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The Impact of a Weighted Warmup on 1-Mile Run Performance

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PURPOSE: To investigate the impact of a weighted warmup on 1-mile run performance.

METHODS: 7 males (Age: 20.9 ± 0.9 yr; Height: 175.5 ± 7.0 cm; Weight: 80.8 ± 11.4 kg; Body Fat: $12.8 \pm 4.2\%$) and 5 females (Age: 22.4 ± 3.8 yr; Height: 167.9 ± 9.0 cm; Weight: 65.1 ± 10.1 kg; Body Fat: $20.5 \pm 2.6\%$) participated in the study. On four separate days, subjects completed a 15 min warmup walking on a motorized treadmill, at a predetermined unloaded intensity equal to 5 METs, followed by a 1-mile run. Warmup sessions included an unloaded (UL) trial, which served as the control, and wearing a light load (LL; 24 lb), moderate load (ML; 48 lb) and heavy load (HL; 80 lb) weighted vest. The testing order of the weighted warmup trials was determined by counterbalanced assignment. Following the 15 min warmup, subjects were asked to complete an unloaded 1-mile run as quickly as possible. Ratings of Perceived Exertion (RPE) were assessed every minute and heart rate (HR) was measured continuously throughout the 1-mile run and averaged for statistical comparison. Repeated Measures ANOVAs were used to compare the different weighted conditions. **RESULTS:** 1-mile run time (UL: 9.4 ± 0.9 , LL: 9.0 ± 1.3 , ML: 9.4 ± 1.3 , HL: 9.0 ± 1.3 min; $p = .340$) and average RPE (UL: 11.6 ± 1.9 , LL: 10.9 ± 2.3 , ML: 10.8 ± 2.4 , HL: 11.2 ± 2.2 ; $p = .191$) were not significantly different between warmup conditions. Average HR, during the 1-mile run, was significantly higher after the HL warmup (167.3 ± 10.7 b \cdot min⁻¹) when compared to the UL (161.9 ± 8.9 b \cdot min⁻¹; $p = .013$) and ML (159.0 ± 13.3 b \cdot min⁻¹; $p = .019$) warmup trials. **CONCLUSION:** The 15-minute weighted warmup sessions did not impact run performance or perception of effort.

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