



## There is an association between sarcopenia, osteoporosis, and the risk of hip fracture

Sarkopeni, osteoporoz ve kalça kırığı riski arasında ilişki vardır

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Sarcopenia is an age-related condition associated with progressive loss of muscle mass and function. It leads to physical disability, poor quality of life, and mortality.<sup>[1]</sup> There is an association between sarcopenia, osteoporosis, and the risk of hip fracture; like distal radius fracture and hip fracture.<sup>[2,3]</sup> Sarcopenia also increases the risk of five-year mortality in patients with osteoporotic hip fractures.<sup>[4]</sup>

Genetic, developmental, endocrine, and lifestyle factors, such as lack of physical activity, smoking, and poor diet have dual effects on both muscle and bone mass.<sup>[5]</sup> Vitamin D receptor might be a key element of osteoporosis-sarcopenia connection in muscle atrophy of elderly patients.<sup>[6]</sup>

Due to low physical performance and high bone turnover, older adults with osteosarcopenia have to be regarded as the most at-risk population for fractures and disability.<sup>[7]</sup> Interventions such as resistance training, optimal dietary protein, vitamin D, and calcium intake have positive effect on bone and muscle, reducing falls, fractures, and, consequently, disability.<sup>[8]</sup> A recent systematic review provides evidence of the beneficial effect of dairy protein to improve muscle mass in middle-aged and older adults.<sup>[9]</sup>

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