Physiological Effects of Exercise Program on the Bone Mineral Density in Sedentary Saudi Arabian Females

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Summary

Osteoporosis is a widespread disorder, which affects postmenopausal women, causing fractures after simple trauma. The overall expenditure to treat such injuries is draining the economy of the developing world. Earlier studies on Saudi Women have shown that their Bone Mineral Density (BMD) was much lower in comparison to the western standards. Exercise is long being known to reduce the risk of osteoporosis. A prospective study was carried out at King Faisal University, King Fahd Hospital of the University, Al-Khobar, Saudi Arabia to scientifically assess the effect of exercise in sedentary Saudi Women. The study was carried out in 100 women with clearly defined criteria of inclusion in the study. The data of height, weight, abdomen, and thigh girth was measured pre and post exercise. The age range was 28-50 years (mean 39 years). They were randomly divided into groups. Both groups had BMD measurement of the lumbar spine and hip region before the start of the study. One group was subjected to a structured exercise program within the hospital confines, three times a week for two months. At the end of the two months the measurements were repeated. The results indicate that there was statistical significant gain in the BMD measurement of women who had exercise as compared to the women who did not exercise. We believe it is advisable for Saudi women who are sedentary to participate in some type of exercise so as to reduce the risk of osteoporosis and osteoporosis related fractures.

Keywords: Osteoporosis Bone Mineral Density Exercise.