

Sarcopenia: Is it Connected with Osteoporosis?

In 1989, the term sarcopenia was introduced to refer to the age-related decline in skeletal muscle mass. Currently, sarcopenia is defined as a progressive decline in muscle mass, strength, and physical function, thus increasing the risk for various adverse outcomes, including osteoporosis. Osteoporotic fractures are defined as fragility fractures. While “frailty” has been a risk factor for such fractures in the past; increasing evidence now suggests that what we previously called frailty includes a significant component of loss of muscle mass, strength, and function—referred to as sarcopenia. Although muscle and bone tissues differ morphologically, their functioning is closely interconnected.

Sarcopenia-osteoporosis Duo

Lima et al. in a study found the rates of osteoporosis were 15.8%, 19.2%, 35.3%, and 46.2% for nonsarcopenia, presarcopenia, sarcopenia, and severe sarcopenia, respectively ($p = 0.002$). Whole-body and femoral neck bone mineral density (BMD) values were significantly lower among all sarcopenia stages when compared with nonsarcopenia ($p < 0.05$). The severe sarcopenia group showed the lowest lumbar spine T-scores ($p < 0.05$). When clustered, sarcopenia and severe sarcopenia presented a significantly higher risk for osteoporosis (odds ratio, 3.4; 95% confidence interval [CI], 1.5–7.8) dose to conclude a dose response relationship exists between sarcopenia stages, BMD, and the presence of osteoporosis. Not only objective testing for sarcopenia, but conducting even a subjective assessment should also be considered in addition to BMD determinations in making decisions about treatment.

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