

# UF to receive \$64 million over six years to study whether exercise prevents disability in older adults

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The University of Florida will receive \$29.5 million in federal stimulus funds over the next two years from the National Institute on Aging to begin a six-year study on whether a program of structured physical activity can prevent or delay major movement disability in older adults.

When completed, funding for the project is expected to total more than \$60 million from the NIA, including the \$29.5 million through the American Recovery and Reinvestment Act of 2009. The total will amount to the largest federal award to UF, as well as fund the largest study to prevent mobility disability in seniors.

Many studies have shown that regular exercise improves physical performance. And the U.S. Department of Health and Human Services recommends that adults engage in at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity aerobic activity each week, as well as muscle-strengthening activities.

Still, little is known about whether exercise can actually help prevent major mobility disability, defined as the inability to walk a quarter of a mile, or four blocks.

For older adults, staving off disability could help them maintain their physical independence and enhance the quality of their later years.

“We all know that physical activity is good for our health, but the definitive evidence whether it can prevent disability in older people — whether you can prevent them from being unable to walk — is lacking,” said principal investigator Marco Pahor, M.D., director of the UF Institute on Aging.

The new study, called the Lifestyle Interventions and Independence for Elders, or LIFE study, seeks to fill that gap in scientific knowledge. This phase 3 randomized controlled trial of 1,600 sedentary adults ages 70 to 89 who are at risk of mobility disability will be conducted at eight institutions around the country.

It expands on the results of a pilot study that found the rate of onset of mobility disability was lower among a group of older adults who engaged in a structured exercise program for a year, compared with a group of seniors who took part in a health education



Marco Pahor, M.D.

program for a year.

“This grant reflects NIH’s recognition of the excellence of Dr. Pahor’s work in this area over the past 10 years,” said David S. Guzick, M.D., Ph.D., UF’s senior vice president for health affairs and president of the UF&Shands Health System. “It represents the kind of translational research that UF will increasingly be in a position to conduct.”

UF is the coordinating center and a field site for the LIFE study, with other field sites at Northwestern

University, Pennington Biomedical Research Center — a campus of the Louisiana State University system, Stanford University, Tufts University, the University of Pittsburgh, Wake Forest University Health Sciences and Yale University.

Recruitment will begin in early 2010. Eligible participants will be randomly assigned either to take part in a program of moderate-intensity physical activity or a health education program on successful aging. Individuals will be followed for up to three-and-a-half years.

It will be the largest randomized controlled trial ever conducted on physical activity in older adults, and the size of the study will allow scientists to examine the effect of physical activity on a large number of outcomes in ways that have not been possible before.

Primarily, the study seeks to gauge whether there are long-term effects of physical activity interventions on major mobility disability. Investigators will also examine the effects of physical activity on a number of factors, including cognitive function, serious fall injuries, disability in basic activities of daily living, cardiovascular events and hospitalization and nursing home admission. They will also examine quality-of-life measures such as depression symptoms, sleep quality, stress and satisfaction with life.

In addition, the project will allow an assessment of the cost effectiveness of walking programs for the elderly, and whether the money spent on such programs can help reduce medical expenses for injuries and illness that might otherwise result from lack of adequate physical activity.

As life expectancy increases in the United States, the care of older adults has become a major issue for clinical practice as well as public health policy. Average life expectancy today is 77.7 years — almost seven years more than in 1970, according to CDC data.

As adults age, many lose vitality and the inclination or ability to engage in physical activities as simple as walking. Older adults ages 60 to 85 spend almost 60 percent of their time — more than eight of their waking hours — in sedentary behaviors, according to data from the National Health and Nutrition Examination Survey.

The length of time spent in sedentary behaviors has been associated with increased risk of weight gain and various diseases, including diabetes and heart disease. And people who lose their mobility have higher rates of sickness, hospitalization and death than others who do not have disabilities.

“Limitations in walking ability compromise independence, and contribute to the need for assistive care,” said Evan C. Hadley, M.D., director of NIA’s Division of Geriatrics and Clinical Gerontology, whose program is overseeing the trial. “Older people with impaired

walking are less likely to remain in the community, have higher rates of certain diseases and death, and experience a poorer quality of life. A successful intervention might help prevent these bad outcomes.”