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Postural Control After A Prolonged Treadmill Run At Individual Ventilatory And Anaerobic Threshold

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The objective of the study was to verify whether young males' balance was affected by 30min prolonged treadmill running (TR) at individual ventilatory (IVT) and anaerobic (IAT) thresholds in recovery time. The VO₂max, IAT and IVT during an incremental TR were determined. Mean displacement amplitude (Acp) and velocity (Vcp) of center of IVI during an incremental IR were determined. Mean displacement amplitude (Acp) and velocity (Vcp) or center of pressure were recorded before (pre) and after (Omin post; Smin post; and 10min post) forlonged TR at IAT and IVT, through posturographic trials performed with eyes open (EO) and closed (EC). Significant differences between IVT and IAT for Vcp, between EO and EC for Acp and Vcp, were observed. The IAT induced higher destabilizing effect when postural trials were performed with EC. The IVT intensity produced also a destabilizing effect on postural control immediately after exercise. An impairment of postural control after prolonged treadmill running exercise at IVT and IAT intensity was showed. However, destabilizing effect on postural control disappeared within 10min after IAT intensity and within 5min after IVT intensity.

Key words: Posture, vision, ventilatory threshold, anaerobic threshold

Key Points

- To verify whether young males, balance was affected by 30min prolonged treadmill running at individual ventilatory and anaerobic thresholds in recovery time.
- Mean displacement amplitude and velocity of foot pressure center were recorded before and after prolonged treadmill running at individual ventilatory and anaerobic thresholds, through posturographic trials performed with eyes open and closed.
- Destabilizing effect on postural control disappeared within 10min post individual anaerobic threshold, and within 5min post individual ventilatory threshold

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