

## Effect of Aerobic Exercise on Estrogen Hormone and Bone Mineral Density in Osteoporotic Women

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**Abstract :** Osteoporosis is a metabolic bone disease characterized by low bone mass, deterioration of bone tissue, and disruption of bone microarchitecture, which leads to compromised bone strength and an increased risk of fracture, commonly it occurs in women 10-15 years after menopause, the mean age of menopause is 51 years. Menopause is natural physiological changes primary because of decline of ovaries function with age which leads to decrease of estrogen hormone production which is the main hormone for bone continuous remodeling for bone density maintenance. Exercise increase stimulation of bone growth to keep bone mass by the effect of the mechanical stimulation, antigravity loading and stress exerted on musculoskeletal muscles. Purpose: This study aimed to determine the effect of aerobic exercise on estrogen hormone and bone mineral density (BMD) in osteoporotic women and the correlation between the estrogen and BMD.

**Keywords :** Osteoporosis, Postmenopause, Aerobic exercise, DEXA, Serum Estrogen

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