

# Review of: "Sustained Muscle EMG Activity to Contractile Failure During Incremental Exercise and Intense Constant Load Cycling: No Evidence of a Central Governor"

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Potential competing interests: No potential competing interests to declare.

- 1- The title is clear but could be more concise;
- 2- Some technical terms are not explained. Provide brief explanations or definitions for technical terms when they first appear, ensuring the text is accessible to a broader audience.

## ABSTRACT

- 1- The abstract provides a good overview but is quite dense and technical. Simplify the language and reduce technical density for better comprehension;

## INTRODUCTION

- 1- There are several points where the narrative could be more cohesive. Ensure each paragraph flows logically to the next, maintaining a clear link between the problem, the research question, and the hypothesis;
- 2- Trim down the historical context of the Central Governor Model to a couple of sentences and focus more on the specific gap your study is addressing;
- 3- The hypotheses for the study should be formulated and placed at the end of the introduction so that they can be answered after the discussion.

## MATERIAL AND METHODS

- 1- The recruitment section is too detailed regarding participant demographics but doesn't explain why these criteria are important. Why did you choose these inclusion criteria?
- 2- Why was the age limit for men and women different?
- 3- Doesn't the fact that the sample is mixed, i.e., made up of men and women, influence the results?
- 4- What does a statistical power of 0.86 mean? The significance of this value for the study should be described;
- 5- The equation should be numbered ahead of it and not just referenced in the text;
- 6- Include a flowchart of the experimental protocol to provide a clear visual representation of the steps;
- 7- Didn't you collect the MVC (maximum voluntary contraction) values for each muscle under study before the exercise?
- 8- Provide a more detailed rationale for choosing specific statistical tests and how they relate to your hypotheses;
- 9- Adding pictures of the collection protocol can add value to the article as it makes it easier for the reader to understand.

## RESULTS

- 1- Correct the first sentence of the results. "sEMGrms"?
- 2- The "p" of the statistical significance value should be written in lowercase italics;
- 3- They always refer to "sEMG" and in the legend of the axes of the different graphs in Figure 1 it does not appear with the same name. This should be corrected;
- 4- After Figure 1, I don't understand the meaning of ..."  $F=20.474(3)$ ";
- 5- Wouldn't it be relevant to have the sex of each subject in table 1?
- 6- In tables 1 and 2, there are some inconsistencies regarding the number of decimal places. It should always be the same within the same variable;
- 7- The last paragraph should appear after Figure 4 and not before it;
- 8- The results section is dense with numbers and statistical results, which can be overwhelming.

## DISCUSSION

- 1- The discussion sometimes repeats points made in the introduction;
- 2- I don't understand the end of the last paragraph of the subheading "Cardio-pulmonary data to reveal the high exercise intensities attained for each bout" and what use it is for this article;
- 3- There is a lack of practical implications. How might this change current understanding or practices in exercise physiology?
- 4- No suggestions for future research. Propose specific follow-up studies that could address the limitations of the current study and further test the CGM.

## CONCLUSIONS

- 1- Make a stronger statement about the implications of your findings for the Central Governor Model and future research directions.