

Bradycardia: changes in intrinsic rate rather than cardiac autonomic modulation

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The recent cross-sectional comparison by Molina et al. [1] highlights again the growing evidence for a reduced, cardiac intrinsic rate responsible for exercise-induced bradycardia (EIB). Several longitudinal studies [2–4] have previously shown EIB without alterations in cardiac autonomic modulation as evidenced by heart rate variability (HRV). While HRV changes have been reported to be dependent on exercise training intensity [5] and initial high HRV levels in young healthy adults [2, 6], these past and current results point to localised changes within the myocardium as the primary contributor to EIB. Chronic, mechanical stretching of the sino-atrial node [2–4], changes in ionic concentration within the sino-atrial node [7], and localised changes in myocardial conduction [8] appear to play a role in the development of EIB. The current work of Molina [1] adds to that of others previously and further highlights the necessity to examine sino-atrial function as a key mechanism for EIB.

Conflict of interest The corresponding author states that there is no conflict of interest.

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