This bachelor's thesis deals with dietary calcium intake and its effect on bone mineral density. The theoretical part summarizes the general knowledge of calcium, its function, metabolism, sources, recommended daily allowance, disorders of calcium metabolism, diseases associated with calcium metabolism. The practical part contains the evaluation of results of the questionnaire focused on dietary calcium intake of patients from Osteological Centre of the 3rd Department of Medicine - Department of Endocrinology and Metabolism, First Faculty of Medicine, Charles University in Prague and General University Hospital in Prague. These results were compared in association with bone mineral density. Key words: calcium, metabolism, nutrition, osteoporosis, bone mineral density