

Poster presentation

The combined effects of exercise training and ingestion of a weight loss supplement on body composition and fitness parameters in college-aged males and females

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Background

A randomized, double-blind, placebo-controlled study was performed to evaluate the effect of a weight loss supplement on body composition and fitness parameters following 8 weeks of supplementation and concomitant exercise training in college-aged males and females.

Methods

Weight, BMI, bench press 1 RM, leg press 1 RM, body composition parameters, $VO_{2\text{Max}}$, fasting glucose and lipid panels were evaluated before (pre-test) and after (post-test) 56 days (8 weeks) of resistance and cardiovascular training, performed three times per week (totaling 24 workouts). Resistance training consisted of two sets of 12 repetitions of the following exercises: seated leg press, bench press, leg extension, leg curl, seated military press, lat pull, and cable row (75–80% 1 RM). Cardiovascular training consisted of 30 minutes on a cycle ergometer at a predetermined heart rate (70–85% heart rate reserve). Both resistance and cardiovascular training intensity was increased every two weeks. Additionally, during the testing period, subjects consumed two doses per day of a weight loss supplement ($n = 12$) or placebo ($n = 12$) as well as a once daily protein supplement.

Results

Fat mass and percent body fat were significantly reduced ($p < 0.05$) in both groups. These differences were not statistically significant between groups. Consumption of a protein supplement and a weight loss supplement or protein supplement alone, while following a diet and exercise program, resulted in a significant decrease in fat mass and percent body fat and non-significant decreases in body mass and non-significant increases in lean mass. Fitness status (upper-body strength, lower-body strength, VO_2) significantly increased ($p < 0.05$) in both groups, but these differences were not statistically significant between groups. Lipid panels markers (e.g., triglycerides, total cholesterol, LDL cholesterol, HDL cholesterol) all experienced non-significant improvements in both groups, while serum glucose levels improved to a greater extent ($p < 0.05$) in the supplementation group.

Conclusion

A daily protein supplement in conjunction with a thrice weekly resistance training and cardiovascular exercise program increased fitness levels, decreased body and fat mass, improved body composition and improved clinical markers of coronary heart disease. Weight loss supplementation sustained these outcomes, while conferring an additional benefit for changes in serum glucose levels.

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