

Steep physical decline with age is not inevitable—here's how strength training can change the trajectory

October 16 2023, by Zachary Gillen



From left are the author's father, who was age 61 at the time, the author's wife and the author after completing the Lincoln Half Marathon. Credit: Zachary Gillen, [CC BY-NC-ND](#)

Raise your hand if you regularly find yourself walking up a flight of stairs. What about carrying heavy bags of groceries? How about picking up your child or grandchild? Most of us would raise our hands to doing at least one of those weekly, or even daily.

As people age, it can become more and more difficult to perform some physical tasks, even those that are normal activities of daily living. However, prioritizing physical fitness and health as you get older can help you go through your normal day-to-day routine without feeling physically exhausted at the end of the day.

It can also help you continue to have special memories with your family and loved ones that you might not have been able to have if you weren't physically active. For example, I ran two half-marathons with my dad when he was in his 60s!

I am an [exercise physiologist](#) who studies how people can [use resistance training to improve human performance](#), whether it be in sports and other recreational settings, in everyday life, or both. I am also a certified [strength](#) and conditioning specialist. My career has given me the opportunity to design [exercise programs](#) for kids, college athletes and [elderly adults](#).

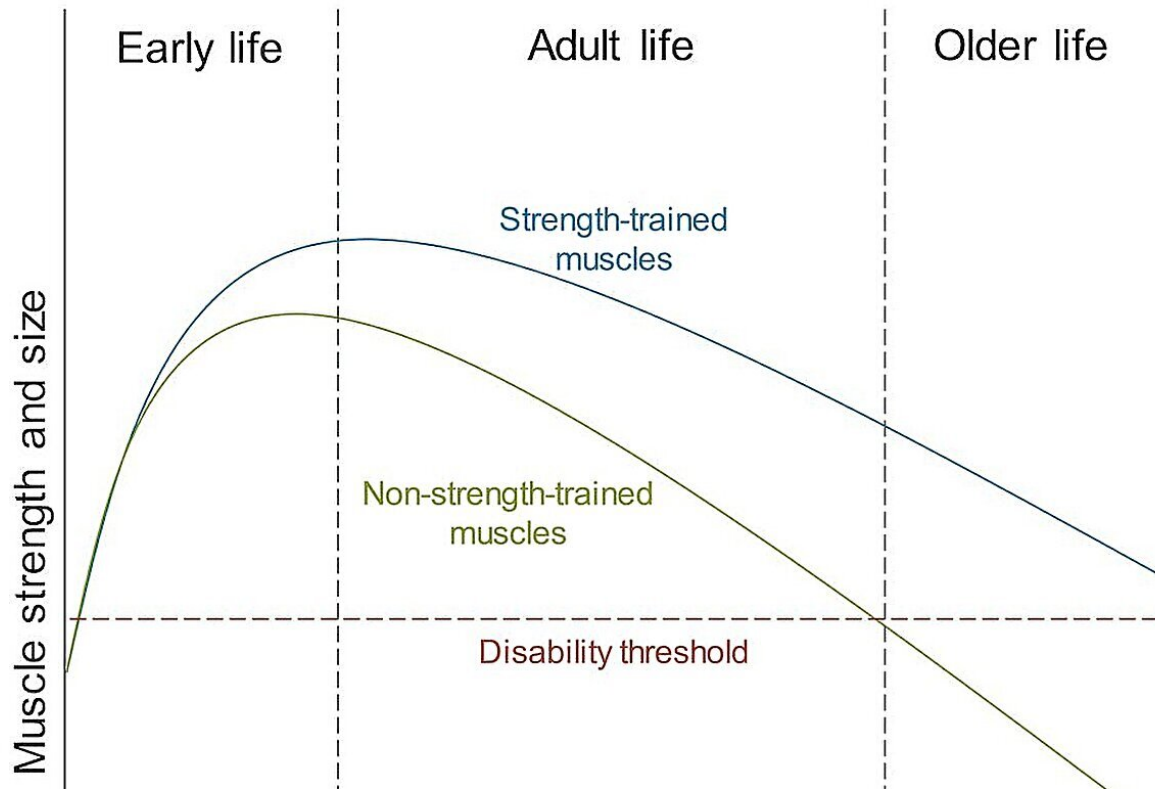
Staying physically active as you get older doesn't need to include running a half-marathon or trying to be a bodybuilder; it could be as simple as trying to get through the day without feeling winded after you go up a

flight of stairs. Although our muscles naturally get weaker as we age, there are ways we can combat that to help improve quality of life as we get older.

