ORIGINAL RESEARCH

Effects of Resistance Exercise and Protein on Body Composition Following Weight Loss

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ABSTRACT

Background: Research indicates that weight loss programs are effective for reducing body weight temporarily, but weight maintenance studies have been almost uniformly unsuccessful in preventing weight regain.
Methods: Subjects who completed a 6-month weight loss study were invited to continue with a weight maintenance program. The weight loss study examined the effects of exercise (20 min strength, 20 min aerobics, twice weekly) and nutrition (1,200 to 1,800 kcal·d^{-1}, 2 daily meal replacement protein shakes) on body weight and body composition. Weight loss program completers experienced improvements ($P < 0.05$) in body weight, percent fat, fat mass, lean mass, waist girth, and hip girth. Subjects who participated in the weight maintenance program performed the same strength and aerobic exercise protocol, but discontinued caloric restriction and decreased daily meal replacement protein shakes from 2 to 1.
Results: After 6 months on the weight maintenance program, participants experienced improvement ($P < 0.05$) in percent fat, fat mass, lean mass, waist girth, and hip girth, with no significant change in body weight. A subgroup of subjects who continued the weight maintenance program for an additional 3 months experienced additional improvement ($P < 0.05$) in percent fat, fat mass, lean mass, waist girth, and hip girth, with no significant change in body weight.
Conclusion: These findings indicated that a postdiet weight maintenance program incorporating 2 weekly resistance and aerobic exercise sessions coupled with a daily meal replacement protein shake was effective for avoiding weight regain and for improving body composition, with concurrent fat mass decrease and lean mass increase. *Journal of Clinical Exercise Physiology.* 2018;7(2):25–32.

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