heart J publication on this topic (PMID: 29020414).

Please specify how the standardisation of food intakes was performed.

Add whether two-sided p-values were reported.

Add specific adjustments in footnotes of Tables (e.g. 4) for models 1 and 2.

I am assuming that dietary patterns and physical activity were included in the same model, please explicitly state whether that was truly the case.

The author mention that they see diet being part of a broader lifestyle, so I wonder whether authors consider testing a sort of healthy lifestyle score combining diet, physical activity, and maybe smoking.

Related to this previous comment, did the authors evaluate correlation structure between physical activity and dietary patterns? For example, one could imagine that men with higher physical activity levels have higher scores on the "fruit and vegetables" pattern and less so in women, which could explain why one does not see an association with healthy patterns, but with physical activity. This should be evaluated and briefly mentioned in the discussion.

Please indicate in the discussion whether the authors would find it worthwhile to evaluate their analysis in a prospective setting?
**Level of interest**
Please indicate how interesting you found the manuscript:

An article of importance in its field

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

Acceptable

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