Reviewer's report

Title: The contribution of office work to sedentary risk

Version: 1 Date: 11 January 2013

Reviewer: Dane Van Domelen

Reviewer's report:

Summary:
This is an interesting and useful contribution to the literature. The authors do an excellent job providing details on the study methods (recruitment, physical activity monitor specifications and data-processing decisions, etc.) and report interesting new insight into the contribution of office work to overall levels and patterns of sedentary behavior.

Major compulsory revisions:
None

Minor essential revisions:
1. In Abstract Results, definition of “brief duration light intensity activity” should be stated as it is for “sustained sedentary time.”
2. In Abstract Conclusions, last sentence should be modified or removed. The study did not address whether interrupting prolonged sedentary time or increasing light physical activity has health benefits.
3. In Methods, Data Processing, please provide a justification for 500 min/d for inclusion. A cut-point of 600 min/d (10 hours/d) is much more common in the literature.
4. The EVA figure should be modified so that differences in MVPA are more visible. MVPA time in minutes will always be small compared to sedentary time, even if the study population is very active. There could be important differences in MVPA that are simply not visible when graphed on the same scale as sedentary time. Also, the text and figure caption seem to be at odds with each other – are these weekly totals or daily totals?
5. In Results, Relationship between… section, Pearson correlation for sedentary time with non-work days may not be appropriate, since non-work days can only take on a small number of values, e.g. 1, 2, 3? Use of a Spearman correlation coefficient or an ANOVA comparing mean sedentary time across number of non-work days might be more appropriate.
6. Discussion paragraph on health promotion interventions in workplace settings should briefly address issues of productivity and feasibility, e.g. from employer’s point of view.
7. Statement in Discussion that “public health campaigns should now also
concentrate on programmes to modify sedentary and light activities” should be removed as it is not substantiated by the study data.

8. Discussion needs to address the difference in MVPA observed on work days vs. non-work days. Why is it that office workers have more MVPA on work days than on non-work days? Travel to and from work?

9. Authors should mention possibility of selection bias in Discussion, e.g. workers who volunteered to wear accelerometer may be more likely to be the type that exercises in their free time.

Discretionary revisions:

10. In Background, paragraph 1, suggest removing word “independent” from first sentence since cited studies differ in what they adjusted for.

11. Authors might consider moving the definition of sedentary activity to earlier in the Background section.

12. It is somewhat uncommon to see 120 minutes used for non-wear time; 60 minutes is more common. However, a diary seems to have been the primary tool for identifying non-wear, so a more conservative signal-based method is reasonable.

13. Authors might add a little more detail as to how working hours were determined. In particular, were working hours meant to include travel to and from work, or were they strictly to include time in the office? This could affect the results.

14. In first block of Results, it would be interesting to see how consistent the workday vs. non-workday differences in activity were. For example, for what percent of participants was sedentary time greater on work days? And for what percent was light activity greater on non-work days? High percentages would strengthen the findings.

15. I am not sure that Figure 1 part e is necessary. Non-work time on work days may very well be different than non-work time on non-work days, so I would prefer seeing the results as shown in a through d. If authors choose to remove part e, then they might also remove paragraph under Results, Sedentary time, light and moderate/vigorous…

Minor issues not for publication:

16. In Results, Overall contribution… section, believe authors incorrectly state that 36.5 hours is 48.5% of wear time when they mean 48.5% of total sedentary time.

17. In Results, Pattern of sedentary… section, 93.9 minutes per week of bouted MVPA is actually not bad. Physical activity guidelines usually call for 150 minutes per week of sustained MVPA, and most studies show that only 2-5% of people achieve that.

18. In Results, Relationship between… section, suggest adding negative signs to the r values for negative correlations. First one seems to be missing the negative sign.
19. Presentation of p-values should be more consistent. In Results, Relationship between... section, r-values of 0.93 and -0.96 must have p < 0.001, but it is only shown as < 0.01. Earlier in paper p < 0.001 is used.

20. In Discussion, sentence should read “While inclinometer based devices, such as activPAL...” Two errors here – need to insert “as” and spelling of activPAL.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.