

**Subject:** BMJ - Decision on Manuscript ID BMJ.2016.035517.R1

**Body:**

Dear Dr. Celis-Morales

Manuscript ID BMJ.2016.035517.R1 entitled "Association between active commuting (walking and cycling) and incident cardiovascular disease, cancer and mortality: Prospective cohort study of 264,337 UK Biobank participants"

One reviewer has suggested some further, minor, changes. Please would you review and consider revising.

I hope you will find the comments useful.

Best wishes

Yours sincerely

Rubin Minhas  
Dr Rubin Minhas  
BMJ Associate Editor  
rm1000@live.com

\*\*\* Present at Analysis meeting:[ INSERT]

**INFORMATION TO INCLUDE IN REVISION**

Please would you also check that you have provided the following information

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Reviewer(s)' Comments to Author:

Reviewer: 1

Recommendation:

Comments:

The Authors have done a good job With the revision. I have no further comments.

Additional Questions:

Please enter your name: Lars Bo Andersen

Job Title: professor

Institution: Sogn and Fjordane University College

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

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Reviewer: 2

Recommendation:

Comments:

Review provided by Dr Shannon Sahlqvist

This remains an important study strengthened by its large sample, inclusion of a wide range of disease outcomes, ability to control for important confounders and its exploration of both walking and cycling for commuting purposes. Further, as the authors highlight, much of the work on the health benefits of active travel is confined to countries that report high rates of active travel. The fact that this study was conducted in the UK, with traditionally much lower rates of active travel, is important.

This manuscript is original, important for policy makers and addresses an important, and well defined, research question.

I thank the authors for their thoughtful considerations of my comments. The manuscript has been greatly strengthened and makes a valuable contribution to the field.

I remain concerned (yet understand why) the authors did not control for total physical activity (or all other physical activity except for the commuting). Models did control for time spent walking for pleasure, strenuous sport, time spent in heavy DIY and occupational physical activity, and this is important, but there are other types of physical activity that could be explaining the associations and that weren't controlled for. Are the findings due to commuter cycling specifically or simply the fact that commuter cyclists report higher overall levels of physical activity and correspondingly greater cardiorespiratory fitness? This is important from a policy perspective - should policy makers be promoting commuter cycling specifically, or just greater physical activity in general. I think the authors need to give more weight to this in the discussion.

I have a couple of other points of clarification

1. In the abstract could the authors qualify that the question about commuting referred to 'a typical day'?
2. Could the authors define active commuting in the introduction? There remains some confusion in the field that active commuting refers to work-related travel specifically, and not travel more generally, and it would be good to (very) briefly make this clear.
3. Could the authors expand on 'Cycling and mixed mode cycling, weekly commuting distance was derived from self-reported one way commuting distance and the weekly number of round trips' providing information on how these questions were asked and why they were not asked for walking?
4. Looking at the median distance it seems that commuters were not travelling great distances and yet there were substantial health benefits. Perhaps this warrants a comment in the discussion?
5. In the discussion the authors write that the models controlled for 'leisure time physical activity' however from my understanding of the methods section this is not entirely correct. The models controlled for specific types of physical activity. Given my point above this is an important distinction.
6. In the discussion the authors right that 'In the UK Biobank is relatively representative of the general population with respect to age, sex, ethnicity and deprivation within the age range recruited but is not representative in other regards'. Although a reference is provided it would be useful to highlight what is meant by 'in other regards'.
7. To my mind another limitation is the fairly crude measure of commuting behaviour. Could the authors briefly mention this?

Additional Questions:

Please enter your name: Shannon Sahlqvist

Job Title: Senior Lecturer

Institution: IPAN, School of Exercise and Nutrition Sciences, Deakin University

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

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Reviewer: 3

Recommendation:

Comments:

Overall the authors have done a nice job with the revisions. I believe their responses were thorough and I believed they addressed mine and the other reviewers' concerns adequately.

Additional Questions:

Please enter your name: Melissa Bopp

Job Title: Associate professor

Institution: Pennsylvania State University

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

Funds for a member of staff?: No

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**Date Sent:** 02-Mar-2017