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Strength training for obesity prevention in midlife women.

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Source

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Abstract

OBJECTIVE:

The primary goal of this study was to assess whether increases in fat-free mass (FFM) and decreases in total and percentage fat mass from 15 weeks of twice weekly supervised strength training would be maintained over 6 months of unsupervised exercise in a randomized controlled trial.

DESIGN:

In all, 60 women aged 30-50 y, body mass index between 20 and 35 kg/m(2), were randomized to control or treatment groups. The treatment group performed twice-weekly supervised strength training followed by 6 months of unsupervised training. Measurements at baseline, 15, and 39 weeks included body weight and body composition by dual-energy X-ray absorptiometry. Repeated measures regression was used to assess between-group differences for changes over time.

RESULTS:

Almost 90% of prescribed exercise sessions were completed. The body composition treatment effects over 15 weeks were largely maintained over 6 months of unsupervised exercise. Over the total 39 weeks of strength training, the treatment group gained +0.89 kg more in FFM, lost -0.98 kg more in fat mass, and lost -1.63% more in percent body fat when compared to the control group. P-values for these between-group differences in 39-week changes were 0.009, 0.06, and 0.006, respectively. Strength training did not result in any significant weight loss or waist circumference attenuation. Adjustment for changes in energy intake and physical activity did not alter these results.

CONCLUSIONS:

Twice-weekly strength training is behaviorally feasible for busy midlife women and the favorable body composition changes resulting from supervised strength training can be maintained over time. These findings lay the groundwork for determining the long-term health benefits of this behaviorally feasible exercise prescription, potentially including prevention of age-associated fat gains.

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