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The Effects of a Six-Week Weight Loss Program on Body Composition and Metabolic Rate

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Regular physical activity and a healthy diet are linked to improved metabolic activity and body composition changes. A local gym recruits individuals to participate in a six-week twenty pound weight loss challenge and provides participants with a structured diet and exercise plan. **PURPOSE:** The purpose of this study was to determine if a primarily weight loss driven program would also result in a decrease in body fat percentage, a decrease in waist and hip circumference, and improve resting metabolic rate. **METHODS:** Total weight (lbs), body fat (%), lean muscle mass (%), waist circumference (in), hip circumference (in), and resting metabolic rate (RMR) were assessed before and after the six-week program in thirty four sedentary adults ($M_{age}=38.24$, $SD=9.93$). Subjects were required to participate in a vigorous boot camp program a minimum of five days per week for fifty minutes, follow a given and structured diet plan, and drink a gallon of water daily. **RESULTS:** There was a significant decrease in total body weight following the six-week challenge (197.1 ± 7.76 lbs pre vs. 187.8 ± 7.16 lbs post; $P < 0.001$). There was also a significant decrease in body fat ($38.6 \pm 1.52\%$ pre vs. $36.2 \pm 1.52\%$ post; $P < 0.001$) as lean muscle mass increased ($61.4 \pm 1.52\%$ pre vs. $63.8 \pm 1.52\%$ post; $P < 0.001$). Participants successfully lost 1 inch off their waist ($P < 0.01$) and hip ($P < 0.001$) circumference. Interestingly, RMR decreased from 1678.6 ± 59.36 kcal/day to 1602.7 ± 49.87 kcal/day although it was not statistically significant ($P = 0.09$). **CONCLUSIONS:** These data suggest that this particular weight loss program is effective in significantly reducing total weight, body fat, waist and hip circumference as lean muscle mass increased. This study supports the effectiveness of a financially driven six-week weight loss program and emphasizes its positive impact on body composition in previously sedentary individuals.

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