

## عنوان مقاله:

Association of Physical Activity and Daily Calcium Intake with Body Mass Index and Bone Density in Menopause  
Females Referred to Bone Density Center of Rasht City

## محل انتشار:

مجله علمی پژوهشی دانشگاه علوم پزشکی زنجان، دوره 22، شماره 95 (سال: 1393)

تعداد صفحات اصل مقاله: 11

## نویسندگان:

مریم بهلوانزاده - *Dept. of Sport Physiology, Guilan Science and Research Branch, Islamic Azad University, Guilan, Iran*

فرهاد رحمانینیا - *Dept. of Sport Sciences, University of Guilan, Iran*

رامین شعبانی - *Dept. of Sport Physiology, Islamic Azad University, Rasht Branch, Guilan, Iran*

## خلاصه مقاله:

**Background and Objective:** This study was carried out to investigate the relationship between the amount of physical activity and daily calcium intake with body mass index and the amount of bone density in post-menopausal female patients. **Materials and Methods:** This descriptive-cross sectional study was performed on 80 post-menopausal women with mean age of  $58.13 \pm 7.59$  years and BMI mean of  $26.69 \pm 3.66$ . Participants' physical activity level was measured using Beck Physical Activity Questionnaire and daily calcium intake was measured using Food Frequency Questionnaire (FFQ) and three-day dietary recall. Bone densitometry method was used for determining bone density in the spinal and femur bone regions. To analyze the data, SPSS software was used. **Results:** Physical activity in 53.8% of the participants was in low level and calcium intake of 62.5% of them was lower than daily recommended level. Frequency distribution of bone density in spine region was 37.5% osteopenia and 26.2% osteoporosis while in femur bone it was 48.8% osteopenia and 11.2% osteoporosis ( $P < 0.05$ ). Women with a lower physical activity had 51.2% osteopenia and 46.5% osteoporosis in spine region along with 69.8% osteopenia and 20.9% osteoporosis in the femur bone region. Women whose daily calcium intake was lower than the recommended amount suffered from 38% osteoporosis and 36% osteopenia in spine region and 70% osteopenia and 14% osteoporosis in the femur region. **Conclusion:** In our study, most menopause women had osteopenia in both spinal and femur bone regions. Due to the significant effect of physical activity and daily calcium intake on bone density, an increase in daily calcium intake and encouragement of women to take part in physical activities are recommended. 1- Wickham CA, Walsh K, Cooper C, Barker DJ, Margetts BM, Morris J, et al. Dietary calcium, physical activity, and risk of hip fracture: a prospective study. *BMJ (Clinical research ed)*. 1989 299(6704): 889-92. 2- Sandler RB, Cauley JA, Hom DL, Sashin D, Kriska AM. The effects of walking on the cross-sectional dimensions of the radius in postmenopausal women. *Calcif Tissue Int*. 1987 41(2): 65-9. 3- Heaney RP. Calcium, dairy products and osteoporosis. *J Am Coll Nutr*. 2000 19(2 Suppl): 83s-99s. 4- WHO. Prevention and management of osteoporosis. *World Health Organ Tech Rep Ser*. 2003 921: 1-164, back cover. 5- Jamshidian-Tehrani M, Kalantari N, Azadbakht L, et al. Osteoporosis risk factors in Tehrani women aged 40-60 years. ... *Iranian Journal of Endocrinology and Metabolism*. 2004 6(2): 139-45. 6- Maalouf G, Gannage-Yared MH, Ezzed

## کلمات کلیدی:

Keywords: Physical activity, Daily calcium intake, Bone density, Menopause, Osteoporosis

