

Laughter-based exercise program for older adults has health benefits, researchers find

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Credit: Georgia State University

Incorporating laughter into a physical activity program that is focused on strength, balance and flexibility could improve older adults' mental health, aerobic endurance and confidence in their ability to exercise,

according to a study led by Georgia State University.

In this study, older adults residing in four assisted-living facilities participated in a moderate-intensity group [exercise program](#) called LaughActive that incorporates playful simulated [laughter](#) into a strength, balance and flexibility workout. In simulated laughter exercises, participants initially choose to laugh and go through the motions of laughing. The exercises facilitate eye contact and playful behaviors with other participants, which generally transition the laughter from simulated to genuine.

Simulated laughter techniques are based on knowledge that the body cannot distinguish between genuine laughter that might result from humor and laughter that is self-initiated as bodily [exercise](#). Both forms of laughter elicit [health benefits](#), researchers said.

For six weeks, study participants attended two 45-minute physical activity sessions per week that included eight to 10 laughter exercises lasting 30 to 60 seconds each. A laughter exercise was typically incorporated into the workout routine after every two to four strength, balance and flexibility exercises. Because laughter is scientifically demonstrated to strengthen and relax muscles, the laughter exercises often involved physicality in the muscles being worked in strength, balance and flexibility exercises to prepare the body for exercise and help it recover.

The study found significant improvements among participants in mental health, aerobic endurance and outcome expectations for exercise (for example, perceived benefit of exercise participation), based on assessments completed by the participants. When surveyed about their satisfaction with the program, 96.2 percent found laughter to be an enjoyable addition to a traditional exercise program, 88.9 percent said laughter helped make exercise more accessible and 88.9 percent

reported the program enhanced their motivation to participate in other exercise classes or activities. The findings are published in the journal *The Gerontologist*.

Despite the health benefits of physical activity and the risks of physical inactivity, many adults don't engage in sufficient physical activity to achieve health benefits. Maintaining the motivation to adhere to [regular physical activity](#) is a challenge for many older adults. Adults should participate in a minimum of 30 minutes of physical activity at least five days per week to achieve desirable health outcomes, according to the U.S. Department of Health and Human Services' 2008 Physical Activity Guidelines.

These health benefits include lower mortality and a reduced risk of a number of chronic conditions, including coronary heart disease, high blood pressure, stroke, type 2 diabetes, metabolic syndrome, osteoporosis, colon cancer, breast cancer, anxiety and depression. Regular physical activity also reduces the impact of age-related declines in aerobic endurance, the incidence of falls and hip fracture and the degenerative loss of muscle mass, quality and strength. All of these benefits are crucial in older adults maintaining their ability to perform activities of daily living.

The pleasant associations with laughter may add enjoyment to an exercise program and keep older adults motivated to work out.

"The combination of laughter and exercise may influence older adults to begin exercising and to stick with the program," said Celeste Greene, lead author of the study and a master's degree graduate from Georgia State's Gerontology Institute. "We want to help older adults have a positive experience with exercise, so we developed a [physical activity program](#) that specifically targets exercise enjoyment through laughter. Laughter is an enjoyable activity and it carries with it so many health

benefits, so we incorporated intentional laughter into this program to put the fun in fitness for older adults."

Simulated laughter may be an ideal way for older adults with functional or cognitive impairment to achieve the health benefits of laughter, which include improved physiological and psychological functioning.

Participants simply choose to laugh and initiate laughter as bodily exercise. There is no need to rely on cognitive skills to "get the joke" because there is no joke. Further research is needed to better understand the underlying mechanisms of laughter, the effect of different levels of exposure to laughter and its associated health benefits.

This research is one of few studies to evaluate the potential of simulated laughter in improving health outcomes among [older adults](#), and it's the first evaluation of a dedicated [physical activity](#) program that incorporated simulated laughter, said Dr. Jennifer Craft Morgan, second author of the study and Greene's thesis adviser.

More information: Celeste M. Greene et al. Evaluation of a Laughter-based Exercise Program on Health and Self-efficacy for Exercise, *The Gerontologist* (2016). [DOI: 10.1093/geront/gnw105](https://doi.org/10.1093/geront/gnw105)

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