

For older adults, exercise is good medicine for health, mobility and mood

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“Even if you are overweight or obese, starting a physical activity program can have beneficial effects above and beyond weight control or weight loss,” says Roger Fielding.

Because folks over age 65 will make up 40 percent of the U.S. population in 30 years, according to the Census Bureau, quality of life looms as an important public health issue as baby boomers head into retirement. Figuring out how seniors can best maintain it was a major goal of the recently completed Lifestyle Interventions and Independence

for Elders (LIFE) Study, conducted at eight sites across the United States, including Tufts, the University of Florida and Northwestern and Stanford universities.

Scientists already knew that the ability to walk without assistance is hugely important in keeping elders independent; that is, able to care for themselves and live on their own. Rates of disease, disability and death are much higher among people with reduced mobility. That's why the study investigators—including Roger Fielding, a senior scientist and director of the Nutrition, Exercise Physiology and Sarcopenia Laboratory at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts—believe keeping older Americans moving will also ease the burden on the health-care system.

The scientists recruited sedentary men and women between ages 70 and 89 who were already having some difficulty getting around. The seniors were randomly sorted into one of two groups; half participated in structured aerobic, flexibility and strength training two times a week at their local research centers. They were also supplied with at-home workouts to complete three to four times a week. The goal of the exercise program was to get them walking up to 30 minutes at a time and doing 10-minute sessions each of strength and balance exercises three to four times a week.

The other half of the [study participants](#) attended sessions at the centers that included workshops on healthy aging and stretching exercise classes that were limited to the upper body.

Over the course of the three-year study, the researchers witnessed remarkable results. Compared with those in the health education group, the exercising seniors significantly lowered their risk of developing mobility problems. What's more, the active group fared better than their counterparts by other measures, too. They experienced fewer

cardiovascular and fewer diabetes-related health events during the trial. The study appeared in the *Journal of the American Medical Association* in May. Tufts Now asked Fielding about the findings and what they mean for all of us.

Tufts Now: Is it ever too late to start exercising?

Roger Fielding: I don't think there is an age limit on when you can start. It's hard for me to conceive of people being too old to begin an activity program, especially given that we saw such positive effects in this relatively older group. The average age of the study participants when they started was almost 79, and they were followed for an average of three years.

Even though these folks had a lot of chronic diseases and had some mobility limitations at the start, they were still able to benefit from this program of [physical activity](#) in terms of reducing the onset of major mobility disability, which we define as not being able to walk 400 meters or about a quarter of a mile without stopping or the use of aids like walkers or canes. We were able to preserve their independence longer with this [exercise program](#). That's an important public health finding.

Of course, if we can motivate and encourage people earlier in their lives to adopt a program of moderate-intensity physical activity, I certainly believe we can help prevent mobility limitations, too.

What kind of exercise did the study participants do?

The primary mode was walking. They also did very modest resistance training and low-intensity knee-extension and knee-flexion exercises with ankle weights. That's based on a lot of evidence that cardio, strength and flexibility training are all really important components of physical

fitness and have clear health benefits.

We tried to design a program that [older people](#) could do that didn't require any specialized equipment and could be done in a number of different settings.

We also tailored the intervention to match people's level of fitness and physical health. Some people could really only walk three or four minutes before they had to stop and rest. We gradually built them up, and by the end of the study, people were walking an average of 25 to 30 minutes per session.

How can someone get started on his or her own?

Cardiovascular exercise or [aerobic exercise](#), like walking, benefits so many of the body's systems. Good cardiovascular fitness reduces the risk of heart attack and stroke. We know that for sure.

I think most people, with a little bit of guidance and maybe a few tips, can walk on their own. People don't need a lot of supervision, unless someone is really limited or has a balance problem.

Go for a 10- to 15-minute walk at first; then gradually increase the time. People can do this inside; they can do it outside when the weather's good. People have lots of options, such as shopping malls or the grocery store. It doesn't have to be the gym. Walking is the most important thing we need to encourage all older adults to do. Everybody should think about getting out of that chair and walking more.

Then you'll want to introduce some [strength training](#) two to three days a week. That's particularly true for older people, because we know we lose muscle as we age.

Why is it important to maintain muscle tissue?

Muscle is one of the biggest consumers of sugar. If you're physically active and physically fit and you have a lot of lean muscle mass, your risk of developing type 2 diabetes is reduced.

Certainly from a performance perspective, if you have more muscle and are stronger, you'll find it easier to walk, easier to stand up and get out of your chair.

Flexibility training such as stretching or yoga is good for reducing musculoskeletal injuries and joint pain, so that needs to be part of the picture, too. Additionally, older adults may be starting to have problems with stability and balance. Doing some simple balance-training exercises may be advisable for them as well. One example of that is holding on to a counter and standing on one leg, with one hand or two hands holding as able, then attempting it with eyes closed, if able.

The main message is this: you have to start slowly and listen to your body. It's not unusual to have a little bit of soreness the first week or two, but that should go away over time.

What if someone is very overweight? Is it safe to start exercising?

Even if you are overweight or obese, starting a physical activity program can have beneficial effects above and beyond weight control or weight loss. Don't ignore one at the expense of the other. Physical activity by itself doesn't seem to have a real strong effect on weight loss, but I think lack of fitness is an independent risk factor for a lot of bad events in people's lives.

What are some of the other benefits of exercise?

There's clear evidence that exercise helps with mood. Some small studies and some observational studies indicate that cognition and brain function and even brain anatomical structures may be influenced by [exercise](#), but we need to know more about that. There's definitely some evidence that sleep quality is improved with physical activity.

More information: The complete study is available online:
[jama.jamanetwork.com/article.aspx?articleid=1875328](https://jamanetwork.com/article.aspx?articleid=1875328)

The National Institute on Aging, part of the National Institutes of Health, has an online guide that is available online:
www.nia.nih.gov/sites/default/files/physical_activity_0.pdf

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