

POSTER PRESENTATION

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Effects of diet cycling on weight loss, fat loss and resting energy expenditure in women

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Background

The Curves fitness program involves a 30-minute circuit training program. Women interested in losing weight can also follow a weight management program. The most recent version of the weight management program involves cycling between periods of moderate calorie restriction (1,200 – 1,500 kcals/d) followed by periods of higher caloric intake (2,200 kcals/d) in an attempt to prevent long term reductions in resting energy expenditure (REE). The purpose of this preliminary study was to examine the efficacy of this exercise and diet cycling program approach on weight loss, fat loss, and REE.

Methods

Thirty-six overweight and sedentary women (35±8 yr; 200±42 lbs; 43±4% fat, 33.4±6 kg/m²) were assigned to a high carbohydrate (HC, n=17) or high protein (HP, n=19) diet group. During the first 30-days, subjects consumed 1,200 kcals/d for 1-wk followed by ingesting 1,500 kcals/d for 3-wks. Subjects then followed a 2,200 kcals/d maintenance diet for 4-wks before repeating the 30-day diet. Diets were 45:30:25% or 30:45:25% CHO:PRO:F for the HC and HP groups, respectively. Subjects also participated in the Curves circuit training program (30-minute hydraulic resistance exercises interspersed with recovery floor calisthenics performed at 30-second intervals) 3-d/wk and walked briskly for 30-min 3-d/wk. Data were analyzed by MANOVA with repeated measures and are presented as means ± SD changes from baseline after 1, 2, 3, 4 and 5 months for the HC and HP groups, respectively.

Results

There were significant time effects at each monthly time point compared to baseline for decreases in weight (-5.1±4.5, -6.9±5.5, -8.9±7.1, -10.0±8.4, -10.7±9.6 lbs, p=0.001), fat mass (-3.8±3.5, -5.5±4.2, -6.2±4.4, -7.8±5.8, and -7.7±6.7 lbs, p=0.001) and percent body fat (-0.9±1.7, -1.5±1.8, -1.5±1.8, -2.2±2.2, -2.0±2.5%, p<0.01). There were no significant diet effects seen between HP and HC groups for changes in overall weight (-7.3±1.3; -6.5±1.3 lbs, p=0.65) or fat mass (-5.3±0.8; -5.1±0.9 lbs, p=0.85). In terms of REE, there were no significant differences between diet groups in overall changes in REE (-50.8±32.5; -52.7±34.4 kcals/d, p=0.97) or changes in the REE over the 5 month program (-52.2±165, -73.3±214, -63.5±217, -64.9±203, -56.2±189 kcals/d, p=0.49) indicating that subjects were able to lose weight without significant reductions in REE.

Conclusion

Short-term diet cycling during a weight loss and exercise program may be an effective way to promote weight loss without associated reductions in REE. In addition, preliminary findings indicate that the HP and HC diet approaches employed were equally effective.

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