Carbohydrate-Protein Drinks Do Not Enhance Recovery From Exercise-Induced Muscle Injury.

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Source:

Abstract:
This study examined the effects of carbohydrate (CHO), carbohydrate-protein (CHO+PRO), or placebo (PLA) beverages on recovery from novel eccentric exercise. Female participants performed 30 min of downhill treadmill running (-12% grade, 8.0 mph), followed by consumption of a CHO, CHO+PRO, or PLA beverage immediately, 30, and 60 min after exercise. CHO and CHO+PRO groups (n = 6 per group) consumed 1.2 g · kg body weight<sup>-1</sup> · hr<sup>-1</sup> CHO, with the CHO+PRO group consuming an additional 0.3 g · kg body weight<sup>-1</sup> · hr<sup>-1</sup> PRO. The PLA group (n = 6) received an isovolumetric noncaloric beverage. Maximal isometric quadriceps strength (QUAD), lower extremity muscle soreness (SOR), and serum creatine kinase (CK) were assessed preinjury (PRE) and immediately and 1, 2, and 3 d postinjury to assess exercise-induced muscle injury and rate of recovery. There was no effect of treatment on recovery of QUAD (p = .21), SOR (p = .56), or CK (p = .59). In all groups, QUAD was reduced compared with PRE by 20.6% ± 1.5%, 17.2% ± 2.3%, and 11.3% ± 2.3% immediately, 1, and 2 d postinjury, respectively (p < .05). SOR peaked at 2 d postinjury (PRE vs. 2 d, 3.1 ± 1.0 vs. 54.0 ± 4.8 mm, p < .05), and serum CK peaked 1 d postinjury (PRE vs. 1 d, 138 ± 47 vs. 757 ± 144 U/L, p < .01). In conclusion, consuming a CHO+PRO or CHO beverage immediately after novel eccentric exercise failed to enhance recovery of exercise-induced muscle injury differently than what was observed with a PLA drink. ABSTRACT FROM AUTHOR