

# THE EFFECT OF SHORT-TERM WEIGHT-BEARING EXERCISE ON BONE MASS DENSITY IN OBESE AND THIN YOUNG GIRLS

## Abstract

The purpose of the present study was to examine the effect of walking program on bone mass density (BMD) among healthy obese and thin young girls. Twenty untrained obese (n=10) and thin (n=10) girls, 20-25 years, volunteered to participate in this study. Before and after the training program both groups had anthropometric measurements, blood analysis BMD evaluation. Each walking session was 30 minutes walking between 50-75% of maximal heart rate, 3 days per week for 2 months. After exercise program, BMD in both regions (hip (1.1%), spin (L<sub>2</sub>- L<sub>4</sub>) (2.3%)) stabilized in the both groups (p<0.05). Percent body fat, fat mass and lean mass were affected positively by exercise program (all p = 0.000). No significant change was observed in Serum estrogen calcium, phosphorus in either group (p>0.05). This study showed that activities such as walking provide significant loading, which positively influences BMD in young thin and obese girls. This result suggests that both thin and obese women can reduce the risk of bone loss by increasing their level of activity.

**Key words:** Bone mass density, Bone loss, Walking exercise, Obese, Thin.