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Level of physical activity in patients with osteoporosis

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Objectives: The aim of this research was to examine the degree and types of physical activity (heavy physical activity, medium heavy and light physical activity) in female patients with lower bone mineral density compared to healthy women.

Materials and Methods: The cross-sectional study included 40 female patients (65,85±11,46 yrs) with lower bone mineral density (BMD) and 20 patients (56,25±6,6 yrs) with no existing abnormality of BMD levels. The research was conducted at the Medical Rehabilitation Clinic, Clinical Center of Vojvodina. Data were collected using the internationally endorsed questionnaire IPAQ. BMD was measured at lumbar spine (L1-4) and at proximal femur by Dual X-ray Absorptiometry technique (DXA). Osteoporosis was defined as BMD > -2.5 T score.

Results: We found that subjects with a normal bone mineral density had the highest level of physical activity (MET = 3154.58), followed by subjects with osteopenia (MET = 2311.25). Patients suffering from osteoporosis who were physically active had the lowest value of MET (1972.95) ($p<0.01$). Sub-analysis based on BMI categories showed 10% (2 patients) of those with osteopenia were underweight, compared to 40% (8 patients) in the group with osteoporosis.

Conclusions: Patients with osteoporosis were more obese and less physically active, as compared to healthier females. Our findings support the fact that adapted physical activity seems to be important for the prevention and treatment of patients with osteoporosis.

Key words: osteoporosis, bone mineral density, physical activity, IPAQ.