New analysis questions frailty outcome for older adults

In the world of geriatrics research, the impact of physical activity on frailty has often been discussed. Now, a secondary analysis of a randomized, controlled trial could offer some insight on the topic.

Researchers examined data collected from a trial that included 1,635 community-dwelling older adults in eight centers across the United States. The participants ranged from age 70 to 89 years and had functional limitations. One group received an intervention that included a structured, moderate-intensity physical activity program incorporating aerobic, resistance, and flexibility activities. The other group participated in a health education program that consisted mainly of workshops and stretching exercises.

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Researchers also analyzed data from the 2013 Lifestyle Interventions and Education for Elders (LIFE) study. After a 2-year follow-up, researchers found no statistically significant difference in frailty measures between the group that received the exercise intervention and the group given health education. However, the frailty findings were not more impressive. Results from a trial that included 1,635 community-dwelling older adults in eight centers across the United States. The participants ranged from age 70 to 89 years and had functional limitations. One group received an intervention that included a structured, moderate-intensity physical activity program incorporating aerobic, resistance, and flexibility activities. The other group participated in a health education program that consisted mainly of workshops and stretching exercises.

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Emily Peron, PharmD, MS, BCPS, BCGP, FASCP, assistant professor of geriatrics at Virginia Commonwealth University School of Pharmacy in Richmond, said she was initially surprised that the frailty findings were not more impressive. Results from the 2013 Lifestyle Interventions and Independence for Elders (LIFE) study have consistently supported physical activity to reduce the risk of major mobility disability among older adults with existing functional limitations, she said. This analysis, published in the *Annals of Internal Medicine,* was a secondary analysis of the LIFE study on physical activity and frailty.

“Although there was no significant reduction seen in overall risk of frailty with the physical activity or health education group, this does not negate the value of either intervention,” said Peron.

Peron’s own research has focused on the relationship between medication use and functional status in older adults. A common thread she’s noticed between studies of pharmacologic and nonpharmacologic interventions for this patient population is that small changes—such as walking 150 minutes a week—can make a big difference.

“I think the take-home message overall from the LIFE study is that it is never too late to make a lifestyle change,” said Peron. “From this secondary analysis, in particular, I think the biggest take-away is that physical activity [as tolerated] should be a consideration for all older adults, not just those who are considered nonfrail by one definition or another.”

Frailty as an outcome measure

Peron pointed out that the *Annals* article is unique in that it calls into question the use of frailty as an outcome measure.

In the accompanying *Annals* editorial to the secondary analysis, Rebecca Brown, MD, MPH, and Kenneth Covinsky, MD, MPH, wondered the same thing. They define frailty as a state of decreased physiologic reserve and increased vulnerability to stressors and say that increasingly, frailty has been recognized as a strong predictor of poor health outcomes. However, no single, universally accepted definition of frailty exists, they wrote.

For this secondary analysis, a standard definition was used to classify whether participants were frail. It included measurements of weight loss, energy level, and the ability to get up from a chair with the use of chair arms. To participate in the study, the groups had to be able to walk a quarter mile (400 m) without assistance. Major mobility disability was defined as not being able to walk a quarter mile within 15 minutes without assistance.

A solid trial

Especially among older adults, recruitment and retention in clinical trials can present challenges with the research, but the LIFE study included a large sample size and an extended follow-up.

“Randomized controlled trials systematically exclude older adults, particularly those with functional limitations,” said Peron. “Research that is representative of older adults with varied functional abilities is key to changing geriatric practice and building the evidence base for clinical interventions.”

Peron, who also led some of the health education sessions for the LIFE study while at the University of Pittsburgh as a postdoctoral research fellow, added that she was impressed by the level of engagement among participants and the pride many felt simply by being enrolled in the study.

“Although [this was] not specifically addressed by the planned study or in post-hoc analyses, I also wonder if there was an inherent value in creating community that we do not account for in the clinical research,” said Peron. A sense of purpose and community could also be associated with positive outcomes.

References


Loren Bonner, senior editor