Reviewer's report

**Title:** Effects of 3 months of controlled whole body vibrations with low exposure period on the risk of falls among nursing home residents

**Version:** 2  **Date:** 9 February 2013

**Reviewer:** Borje Rehn

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Basically, I find the idea valid, i.e. to use “passive” strength training for persons not able to participate in regular regimes. As there is an association between impaired muscle function and falls among elderly, and as the elderly population increases, there has to be tailored interventions to prevent the decline. Research has also shown that vibration can have an effect on muscle function and balance on sedentary persons. The strength of this study, which the authors declare, is the prospective randomized design that also had enough participants on a low drop-out rate. Unfortunately, there was no effect shown which could perhaps be attributed to the low exposure.

I’m uncertain if this really was a controlled session of whole body vibrations and about the low exposure - choose another title!

The section on power analysis is not understandable, needs more information.

How was the randomization done?

I think the authors though did not pinpoint the target group adequately. Not everyone in a home resident is tired, have lack of motivation or low compliance. In fact, there has been research showing that elderly can take part in vigorous physical exercises, even those with dementia. Nevertheless, some may have various types of movement disorders or lack of motivation (doesn’t everyone?) that will prevent them from taking part in more active types of physical training. I think that part should be written more carefully.

The physiological rationale for the dose of vibration is not clear (MCR) at all and I believe that is a major limitation, also just using one intensity. Moreover, the explanation of exposure is insufficient (MCR). The authors should present also the amplitude, the waveform, and the arm posture. What about shoes?

There is a bias introduced with having the supervisors involved as authors, however, this may not have any serious impact.

How was the analysis blinded?

How was falls defined and recorded? I think this is the main outcome, the other instruments just give an idea of the risk.

The results from the quantitative walking analysis are not readily explained.
Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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