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ICFSR 2017
International Conference on
Frailty & Sarcopenia Research

The conference will be held at
HOTEL CROWNE PLAZA BARCELONA
FIRA CENTER BARCELONA
AV. DE RIUS I TAULET, 1-3,
08004 BARCELONA • SPAIN

April 27-29 April • Barcelona, Spain

THE SARCOPENIA PROJECT SYMPOSIUM

BARCELONA, SPAIN, April 27, 2017.

Slow walking speed and muscle weakness are common problems among the elderly and can be signs of the age-related decline in muscle mass and strength known as sarcopenia. In recent years, sarcopenia has emerged as a major contributor to disability and other poor outcomes among older adults, including falls and death, yet there has been little agreement on the best way to diagnose the condition. Now, however, researchers are getting close to developing diagnostic criteria that can be used both clinically and in research studies, potentially raising awareness of the condition in the general population and among clinicians, and providing a much-needed tool for use in clinical trials for sarcopenia treatments.

At the International Conference on Frailty and Sarcopenia Research (ICFSR) on Thursday, April 27, researchers from multiple institutions working collaboratively as part of the Sarcopenia Definitions and Outcomes Consortium, which is funded by the National Institute on Aging (NIA) and the Foundation for the National Institutes of Health (fNIH), presented preliminary results from analysis of data from more than 20,000 older adults. This analysis suggests that commonly used measures of muscle strength, walking speed, and body size can be combined to diagnose sarcopenia.

The data were collected in eight different cohort studies that used similar assessment tools to measure muscle mass, muscle strength, and walking speed. The first step was to harmonize data across these cohorts so that they could be compared. For example, some studies measured walking speed over 4 meters while others measured it over 6 meters. By converting these measures to meters per second, the results of different studies could be compared, said Thomas Travison, PhD, of Harvard Medical School. Muscle mass measurements also had to be harmonized, he said, since although all studies used DXA (dual energy x-ray absorptiometry), different instruments, software, and calibration approaches were used.

Next, different statistical methods were used to determine the best way to compare strength, muscle mass, and physical performance in people who are very different in size. This analysis identified several candidate measures and cutpoints that accurately categorized participants as either sarcopenic or non-sarcopenic regardless of whether they were slim or overweight. These various measures were tested in the large dataset to determine which combination of factors provided the best discriminatory power.

"We allowed the data to show us which are the most important variables," said Peggy Cawthon, PhD of the University of California, San Francisco And California Pacific Medical Center. "*The ratio of grip strength to body mass index was most consistently associated with slow walking although others were also possible*", said Todd Manini, PhD, from the University of Florida, Gainesville.

Finally, the data from all 8 cohorts were analyzed to see which of the various definitions and cutpoints provided results most predictive of mortality and falls. These analyses are still ongoing, but Cawthon said early results suggest that both grip strength and slower walking speed provides additional information in both men and women about the risk of both death and falls. The analyses also identified important differences between men and women. For example, slow walking speed increases the risk of mortality more in men than in women, although the prevalence of slow walking speed is higher in women.

Cawthon stressed that there is more work to do. Since the studies from which the cohorts were derived mostly required participants to be community dwelling and ambulatory, the sample included relatively few with mobility complaints, cognitive impairment, or other medical conditions that are associated with a high prevalence of sarcopenia, such as hip fracture. The influence of race and country of origin also needs to be explored. Nonetheless, once these data are fully analyzed, the consortium plans to hold a conference in 2017 to try to reach consensus across the field regarding diagnostic criteria for sarcopenia.