

OSTEOPOROSIS PREVENTION IN LIGHT OF MODERN NUTRITION

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ABSTRACT

Nutrition plays a central role in bone metabolism as well as in the prevention and treatment of osteoporosis. Essential nutrients such as calcium, vitamin D, protein, and trace elements contribute to bone health, while a balanced diet reduces the risk of degenerative diseases. Calcium and vitamin D are crucial for bone density and formation, and proteins, particularly plant-based ones, also promote bone health. At the same time, "calcium thieves" such as phosphate and oxalic acid should be avoided, as they inhibit calcium absorption. Physical activity supports bone metabolism and minimizes fracture risk. Supplementation with calcium, vitamin D, and other nutrients shows promising but heterogeneous results regarding fracture prevention. A personalized nutrition therapy tailored to individual needs remains essential for maintaining bone health, especially for vegans and people with food intolerances. Future research must further refine specific recommendations for nutrient intake to optimize the preventive benefits of nutrition in osteoporosis.