

Thigh fat may be to blame for older adults who slow down

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(Medical Xpress)—A new study from Wake Forest Baptist Medical Center shows that an increase in fat throughout the thigh is predictive of mobility loss in otherwise healthy older adults.

Lead author Kristen Beavers, Ph.D., and colleagues at Wake Forest Baptist said the findings suggest that prevention of age-related declines in walking speed isn't just about preserving [muscle mass](#), it's also about preventing [fat](#) gain.

Walking speed declines with age, said Beavers, and in older adults slower walking speed is a predictor of disability, nursing home admission and even death. As such, she believes that walking speed represents an important, and potentially modifiable, predictor of independent living for older adults. Unfortunately, said Beavers, not much is known about what precedes this decline, although change in body composition seemed like a reasonable place to start the research. "As people age, they are more likely to gain fat in and around their muscles, and we speculated that gaining fat in the leg [muscle](#) itself would be related to slowed walking speed."

The researchers used data from the National Institute on Aging's Health, Aging, and Body Composition (Health ABC) study, a prospective cohort of several thousand initially well-functioning white and black adults aged 70-79. They looked at how changes in fat and lean mass affected walking speed, and were specifically interested in whether changes in thigh intermuscular fat or thigh muscle area were more predictive of slowed walking speed.

A study sample of 2,306 men and women was reviewed, with a mean age of 74.6 years. Walking speed was assessed by measuring the usual time it took participants to complete a 20-minute walk, and they were tested annually over a four-year period. Body composition measures were assessed via computed tomography (CT).

Results, published online ahead of print in the [American Journal of Clinical Nutrition](#), found both increasing thigh intermuscular fat and decreasing thigh muscle area to be significant, independent predictors of walking speed decline. Importantly, said Beavers, older adults who gained the most thigh fat and lost the most thigh muscle were at greatest risk of experiencing a clinically meaningful decline in walking speed.

Beavers said this study is the first of its kind to address the independent association between changes in sophisticated measures of [body composition](#) and walking speed. "As the burden of disability becomes increasingly common and expensive, identification of modifiable contributors to functional decline in older adults is emerging as a significant priority of public health research," Beavers said. "Future studies building on these findings should test whether targeted reductions in thigh intermuscular fat, augmentation of thigh muscle area, or both yield improvements in [walking speed](#) and prolonged independence for older adults."

Provided by Wake Forest University Baptist Medical Center

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