Response to reviewer comments

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| Reviewer comments | Authors response |
| Do you believe that a correlation between anthropometric values with waist-to-hip ratio could be related with heart rate variability? This measure is criticized for not presenting good diagnostics about cardiovascular disease. What is the explanation to insert this anthropometric index in the analysis? Is an athlete showing some bone or muscle disease? I did not see information about body composition and anthropometric measures in the introduction. The authors did not link this information with VFC. For me the discussion is inconclusive. The authors should improve this section and include: weak points, strong points, limitations, future directions, and practical applications. | Thank you for taking the time to review our manuscript and for your thoughtful comments and questions.  We would like to emphasize that the inclusion of anthropometric indices in our analysis was based on their relevance as markers of body composition, which has been shown to play a crucial role in the regulation of heart rate variability. Our study provides valuable insights into the potential impact of muscle composition, as represented by muscle indices such as SMI and MBI, on cardiac autonomic response to intense aerobic exercise among elite cyclists. These findings have significant implications for optimizing muscle indices in high-performance athletes to improve cardiac autonomic regulation and maximize athletic performance.  We appreciate your feedback, and we have addressed your suggestions in our revised manuscript. We believe that our study adds important new knowledge to the field and has the potential to inform future research in this area. |