VEGETABLE CONSUMPTION AND BONE MINERAL DENSITY IN FEMALES

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Abstract

Vegetables consisted of wide spectrum of nutrients are linked with lower bone turnover, especially bone resorption. For osteoporosis, the evidence from a combination of observational, experimental, clinical, and intervention studies strongly suggest a positive link between vegetable consumption and indexes of bone health. Objective of our research was to investigate the impact of the frequency of vegetable consumption on bone mineral density (BMD) in females.

BMD was measured in 210 females by DEXA denzitometar. For the manner of nutrition a questionnaire was used. The females were divided into 4 age groups, and 4 subgroups: those consuming vegetables on: daily bases; 3 - 5 times/week; 1 - 2 times/week; and non-consumers. Data analysis was performed by statistical program Statistica 7.1 for Windows and SPSS Statistics 17.0. The significance was determined by $p < 0.05$.

0 - 49 and above 69 years old females, did not have significant differences in BMD no matter of vegetable consumption. 50 - 59 years and 60 - 69 years old females on everyday consumption had significantly higher BMD compared to 3 - 5 and 1 - 2 weekly consumers ($p < 0.001$). However BMD between 3 - 5 and 1 - 2 weekly consumers did not differ significantly. The highest influence on BMD/consumption/age ratio had every day consumption than 3 - 5 weekly consumption, while age had the weakest influence. Every day consumers, no matter of age, had a lower percentage of osteoporosis and heavy forms of osteoporosis compared to no consumers (10.9% v. 50% and 17.2% v. 25%). Normal level of BMD was not identified in no consumers group.

Everyday consumption of vegetables has significantly positive impact on BMD of 50 - 59 and 60 - 69 years old females, and it can be considered as a natural option for Osteoporosis prevention, as well as protection factor of critical BMD lowering to fracture threshold. However in 40 - 49 and above 69 years of age the frequency of vegetable consumption have no such influence.

***Key words**: Vegetables, Bone Mineral Density, Osteoporosis, Females, Prevention.*