Author’s response to reviews

Title: 20 weeks of isometric handgrip home training to lower blood pressure in hypertensive older adults: a study protocol for a randomized controlled trial

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Response to Reviewers

We would like to thank both reviewers for insightful and constructive comments to our manuscript. We have carefully considered your comments and responded in a point-by-point manner below. We have uploaded two version of the revised manuscript (with/without tacked changes) to facilitate the reviewers and editor work.

Reviewer #1: This is a well-designed trial, and the study protocol is complying with most of the SPIRIT checklist. Few minor issues are proposed as follows.

1. In order to reduce a selection bias in your small-scale trial, the block size of randomization is suggested to keep secretive until the trial closes.

Authors response: We agree entirely with you, and have therefore deleted the block size under both the “Recruitment and randomization procedure” and the “design” section. In addition, the third party in charge of the group allocation has notified us that the block size is also different from four.
2. The sentence "Prior to the randomization process participants will undergo demographic and physiological baseline assessments by an experienced assessor blinded to allocation of participants" needs to be considered because nobody knows the allocation of participants before randomization.

Authors response: Good point “blinded to allocation of participants” has been deleted from the sentence.

3. According to the SPIRIT 2013 statement, graphical representation of the schedule of enrollment, interventions are also proposed being displayed in Table 1.

Authors response: You are absolutely right and we therefore have converted the table to comply with the recommended standard according to SPIRIT 2013.

Reviewer #2: This is a very interesting protocol. One of the concern is how to make participants follow the protocol strictly? As expressed in the protocol, the participants will be asked to refrain from vigorous exercise and alcohol for 24 hours prior to measurements. In addition, they will have to fast and refrain from caffeine for four hours prior to measurements. Further, they will be asked to refrain from smoking and intake of anti-hypertensive medicine up to 30 min prior to any measurements. Noise and room temperature (20-23 degrees) will be controlled. Finally, participants will be asked to empty their bladder if possible before tests. How to make sure they will follow? Please clarify.

Authors response: Good point and sorry for the unclear formulation. We have reformulated the “assessment protocol” section. The assessors in charge of assessments were instructed on the above procedures, which you mentioned, and the study coordinator also passed these informations on to the participants via telephone prior to their first visit at the hospital.