

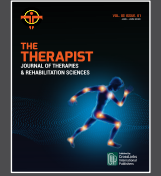


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## Editorial

# Impact of Exercises on Bone Health of Pre-Menopausal Female

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The process of bone resorption and creation, in which osteoclasts destroy old bone and osteoblasts produce new bone, causes the living tissue of bone to continually degrade. Bone is a dynamic tissue that adjusts to the accompanying mechanical forces that are put on it, such as exercise. In order to lower the risk of osteoporosis and resultant fractures during the postmenopausal years, with relative-risk rises, it is crucial to maintain appropriate bone mineral density (BMD) levels throughout the premenopausal years. Pre-menopausal women have been found to have osteopenia and osteoporosis at prevalence rates of 15% and 0.6%, respectively [1]. In addition, it has been found that premenopausal women lose between 0.25 and 1% of their bone mineral density per year [2]. In Pakistan, the long-life expectancy after menopause, multiparity, lack of a calcium-rich diet, vitamin D deficiency, physical inactivity, as well as socio-demographic factors, all contribute to an increase in the prevalence of primary, type II osteoporosis and its associated complications. According to a local survey, it affects postmenopausal women 20-49.3% of the time [3]. Although pre-menopausal women are often unsuitable for pharmaceutical treatment, relying on lifestyle factors is virtually always advised.

Exercise, a low-cost, non-pharmacologic intervention that is accessible to the great majority of the population, is one potentially successful lifestyle strategy for accomplishing this aim. During youth, exercise improves bone growth and increases BMD, and it may help older people avoid osteoporosis and fractures. Regular exercise, particularly weight-bearing and high-impact exercises, helps the body build high peak bone mass and may lower the risk of falls and osteoporotic fractures in later life. Regarding femoral neck BMD, high-impact exercise was shown to be most beneficial, and it has also been hypothesized that gains brought on by high-impact exercise are retained after intervention. In healthy pre-menopausal women, high-impact exercise increases the bone mineral density in the upper femur and the lumbar spine. This kind of exercise could be an effective, secure, and affordable strategy to prevent osteoporosis later in life if done regularly. Progressive resistance strength training for the lower limbs is the kind of exercise that have the greatest impact on BMD for the neck of the femur and should be taken into consideration in clinical practice. The multicomponent training exercise programme has been recommended as the most effective intervention for BMD at the spine. Aerobic exercises involving weight bearing and training on vibrating platforms may also improve BMD.

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