Reviewer's report

Title: Vitamin C and E supplementation does not affect heat shock proteins or endogenous antioxidants in trained skeletal muscles during 12 weeks of strength training

Version: 0 Date: 09 Apr 2017

Reviewer: Dianjianyi Sun

Reviewers report:

Results from this randomized trial showed that vitamin C and E supplementation did not affect antioxidant enzymes after strength training for 10 weeks, as well as the heat shock proteins in the mid of strength training for an acute exercise experiment. Here are some of my comments:

1. As readers are not quite familiar with all the outcome biomarkers, could the authors draw a figure indicating the mechanisms underlying the impact of endurance training on acute stress responses or long-term training adaptations.

2. A table of participant characteristics was needed for either the long-term training adaptations experiment (10-weeks) or the acute stress responses experiment (at the 5th week).

3. More details should be illustrated in results part.

4. What is the clinical application or the importance of public health for this study?

5. What are the other confounding effects?

6. Why not control for the baseline characteristics (eg. Age, gender, BMI, energy intake, and etc.) in the statistical analysis?
7. Like the limitations mentioned in the previous paper of "Vitamin C and E supplementation alters protein signaling after a strength training session, but not muscle growth during 10 weeks of training", the limitation in the current study were not fully addressed.

8. In Figure 4b, 4d, and 4f, the X-axis showed only "mid" and "post", why in the figure legend of "αB-crystallin pre-mid-post (B)" and "HSP70 pre-mid-post (F)"? Where is the "pre-"?

9. Table 1 in the current study can be deleted or moved to the supplementary table.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
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I am able to assess the statistics

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