

Effects of the Curves® fitness and weight loss program in senior-aged women: body composition

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55 senior-aged women (66 ± 5 yrs, 79 ± 11 kg; $44 \pm 4\%$ body fat) participated in a 3-d/wk resistance-training program for 14 wks. Subjects were assigned to an exercise only group (E) or a high carbohydrate (HC) or high protein (HP) diet group. Diets consisted of 1,200 kcal/d for 1-wk, 1,600 kcal/d for 9 wks, followed by a 2,100 kcal/d maintenance phase for 4-wks. The HC group diet contained 55% CHO, 15% PRO, and 30% Fat while the HP diet contained 7-15% CHO, 55-63% PRO, and 30% Fat. The maintenance diet was 55% CHO, 15% PRO, and 30% Fat. Data were analyzed by repeated measures ANOVA and are presented as means \pm SD changes from baseline for the E, HC, and HP groups, respectively. After 10 weeks, women who followed the HP diet experienced a significantly greater ($p < 0.003$) loss in total scanned mass (-0.3 ± 1.6 ; -1.3 ± 1.8 ; -2.9 ± 2.5 kg), fat mass (-0.8 ± 1.3 ; -1.5 ± 1.3 ; -2.8 ± 1.9 kg), and body fat (-1.0 ± 1.6 ; -1.2 ± 1.4 ; $-2.1 \pm 1.6\%$). Intermittent dieting maintained losses in scanned body mass (-0.5 ± 1.6 ; -1.3 ± 2.1 ; -3.1 ± 2.7 kg), fat mass (-0.8 ± 1.1 ; -1.9 ± 1.4 ; -3.3 ± 2.0 kg), and body fat (-0.9 ± 1.5 ; -1.8 ± 1.5 ; -2.7 ± 1.5 kg). No differences were seen in fat free mass (10-wks 0.5 ± 1.4 ; 0.12 ± 1.4 ; -0.11 ± 1.3 kg; 14-wks 0.36 ± 1.5 ; 0.58 ± 1.6 ; 0.22 ± 1.5 kg, $p = 0.41$). Results indicate that senior-aged women experience greater fat loss while following a HP diet during resistance-training.

Effects of the Curves® fitness and weight loss program in senior-aged women: resting energy expenditure

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55 sedentary women (66 ± 5 yrs, 79 ± 11 kg; $44 \pm 4\%$ body fat) participated in the Curves circuit resistance-training program 3-d per wk for 14 wk. Subjects were assigned to an exercise only group (E) or a high carbohydrate (HC) or high protein (HP) diet group. Diets consisted of 1,200 kcal/d for 1-wk, 1,600 kcal/d for 9 wks, followed by a 4-wk maintenance phase (2,100 kcal/d). The HC group diet contained 55% CHO, 15% PRO, and 30% Fat while the HP diet contained 7-15% CHO, 55-63% PRO, and 30% Fat. The maintenance phase consisted of 55% CHO, 15% PRO, and 30% Fat. Data were analyzed by repeated measures ANOVA and are presented as means \pm SD changes from baseline for the E, HC, and HP groups, respectively. Subjects significantly lost weight ($p=0.001$) after 10-wks of dieting (-0.9 ± 1.8 ; -2.2 ± 2.3 ; -4.1 ± 3.9 kg) and maintained weight loss during the 4-wk maintenance phase (-0.9 ± 1.8 ; -2.3 ± 2.4 ; -3.9 ± 2.6 kg). Subjects following the HP diet experienced the greatest weight loss. No significant time or group \times time effects ($p=0.88$) were seen in REE values after 10-wks of dieting (-0.09 ± 1.9 ; -0.12 ± 1.1 ; -0.13 ± 1.3 kcal/kg/d) or the 4-wk maintenance phase (0.27 ± 1.6 ; 0.52 ± 1.6 ; -0.13 ± 1.5 kcal/kg/d). Results indicate that senior women participating in a resistance training program can achieve significant weight loss without reducing REE.

