

**EFFECTS OF BRISK WALKING AND RESISTANCE TRAINING ON  
CARDIORESPIRATORY FITNESS, BODY COMPOSITION AND LIPID PROFILES  
ON OVERWEIGHT AND OBESE INDIVIDUALS.**

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The purpose of this study was to determine the effects of brisk walking (BW) and resistance training (RT) on cardiorespiratory fitness, body composition, and blood pressure and lipid profiles on overweight and obese individuals. 19 male (Age:  $34.5 \pm 9.5$  years) and 35 female subjects participated in this study. Based on their body mass index, 43% of them were overweight and 57% were obese. They were age and weight matched before being randomly assigned into 3 groups (brisk walking, resistance training and control) that consist of 18 subjects per group. The brisk walking group was carried out 3 times a week with increasing exercise time for 8 weeks at an intensity of 60-70% of age-predicted maximum heart rate. Resistance training of 3 sets, 8-15 repetitions of upper and lower body exercises using dumbbells (1-5 kg) was carried out 3 times a week for 8 weeks. The control group (C) was asked to continue their daily physical routine and dietary intake throughout the study period. Fasting blood samples and other anthropometric measurements for all 3 groups were assessed at pre, mid and post-intervention. Results indicate that there was a significant improvement in cardiorespiratory fitness for the BW group ( $28.3 \pm 8.8$  vs  $33.5 \pm 7.8$  ml.kg<sup>-1</sup>.min<sup>-1</sup>,  $p < 0.001$ ) and RT group ( $27.5 \pm 8.1$  vs  $29.3 \pm 7.8$  ml.kg<sup>-1</sup>.min<sup>-1</sup>,  $p < 0.01$ ) at post-intervention compared to pre-intervention. BW group also showed a significant improvement in percentage of body fat ( $39.6 \pm 9.3$  vs  $37.6 \pm 8.1$  %,  $p < 0.001$ ), waist hip ratio ( $0.83 \pm 0.05$  vs  $0.82 \pm 0.04$ ,  $p < 0.001$ ), fat mass ( $29.7 \pm 9.1$  vs  $28.0 \pm 7.8$  kg,  $p < 0.001$ ) and free fat mass ( $44.5 \pm 7.2$  vs  $45.9 \pm 6.9$  kg,  $p < 0.01$ ) compared with pre-intervention values. RT group was showed significant improvement in body mass index ( $29.7 \pm 3.5$  vs  $29.5 \pm 3.3$ kg. m<sup>-2</sup>,  $p < 0.05$ ), waist hip ratio ( $0.84 \pm 0.07$  vs  $0.82 \pm 0.06$ ,  $p < 0.001$ ), blood HDL-cholesterol ( $1.09 \pm 0.28$  vs  $1.19 \pm 0.36$  mmol.L<sup>-1</sup>,  $p < 0.05$ ) compared with pre-intervention values. Systolic blood pressure ( $124 \pm 7.5$  vs  $116.3 \pm 11.9$  mmHg,  $p < 0.05$ ) and fat mass ( $28.5 \pm 5.5$  vs  $33.9 \pm 10.6$  kg,  $p < 0.05$ ) for RT were showed significant different compared to C group values. Similarly, participants in the resistance training group had significant improvement in BMI, WHR, fat mass and HDL-cholesterol. Thus, we conclude that both types of exercise were effective in eliciting some positive health changes among the subjects in the intervention group.

Thus, we conclude that brisk walking and resistance are suitable and can be recommended for overweight and obese individuals.