

**Title:** Bone fragility in postmenopausal women: a preliminary study

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**Abstract:** The aim of this work is to identify the prevalence of risks factors for bone fragility in postmenopausal women with hormonal replacement therapy (HRT) within two groups (with bone fracture history and without bone fracture history) and to evaluate the effect of modifiable risk factors on bone mineral density (BMD). The overall prevalence of osteoporosis in postmenopausal Portuguese women is high. A pattern identification of occurrences, in a group of patients submitted to this analysis, will enable the formulation of conclusions for knowledge improving of these different pathologies. This preliminary study will demonstrate that age, physical exercise and coffee consumption are associated with lower BMD and osteoporosis status in postmenopausal Portuguese woman.

**Keywords:** osteoporosis; osteopenia; bone mineral density; BMD; postmenopausal women; femoral neck; hip region; lumbar vertebra; risk factors; bone fragility; dual energy X-ray absorptiometry; DEXA; bone density; hormonal replacement therapy; HRT; bone fracture; Portugal; pattern identification; age; physical exercise; coffee consumption; postmenopause.

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