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Prevalence of low bone mineral density in an apparently-healthy elderly population

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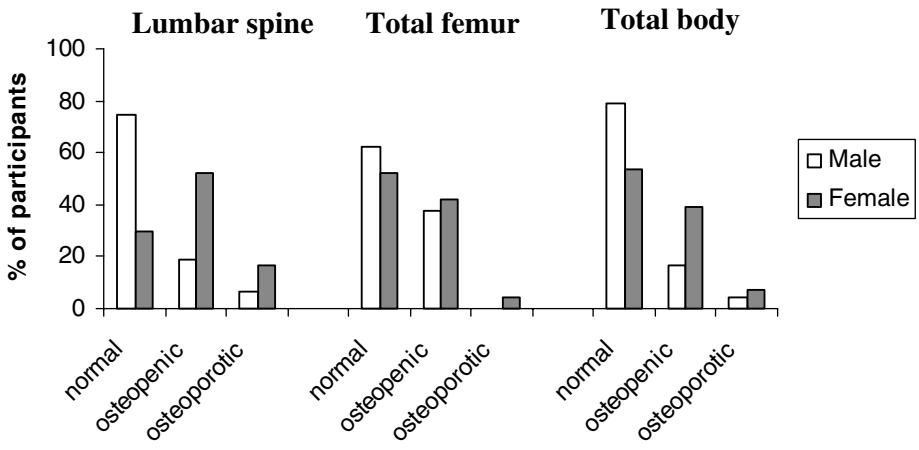
Osteoporosis is an increasingly common and debilitating bone disease that in many cases could be preventable and is estimated to cost the National Health Service £1.8×10^9 annually[1]. Earlier screening and treatment of older adults has been shown to reduce the incidence of hip fracture in women by 36% over 6 years compared with women who receive normal care[2]. Since low bone mineral density (BMD) is the single predictor of fracture risk, the aim of the present study was to measure BMD in elderly men and women and to assess the prevalence of undiagnosed osteopenia and osteoporosis. Apparently-healthy men and women aged 65–85 years ($n = 119$) were recruited from the local community. BMD of the lumbar spine (L1–L4), total femur and total body were measured by dual-energy X-ray absorptiometry using a Lunar Prodigy scanner (GE Lunar, Madison, WI, USA; software version 11). Values for males and females were compared using *t* tests.



BMD of the lumbar spine, total femur and total body was significantly higher in men compared with women ($P < 0.001$). Osteopenia (as defined by a T-score between -1.0 SD and -2.5 SD) at lumbar spine, total femur and whole body was evident in 18.8, 37.5 and 16.7% of men and 52.1, 42.3 and 39.4% of women respectively. The prevalence of osteoporosis (as defined by a T-score ≤ -2.5 SD) at lumbar spine, total femur and whole body was 6.3, 0 and 4.2% for men and 16.9, 4.2 and 7% for women respectively. While as expected the results showed higher levels of osteopenia and osteoporosis in women, low BMD was also evident in a considerable proportion of the healthy men recruited to the study. Current public health messages on maintaining bone health focus largely on women. The results clearly indicate that such strategies need also to focus on men and should be targeted at this age-group as a whole.

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1. Dolan P & Torgerson DJ (2000) *Osteoporos Int* **11**, 551–552.
2. Kern LM, Powe NR, Levine MA, Fitzpatrick AL, Harris TB, Robbins J & Fried LP (2005) *Ann Intern Med* **142**, 173–181.