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Sprinting Velocity Increases Through Postactivation Potentiation with a Hex-Bar Farmers Walk

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Postactivation Potentiation (PAP) is an enhanced muscle contractile response for a given activation following a maximum or near maximum voluntary contraction. Inducing PAP can commonly elicit acute postactivation performance enhancements that may be used to enhance in-competition performance, with the greatest responses using exercises of similar movement patterns. However, very few studies have induced PAP for sprinters with a conditioning exercise (CE) of a similar movement pattern to examine subsequent sprinting performance. **PURPOSE:** To examine the influence of initiating PAP with a hex-bar farmers walk (HBFW) on subsequent 20 m sprint performance. **METHODS:** Recreationally trained individuals ($n = 12$, age 23 ± 2 years), performed five 20 m sprints at baseline, 4, 8, 12, and 16 minutes after a walking control (C), light farmers walk (LFW) with 70% their hex-bar deadlift (HBD) 1-Repetition Maximum (RM), and heavy farmers walk (HFW) with 80% their HBD 1-RM, no less than 48 hours apart. Comparisons were made using paired samples t-tests. **RESULTS:** Mean (M) sprint velocities ($\text{m} \cdot \text{s}^{-1}$) over 20 m were similar between trials at baseline. Thereafter, 20 m sprint velocities significantly improved during the LFW condition at 8 minutes ($M = 6.03$, $SE = 0.14$, $p < 0.001$), 12 minutes ($M = 6.05$, $SE = 0.15$, $p < 0.001$), and 16 minutes ($M = 6.03$, $SE = 0.14$, $p = 0.010$) compared to previous baseline sprints ($M = 5.91$, $SE = 0.14$, $p < 0.05$). The HFW condition yielded significant increases to sprint velocities at 4 minutes ($M = 6.03$, $SE = 0.14$, $p = 0.004$), 8 minutes ($M = 6.03$, $SE = 0.14$, $P = 0.002$), 12 minutes ($M = 6.01$, $SE = 0.13$), $p = 0.001$), and 16 minutes ($M = 5.99$, $SE = 0.13$, $p = 0.026$) compared to subject's baseline sprints ($M = 5.93$, $SE = 0.14$, $p < 0.05$). Most notably, sprint velocity significantly increased during the LFW condition at 8 minutes ($M = 6.03$, $SE = 0.14$, $p = 0.025$), 12 minutes ($M = 6.05$, $SE = 0.15$, $p = 0.016$), and 16 minutes ($M = 6.03$, $SE = 0.14$, $p = 0.011$) when compared to their respective control condition intervals ($M = 5.96$, $SE = 0.14$; $M = 5.97$, $SE = 0.15$; $M = 5.94$, $SE = 0.14$; $p < 0.05$). No change to sprinting velocity was witnessed across either of the C conditions. **CONCLUSION:** Sprinting performance is enhanced after a HBFW, when an optimal amount of time is allotted to reduce the initial fatigue. However, the magnitude of enhancement appears to differ with the load of the CE.