

Scholars propose new standards for gauging muscle decline in older adults

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the age-related loss of muscle mass and strength—may put up to 50 percent of seniors at greater risk for disability, yet there is no consensus within the medical community for how this condition should be measured. However, [a new collection of articles](#) appearing in *The Journals of Gerontology, Series A: Biological Sciences and Medical Sciences* (volume 69, number 5) lays out an empirically derived set of criteria for diagnosing sarcopenia.

These recommendations are a result of the Foundation for the National Institutes of Health Biomarkers Consortium Sarcopenia Project, which includes scientists and grantees from the National Institutes of Health, along with other partners in government, academia, and the private sector.

"Low [muscle mass](#) and weakness are common and potentially disabling in older adults, but in order to become recognized as a clinical condition, criteria for diagnosis should be based on clinically relevant thresholds and independently validated," state the authors in the lead article of the series.

Their findings suggest that evidence-based cutpoints of grip strength (the force applied by the hand to grip an object) and lean mass could be used in identifying sarcopenia. To arrive at the recommended criteria, the scientists working within the Sarcopenia Project pooled data from nine large studies of older people living in the community and analyzed it for grip strength, gait speed, [body mass index](#) (BMI), and appendicular lean mass (ALM), which is a measurement of muscle mass in the arms and legs. The total sample included more than 26,000 participants. The average age of the men was about 75.2 years, and the average age of the women was 78.6 years. Women comprised 57 percent of the sample.

Based on their analyses, the investigators recommend that weakness be defined as [grip strength](#) less than 57 pounds (26 kilograms) for

men and 35 pounds (16 kilograms) or less in women, and low muscle mass defined as an ALM-to-BMI ratio of less than 0.789 for men and 0.512 for women. Both of these criteria were associated with increased risk of developing mobility impairment over three-years of follow-up.

They also noted that the datasets included primarily healthy older people who lived within the community; they noted that additional research is needed in more vulnerable older populations where disability rates are higher.

In the final article in the series, the authors propose adopting the term "skeletal muscle function deficit" as a new terminology to embrace the evolving conceptualization of sarcopenia and other age-related muscle dysfunction; they argue it has the potential to provide a framework for developing diagnostic categories that are useful for both clinical practice and research.

Provided by The Gerontological Society of America

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