Effects of the Curves® fitness & weight loss program in senior-aged women: training adaptations

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Effects of the Curves® fitness & weight loss program in senior-aged women: health markers

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Effects of the Curves® fitness & weight loss program in senior-aged women: quality of life

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55 sedentary women (66 ± 5 yrs, 79 ± 11 kg; $44 \pm 4\%$ body fat) participated in the Curves circuit resistance-training program 3-d per wk for 14 wks. Subjects were assigned to an exercise only group (E) or a high carbohydrate (HC) or high protein (HP) diet group. Diets consisted of 1,200 kcal/d for 1-wk, 1,600 kcal/d for 9 wks, followed by a 2,100 kcal/d maintenance diet for 4 wks. The HC and maintenance diets contained 55% CHO, 15% PRO, and 30% Fat while the HP diet contained 7-15% CHO, 55-63% PRO, and 30% Fat. SF-36 data were analyzed by repeated measures ANOVA and are presented as means \pm SD changes from baseline after 10 and 14 wks, respectively, for all groups combined. Results revealed that general health (9.3 ± 28 , 9.8 ± 25 %, $p=0.007$), vitality (10.8 ± 39 , 13.7 ± 34 %, $p=0.005$), and mental health (17.7 ± 27 , 24.3 ± 23 %, $p=0.001$) scores significantly increased over time while social functioning scores tended to increase (-5.3 ± 53 , 6.4 ± 28 %, $p=0.10$) in all groups. Physical functioning (-0.7 ± 40 , 6.0 ± 36 %, $p=0.23$), bodily pain (5.4 ± 53 , 9.6 ± 50 %, $p=0.17$), role physical (20.8 ± 100 , 26.7 ± 115 %, $p=0.13$), and role emotional scores (-10.3 ± 67 , -11.8 ± 72 %, $p=0.29$) were not significantly changed over time. No significant interactions were observed among groups. Results indicate that the Curves fitness and weight loss program improves select markers of QOL in senior-aged women.

Effects of the Curves® fitness & weight loss program in senior-aged women: body image & self esteem

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Effects of a multi-component school-based intervention on health markers, body composition, physical fitness, and psychological measures in overweight adolescent females

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42 obese adolescents participated in a 10-week multi-component exercise, diet, and behavioral modification program (MC) or standard physical education classes (PE). The MC program included a supervised 30-minute resistance training circuit program 3 d/wk in addition to 1-d/wk of aerobic training and 1-d/wk of behavioral modification. The diet was 500 kcals below REE and consisted of 55% C, 15% P, and 30% F. Data were analyzed at 0, 10 and 22 weeks by ANOVA with repeated measures and are presented as means \pm SD from baseline. Significant interactions were observed in body mass (PE 2.82 ± 2.7 ; MC 0.58 ± 2.5 %, $p=0.02$); fat mass (PE 3.64 ± 5.9 ; MC -2.66 ± 5.7 %, $p=0.006$); percent body fat (PE 0.52 ± 4.7 ; MC -2.92 ± 4.4 %, $p=0.024$), triglycerides (PE 44.8 ± 85 ; MC -9.6 ± 35 %, $p=0.002$), HOMA-IR (PE 49.4 ± 70 ; MC 17.6 ± 67 %, $p=0.052$), physical activity environmental factors (PE -6.92 ± 18.7 ; MC 10.0 ± 28 %, $p=0.039$), fruit and vegetable negative decisions (PE 31.7 ± 50 ; MC 3.4 ± 47 %, $p=0.043$), and dietary protein intake (PE -3.3 ± 53 ; MC 8.2 ± 59 %, $p=0.025$). Significant time effects were seen in body mass ($1.6 \pm 3\%$), fat free mass ($2.7 \pm 4\%$), bone mineral content ($3.6 \pm 5\%$) and bone mineral density ($3.4 \pm 3\%$). Results indicate that the PE and MC programs promoted improvements in health and fitness. However, subjects in the MC program observed significantly greater improvements in body composition, triglycerides, and insulin sensitivity.

