



INFLUENCES OF A DIETARY SUPPLEMENT IN COMBINATION WITH AN EXERCISE AND DIET REGIMEN ON ADIPOCYTOKINES AND ADIPOSITY IN WOMEN WHO ARE OVERWEIGHT

Maren S. Fragala, William J. Kraemer, Jeff S. Volek, Barry A. Spiering, Disa L. Hatfield, Jakob L. Vingren, Jen Yu Ho, Cassandra E. Forsythe, Michael J. Puglisi, Jeffrey M. Anderson, Carl M. Maresh. Human Performance Laboratory, Department of Kinesiology, University of Connecticut, 2095 Hillside Road, Gampel Pavilion, University of Connecticut, Storrs, CT, 06269-1110

The influence of a high, viscosity polysaccharide dietary supplement on adipocytokine and regional body composition responses to a weight loss program was examined. Twenty-two women (Supplement group (S) (n=11): age= 36.8 ± 7.2 y; weight= 87.4 ± 6.1 kg; % body fat= 43.6 ± 7.1); Placebo group (P) (n=11): age = 38.3 ± 6.8 y; weight = 88.3 ± 7.2 kg; % body fat= 44.2 ± 8.2) completed an 8-week placebo-controlled, double-blind study consisting of a caloric restricted diet and cardiovascular exercise. Body composition and serum insulin, leptin, and adiponectin were assessed at pre-, mid-, and post-intervention. From pre- to postintervention, significant decreases ($p < 0.05$) were observed for body weight (S: 87.4 ± 6.1 to 78.2 ± 3.4 kg; P: 88.3 ± 7.2 to 82.9 ± 4.1 kg) ($p < 0.05$ S vs P), % body fat (S: 43.6 ± 7.1 to 36.2 ± 4.4 ; P: 44.3 ± 8.2 to 40.9 ± 4.3) ($p < 0.05$ S vs P), leptin (S: 28.2 ± 6.1 to 16.3 ± 3.4 $\mu\text{g} \cdot \text{ml}^{-1}$; P: 29.3 ± 9.1 to 19.7 ± 3.3 $\mu\text{g} \cdot \text{ml}^{-1}$) ($p < 0.05$ S vs P), and insulin (S: 7.2 ± 2.2 to 5.4 ± 2.4 $\text{mU} \cdot \text{L}^{-1}$; P: 7.7 ± 2.2 to 5.2 ± 2.7 $\text{mU} \cdot \text{L}^{-1}$). Serum adiponectin increased ($p < 0.05$) (S: 12.2 ± 3.1 to 26.2 ± 3.4 $\mu\text{g} \cdot \text{ml}^{-1}$; P: 12.6 ± 4.2 to 21.7 ± 4.3 $\mu\text{g} \cdot \text{ml}^{-1}$) ($p < 0.05$ for S vs P). Data indicated the dietary supplement used during an 8-week weight loss/exercise program exhibited favorable effects on adipocytokines and regional body composition.