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Sommario/riassunto	<p>Aging is characterized by progressive deterioration of walking ability. This function loss has multiple causes including central and peripheral nerve dysfunction, loss of muscle mass and strength, as well as joints and bone alterations. Muscle-tendon unit and its innervation has a pivotal role in motor function performance that can be disrupted by overuse degeneration and aging. Research has shown that overuse degeneration and aging also share some pathophysiological mechanisms including mitochondrial dysfunction, increased apoptosis, abnormal modulation of autophagy, decline in satellite cells, increased generation of reactive oxygen species, and modification of signalling and stress response pathways. This Research Topic is intended to bring together basic researchers and clinicians working in the area of neuroscience, aging, sarcopenia and orthopaedics in human and in animal models. The aim of this cross-fertilization is to accelerate our understanding of the mechanisms involved in aging and degeneration of the muscle-tendon unit and its innervation and to explore the therapeutic potential of pharmacological and physical therapy interventions.</p>