Effects of the Curves® fitness & weight loss program in women with medically managed conditions: body composition and resting energy expenditure

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116 sedentary women (50 ± 9 yrs, 162 ± 6 cm; 96 ± 21 kg; $45 \pm 5\%$ body fat) with medically-managed conditions (i.e., hypertension, diabetes, hypertension, hyperlipidemia, heart disease, thyroid conditions, etc) were assigned to an exercise & no diet group (E) or a low calorie high carbohydrate (HC) or high protein (HP) diet. Diets consisted of 1,200 kcal/d for 1-wk and 1,600 kcal/d for 9 wks of either HC (55% C, 15% P, 30% F) or HP (15% C, 55% P, 30% F). Subjects participated in a supervised Curves fitness program 3-d per wk. DEXA body composition and REE measurements were obtained at 0, 2, and 10 weeks and were analyzed by repeated measures ANOVA. Data are presented as means \pm SD changes from baseline for the E, HC, and HP groups, respectively, after 2 and 10 weeks. HP group (-0.9 ± 1.8 , -2.1 ± 3.2 ; -1.1 ± 2.2 , -2.5 ± 3.8 ; -1.9 ± 1.4 , -4.0 ± 3.6 kg, $p=0.056$) with no differences among groups in changes in fat mass (-1.2 ± 1.7 , -2.6 ± 2.8 ; -0.4 ± 2.3 , -1.9 ± 3.3 ; -1.4 ± 1.9 , -3.2 ± 3.0 kg, $p=0.13$) or percent body fat (-0.9 ± 1.6 , -1.7 ± 1.9 ; -0.1 ± 1.4 , -1.2 ± 1.7 ; -0.6 ± 1.7 , -1.8 ± 2.2 kg, $p=0.44$). No time or group x time effects were observed among groups in changes in REE (0.2 ± 2.3 , 0.6 ± 2.0 ; -0.8 ± 1.5 , 0.2 ± 2.0 ; -0.7 ± 1.4 , -0.3 ± 2.1 kcal/kg, $p=0.49$). Results indicate that the Curves program is effective to promote weight loss without reductions in REE in women with medically-managed conditions.

Effects of the Curves® fitness & weight loss program in women with medically managed conditions: training adaptations

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Medical profile of sedentary women with and without metabolic syndrome (MS)

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543 sedentary women (44±11 yrs, 92±17 kg; 45±4% body fat) were medically screened prior to participation in an exercise and weight loss program. Subjects were divided into those with less than (n=281) or more than (n=262) three criteria for MS. Medical data and fasting blood samples were collected and analyzed by one-way ANOVA for the non-MS and MS groups, respectively. Women with MS had significantly higher (p<0.001) age (42.8±11 vs 46.3±10 yrs), weight (88.1±16 vs 96.5±17 kg), BMI (33.0±6 vs 36.0±6), waist circumference (95±12 vs 103±12 cm), hip circumference (118±13 vs 124±13 cm), DEXA percent body fat (44.6±5 vs 45.8±4 %), resting HR (69.6±10 vs 72.0±10 bpm), resting SBP (121±12 vs 131±16 mmHg), resting DBP (79±8 vs 85±9 mmHg), triglycerides (103±44 vs 171±87 mg/dl), total cholesterol (198±37 vs 211±46 mg/dl), LDL (115±31 vs 128±35 mg/dl), CHL/HDL ratio (3.5±0.8 vs 4.6±1.1), glucose (92±11 vs 106±26 mg/dl), and REE(1,606±243 vs 1,755±276 kcals/d). HDL (58±14 vs 48±13 mg/dl) and maximal oxygen uptake (21.5±5 vs 19.7±4 ml/kg/min) values were significantly lower in women with MS. These findings indicate that a high percentage of sedentary women interested in entering a fitness and weight loss program have MS. Additionally, women with MS have medical profiles that place them at higher risk for chronic and/or metabolic disease.

Relationship of uric acid to markers of metabolic syndrome (MS) and medical status

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