Reviewer’s report

Title: Behavioral and neural adaptations in response to five weeks of balance training in older adults: A randomized controlled trial

Version: 0 Date: 23 Apr 2017

Reviewer: Ting Yu

Reviewer's report:

In this manuscript, the authors carried out a five-week long balance training on aged adults. Postural stability, spinal reflex excitability and cortical excitability were assessed before and after training. For the postural stability measures, they found a training effect for the number of errors conducted during one-legged standing, but not for the sway parameters. In addition, no significant neural adaptations were found.

1. In Table 1, for one-legged static balance task, is the sway value significantly different between training and control groups before training?

2. In Table 1, the error number for both static balance task and dynamic balance task went up after training in the control group. Are they statistically significant? Any possible explanation?

3. Where was the trial carried out and how the sample size was determined?

4. The method used to generate the random allocation sequence was not described.

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