## **Osteosarcopenia is it a public health problem?** Osteossarcopenia é um problema de saúde pública?

## José Eduardo Nogueira Forni<sup>1</sup>D

1. Faculdade de Medicina de São José do Rio Preto, Departamento de Ortopedia e Traumatologia, São José do Rio Preto, SP, Brazil

Osteosarcopenia is defined as the simultaneous occurrence of osteoporosis and sarcopenia. The incidence is highest in older adults and the condition is characterized by low bone mineral density with an increased risk of fractures, along with a reduction in muscle mass that leads to a decline in muscle strength and power, which, in turn, increases the risk of falls and disability. Osteosarcopenia leads to chronic pain, hospitalization and a reduction in quality of life as well as an increased risk of mortality<sup>1</sup>.

Binkley & Buehring first defined this condition in 2009 for older patients with both osteoporosis and sarcopenia and warned of the risk of falls, disability and fractures<sup>2</sup>.

The prevalence of osteosarcopenia varies among countries and geographical regions and depends on factors such as age, sex and diagnostic criteria. However, the global rate among older people ranges from 5 to 40%<sup>3</sup>.

The identification of risk factors is fundamental to the prevention and treatment of osteosarcopenia. The risk is fivefold higher in women compared to men due to the decline in estradiol that occurs with menopause. Moreover, fat infiltration in muscles and bones causes the secretion of a hormone associated with proinflammatory cytokines, such as IL-6, TNF- $\alpha$  and IL-1, leading to the apoptosis of myocytes and osteocytes<sup>4</sup>.

This clinical condition involves the loss of muscle strength and impaired balance, which can lead to

frequent falls and fractures, and may also be associated with cognitive decline<sup>5</sup>. The diagnosis is based on a detailed medical history complemented with strength of grip strength of the hands tests and the sit-tostand test as well as exams such as bioimpedance, ultrasound, quantitative computed tomography, magnetic resonance and the determination of bone mineral density<sup>6</sup>.

Non-pharmacological treatment involves resistance exercises for 20 minutes two to three times a week and nutritional support. Pharmacological treatment involves medication for chronic pain and high doses of vitamin D, along with calcium, antiresorptive agents, the replacement of all deficient vitamins, improvement of intestinal flora especially in elderly or in patients with wasting syndromes and protein replacement through protein supplements.

It is extremely important for healthcare providers – especially clinicians who treat patients with chronic pain – to be attentive to this diagnosis and initiate early treatment to avoid the occurrence of serious complications, including death. This author recommends that this serious condition be included in the curricula of undergraduate courses in medicine as well as graduate programs in the health sciences. This author recommends that this serious illness should be included in the curriculum of undergraduate medical courses, postgraduate courses in health sciences and that it can be included in public health programs<sup>7</sup>.

Study performed at the Faculdade de Medicina de São José do Rio Preto, Departamento de Ortopedia e Traumatologia, São José do Rio Preto, São Paulo, Brazil **Correspondence:** José Eduardo Nogueira Forni.

Rua Capitão José Verde, 1730, Boa Vista, 15025-530, São José do Rio Preto, SP, Brazil.

Email: eduforni@terra.com.br. Conflict of Interest: None. Source of funding: None. Received: 24/03/2025. Accepted: 06/04/2025.

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