Muscle loss and chronic disease

One of the most important parts of [exercise](#) programming, no matter who I am working with, is proper resistance training to build [muscle strength](#). Some amount of age-related loss of [muscle](#) function is normal and inevitable. But by incorporating resistance training that is appropriate and safe at any ability level, you can slow down the rate of decline and even prevent some loss of muscle function.

The medical term for a condition that involves [age-related loss of muscle function and mass is sarcopenia](#). Sarcopenia can begin as early as age 40, but it tends to be [more common in adults age 60 and older](#). Sarcopenia is associated with a number of health issues such as [increased risk of falling](#), [cardiovascular disease](#) and [metabolic disease](#), among others.



Typical age-related changes in muscle strength and size with and without strength training. Credit: Zachary Gillen

In one of our team's previous studies, we saw that otherwise healthy individuals with sarcopenia had issues [delivering vital nutrients to muscle](#). This could lead to greater likelihood of various diseases, such as Type 2 diabetes, and slow down recovery from exercise.

Recent estimates suggest that sarcopenia affects [10% to 16% of the elderly population worldwide](#). But even if a person doesn't have clinically diagnosed sarcopenia, they may still have some of the underlying symptoms that, if not dealt with, could lead to sarcopenia.

Strength training is key

So the question is, what can be done to reverse this decline?

Recent evidence suggests that one of the key factors leading to sarcopenia is [low muscle strength](#). In other words, combating or reversing sarcopenia, or both, may be best done with a proper resistance-training program that [prioritizes improving strength](#). In fact, the decline in muscle strength seems to [occur at a much faster rate](#) than the decline in muscle size, underscoring the importance of proper strength training as people age.

Continuing to regularly strength train with moderate to heavy weights has been shown to be not only effective at combating the symptoms of sarcopenia but also [very safe when done properly](#). The best way to make sure you are strength training properly is to seek out guidance from a qualified individual such as a personal trainer or strength and conditioning specialist.

Despite the clear benefits of strength training, it's been shown that only about 13% of Americans age 50 and older do some form of [strength training at least twice a week](#).

An example of a strength training routine for older adults based on the National Strength and Conditioning Association guidelines

There are a great variety of exercises that could be done interchangeably in a strength training program like this.

Exercise	Number of sets		Repetitions per set	Intensity
Barbell squat	3	6		70-85%
Barbell bench press	3	6		70-85%
Dumbbell lunges	3	8 per leg		50-70%
Dumbbell bent over row	3	10		50-70%
Double-leg hops	2	12		Body weight
Pushups	2	12		Body weight

Credit: The Conversation

Finding what works for you

So how does a person properly strength train as they age?

The National Strength and Conditioning Association, a leading organization in advancing strength and conditioning around the world, states that for [older adults, two to three days per week of strength training](#) can be incredibly helpful for maintaining healthy muscle and bone and combating a number of chronic conditions.

The organization recommends that these workouts involve one to two exercises involving multiple joints per major muscle group, with six to 12 repetitions per set. These are done at an intensity of 50% to 85% of what's known as one-repetition maximum—the most weight you could handle for a single repetition—with the exception of body weight exercises that use one's own body weight as the resistance, such as pushups.

I would also recommend resting for about two to three minutes between sets, or even up to five minutes if the set was challenging. For older adults, particularly those age 60 and older, the National Strength and Conditioning Association guidelines suggest that a program like this be performed two to three days per week, with 24 to 48 hours between sessions.

Making life's tasks lighter

The guidelines above are only one example out of many options, but they provide a framework that you can use to build your own program. However, I would highly recommend seeking out a professional in the field to give specific exercise programming advice that can be tailored to your own needs and goals as you age.

Following such a program would give your muscles an excellent stimulus to enhance strength, while also allowing enough recovery, a very important consideration as people age. You might think it looks like a huge time commitment, but an exercise routine like this can be done in less than an hour. This means that in less than three hours of [strength training](#) per week you can help improve your muscle health and reduce the risk of getting [sarcopenia](#) and associated health issues.

It's also important to note that there is no one right way to do [resistance training](#), and it needn't involve traditional weight equipment. Group

classes like Pilates and yoga or those that involve circuit [training](#) and work with resistance bands can all produce similar results. The key is to get out and exercise regularly, whatever that entails.

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