Reviewer’s report

Title: The effect of two different health messages on physical activity levels and health in sedentary, overweight middle aged women

Version: 1 Date: 1 September 2010

Reviewer: Stacy Clemes

Reviewer’s report:

General comments
This is a very interesting paper, the manuscript is well written and presented throughout.

Major Compulsory Revisions

Materials and Methods
1. Page 7, line 2. You mention that your sample were aged between 35-55 years, it is likely however that few participants under the age of 45 years have gone through the menopause. However, in the introduction, you make a good case for studying postmenopausal women (page 4, lines 10-13). If you have this information from your participants, it might be nice to say how many are premenopausal, peri-menopausal, and postmenopausal. Alternatively, you might want to play down the section in the introduction on increased risk in postmenopausal women so that the text is more reflective of your sample.

2. Page 7, lines 4-6. You mention that interested participants were screened, and then those meeting the inclusion criteria attended an orientation session. It might be nice to add more detail here in terms of the numbers of participants who volunteered, and the numbers who did not meet the inclusion criteria.

3. Page 7, lines 18-22. How can you be certain that the 30 minute group really did comply to the protocol and re-seal the pedometer after recording their weekly steps?

4. Page 8, lines 3-5. You say that participants recorded their pedometer wear times on a calendar throughout the study, it would be nice to present this compliance data in the results. Did both groups have 100% compliance over the 12 week intervention? If not, how did you control for missing step counts, particularly in the 30 minute group since missing 1 day in any one week will bring down the weekly average.

5. Page 8, lines 3-5. On a related point, did you apply any criteria on what constituted a valid day of pedometer data in terms of wear time? For example, in adults mainly with accelerometers, most researchers state that participants have to have worn the device for at least 10 hours/day for that day to be included in the analysis. It would be interesting to report your mean pedometer wear times in the results for each group also, seeing as you have this data.
Statistical analysis
6. Page 10, lines 6-8. I would recommend checking the type of ANOVA that you used for your analyses. Did you really use a repeated-measures ANOVA with intervention group as a between-subjects factor? Since it’s not possible to compare differences between different groups using a standard repeated measures ANOVA, this is fine for the within group comparisons.

7. Page 10, line8-9. Did you apply a Bonferroni correction to your post hoc tests?

Methods/Discussion
8. General point, did all participants keep a daily log of their activities in case they did something that was not picked up by the pedometer, e.g. swimming/cycling?

Minor Essential Revisions
Abstract
9. At the start of the Results section, insert the word ‘there’, so the abstract reads... ‘Results showed that there were no changes...’

Materials and Methods
10. Page 8, lines 4-5. Insert the word ‘when’ into this sentence, so the text reads... ‘were asked to record each day when they wore their pedometer on...’

11. Page 9, lines 3-4. Delete one ‘in’ in this sentence, i.e. ‘in’ appears before and after the brackets in this sentence.

Results
12. Page 11, line 2. Delete “(data not shown)” from the end of this sentence as the age data are presented in the paper.

Discussion
13. Page 15, line 22. Delete ‘the’ towards the end of this line, so the text reads “...guideline with an extra 4616 steps/day...”

14. Page 16, line 22. Delete ‘steps’ as this word appears twice after “4616...”

Level of interest: An article whose findings are important to those with closely related research interests

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