LETTER TO THE EDITOR

André R. Medeiros, Sebastián del Rosso, Anthony S. Leicht, Arto J. Hautala, Daniel A. Boullosa, Methods of assessment of the post-exercise cardiac autonomic recovery: Additional important factors to be considered, International Journal of Cardiology, Volume 239, 2017, Page 23, ISSN 0167-5273, https://doi.org/10.1016/j.ijcard.2017.03.161.

The content of a letter to the Editor must relate to a specific article published in IJC;

max 250 words; 5 references; no figures/tables

The review from Peçanha et al. (2017) has made an important contribution to the applicability of post-exercise, cardiac autonomic assessment utilising heart rate recovery (HRR) and heart rate variability (HRV). We congratulate these authors and would like to highlight important factors that should also be considered in conjunction with this work.

The influence of recovery mode and body posture are important influences with slower parasympathetic reactivation reported during active vs. passive recovery (Barak et al., 2011), and during standing vs. sitting vs. supine postures (Buchheit et al., 2009). There has been no consensus to date regarding the ideal recovery mode and posture for HRR and HRV assessment with standardisation required for comparison in future studies.

The authors also highlighted the advantages of several HRV measures to overcome the issue of non-stationarity of the recovery signal. We would like to further highlight non-linear HRV analyses (Hautala et al., 2003) as a maturing and crucial methodology for the assessment of recovery HRV. Non-linear methods have previously demonstrated good reliability in identifying a reduction in post-exercise HRV during walking recovery (Boullosa et al., 2014), a common recovery mode in sporting and clinical settings. Therefore, practitioners are encouraged to explore non-traditional analyses in their comprehension of the complex, cardiac autonomic activity during post-exercise recovery.

While we acknowledge the excellent work of Peçanha et al. (2017) in consolidating the current information on this topic, we would like to further highlight the urgent need for method standardisation to allow appropriate comparisons in future studies.

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