

Effectiveness of Different Recovery Postures During High-Intensity Interval Training

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ABSTRACT

High-intensity interval training (HIIT) has become a very popular mode of exercise practiced by elite as well as recreationally active adults since it is time efficient and can be adapted to a wide range of populations. A variety of postures have been practiced during recovery in HIIT. However, it is not clear what postural strategies would be best in enhancing recovery and improving performance in subsequent bouts of exercise. **PURPOSE:** To compare four recovery postures that are typically used by exercisers and to identify which posture facilitates the fastest recovery and better performance in subsequent bouts of HIIT. **METHODS:** Sixteen healthy adults (11 males, 26±5 years) performed four randomized HIIT trials separated by at least three days. Each trial consisted of four sets of modified Wingate anaerobic power tests (20 sec duration) separated by a 4-min recovery between sets. Immediately following each set, participants adopted one of the four recovery postures: standing with hands on back of the head (HH), standing with hands resting on knees (HK), slow walking with hands on hips (WK), or supine (SP). **RESULTS:** Peak anaerobic power during the Wingate test progressively declined within each trial ($p < 0.05$), with no differences between postures. Fatigue rate was significantly slower during SP (59±12%) than HK (63±13%). Heart rate recovery was faster during SP (53±9 bpm) when compared with the other three standing postures (39±15 (HH), 42±10 (HK), and 39±9 bpm (WK); $p < 0.001$). Expired CO₂ production during recovery was significantly greater during SP (1.01±0.3 L/min) and WK (1.02±0.2 L/min) when compared with HH (0.83±0.2 L/min). Pulmonary ventilation was not significantly different between postures. Blood lactate concentrations increased immediately after (14.1±2 mmol/L) and 8-min after the final set (13.2±2 mmol/L) from the baseline, but no significant differences were found between postures. **CONCLUSION:** In marked contrast to the prevailing view, supine posture appears to be more advantageous in facilitating recovery when compare with the other three standing postures. No differences were found between standing recovery postures.