

Study highlights need for strength training in older women to ward off effects of aging

23 April 2018, by David J. Hill



Credit: University at Buffalo

Regular physical activity may help older women increase their mobility, but muscle strength and endurance are likely to succumb to the effects of frailty if they haven't also been doing resistance training.

That is according to the findings of a cross-sectional study led by the University at Buffalo and published in the journal *Physical & Occupational Therapy in Geriatrics*.

The study underscores the need for older [women](#) to build up [muscle strength](#) early in the aging process to help ward off the effects of aging, say the study's lead authors Machiko Tomita, clinical professor, and Nadine Fisher, clinical associate professor, both in the Department of Rehabilitation Science in UB's School of Public Health and Health Professions.

"Frailty progresses with aging, but older women who engage in a high level of daily physical [activity](#) can reverse certain characteristics related to aging, such as slow walking and decreased function," says Tomita.

"But for women over the age of 75, muscle strength and endurance declines. Starting resistance exercise when they are young and continuing it is important so that when they reach a very advanced age they have already built up their strength and endurance reserves," Fisher added.

The study looked at 46 women across two different age ranges, 60-74 and 75-90, to learn how physical activity affects frailty differently in the two groups. Researchers found that there was a larger difference between the two groups in terms of muscle strength and endurance among those who were very physically active.

"The younger group's strength and endurance were much better than the older group's. This change was attributed to the younger group's significant gain in them because of the age," Tomita said.

With mobility—as measured by the length of a person's step—and basic functional ability, there was a gap between the two age groups among women who engaged in minimal physical activity. However, that gap disappeared if they did a high level of physical activities.

"Two indicators of frailty, muscle strength and endurance vs. walking speed and function, showed an opposite pattern when we examined age and [physical activity levels](#)," Tomita said.

Tomita says she was surprised to find that women in the 60-74 age group were not engaging in enough physical activity.

"Their main physical activities consisted of light gardening, light housework and stretching. Is this because they are still working and don't have time for exercise, or do they think they are healthy and don't need to?" she said. "It appears that committing to regular exercise is not yet a standard part of older women's lifestyles and is instead a reactive behavior to, for example, falls or illness."

Tomita suggests that [older women](#) should walk more, but 10,000 steps per day are excessive. She also recommends talking to a physical therapist or trainer to learn about exercises that can build muscle [strength](#) and [endurance](#).

In follow-up studies, Tomita and Fisher hope to track older adults who engage in high and low levels of [physical activity](#) for a period of several years. "This will tell us real lifestyle differences that impact frailty," Tomita says.

More information: Machiko R. Tomita et al, Impact of Physical Activities on Frailty in Community-Dwelling Older Women, *Physical & Occupational Therapy In Geriatrics* (2018). [DOI: 10.1080/02703181.2018.1443194](#)

Provided by University at Buffalo

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