Author’s response to reviews

Title: THE EFFECT OF LOW LEVEL LASER IRRADIATION ON OXIDATIVE STRESS, MUSCLE DAMAGE AND FUNCTION FOLLOWING NEUROMUSCULAR ELECTRICAL STIMULATION. A DOUBLE BLIND, CROSS-OVER TRIAL

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Author’s response to reviews:

Dear Editor,

Dear Reviewers,

Thank you very much for the thorough analysis of our manuscript, for valuable and helpful comments and for giving us the opportunity to revise and improve our submission. We hope that our replies and explanations, as well as the amendments to the manuscript, fully address your concerns. We keep the change tracking as highlighted in yellow for the first revision and as highlighted in green for the current, second revision.

In the following, please find our answers to your comments.

Reviewers’ comments:

Angus Lindsay (Reviewer 1):  

Comment 1: Table 3 and 4 - are the ranges provided SD, SEM or CI?

Response: We followed the definition of range as the difference between the lowest and the highest values. As shown in Table 4, it was calculated from raw data as max value minus min value (all values within each time point of LLLT or sham-LLLT intervention). For better clarity,
we have improved the legend to Table 4 with a corresponding explanation. In Tables 1 and 3, the data supplementing mean and SD values are the lowest and highest values (min value and max value). We have corrected the manuscript (line 224) and Table 1, accordingly. Also, we have added further explanation to the Table 3 legend.

Comment 2: Figure 3 - Unfortunately I do not agree with the authors reasoning for not including the force tracings during the exercise protocol. It would be easy to make Figure 3 a two paneled figure. These data might provide some informative data.

Response: We have added a two paneled figure (Fig. 3 A and B), showing the force tracings during the NMES sessions, in the whole group in part I and part II of the study (Fig 3A), as originally described in the manuscript (lines 235-237), and with force tracing in LLLT and sham-LLLT interventions (Fig. 3B), with additional description in the text (lines 237-238). The original Figure 3 (showing absolute values of MVC after NMES) is now Figure 4A in the revised manuscript.

Comment 3: Figure 4 - I am a little confused with this new figure. My original comment was to address % change from baseline for each group. Therefore, baseline should be either 0 or 100 and then changes associated with these values. In fact, it would be easier for the reader of figure 4 was simply incorporated into figure 3 since they are all based on the same data. The same thing occurs with Figure 5.

Response: Following the original comment, we prepared Figure 4A in the first revision, where we addressed % change from baseline (0 level ) for each group (LLLT or sham-LLLT) separately. The figure with the % changes of MVC is Figure 4B in the second revision. We have only added a baseline point to the X-axis, to underline this 0 level as baseline. We hope that Figure 4B and Figure 5B are now more clear and informative. However, we have left (below the revised figures) also the previous versions of the figures (to decision of the Reviewers), without point baseline marked on the X-axis, since horizontal line marked as level 0 on the Y-axis is the baseline for each group, i.e. LLLT and sham-LLLT). We would be grateful for your opinion as to which version of the figures is more appropriate.

John Dixon, PhD (Reviewer 2): I thank the authors for revising the manuscript. The majority of my comments have been addressed well.

The one key point outstanding from my comments, about the implications of the between-group difference at baseline, and subsequent inferences, has also been raised by reviewer 1, and in far more detail than by me. I am unclear whether this has been addressed sufficiently in the amendments, but I am happy for reviewer 1 or an additional statistical reviewer, to follow up on this aspect.

Response:
We hope that our responses to Reviewer 1 sufficiently address your concerns, that the amendments to the manuscript are satisfactory, and that the paper is now more clear in this part.