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The Benefits of Pumping Iron in Later Life

Intense Strength Training Helps Fend Off Age-Related Disability, Research Shows



By Laura Johannes | March 15, 2015

When he hit 50, Tim Carrigan's lower back started hurting so badly he could barely walk.

The injury, which dated to a childhood accident, had caused only occasional pain until Mr. Carrigan lost muscle tone with age. The pain dogged him for several years, but last year the Quincy, Mass., insurance-company treasurer started strength training twice a week on a circuit of a dozen machines.

Not only did his back improve, "I feel better. I feel stronger. I sleep better," says Mr. Carrigan, now 54. He adds that his stronger back has held up while shoveling during Boston's historic snowstorms. While old-school wisdom held that older adults were too frail to pump iron, a growing body of research is showing that strength training helps stave off age-related disability, preserve bone mass in women and even boost brainpower.

"It's way more dangerous to not be active as an older adult," says Miriam Nelson, professor of nutrition at Tufts University's Friedman School of Nutrition Science and Policy in Boston.

Brain fuel

Research at Tufts and around the country is finding that it's safe for older adults to train intensely; when they do, they gain significant muscle mass—albeit not as efficiently as a younger person. A healthy person in his or her 60s can gain 2 to 3 pounds of muscle in six months to a year, about half of the gains that a younger person would see with the same workouts, says Roger A. Fielding, a Tufts University School of Medicine professor. Injuries are rare, he adds.

The benefits appear to be complementary to aerobic exercise. While cardiovascular workouts aid in memory tasks, such as the ability to repeat back a list of words, strength training has been found to boost “executive function,” or higher-level brain tasks, says Teresa Liu-Ambrose, associate professor in the department of physical therapy at the University of British Columbia in Vancouver. Executive function is what allows “a highly capable person to juggle multiple tasks and follow them through to the end,” she says.

A common challenge facing older adults who are starting weight training is pre-existing injuries, such as chronic back or shoulder pain, says Wayne L. Westcott, an instructor of exercise science at Quincy College in Quincy, Mass., which runs a health and fitness center open to the public for an annual fee.

If you're injured before beginning workouts, consult with a trainer, who can give you tips, such as how to modify exercises to take pressure off a weak shoulder, Dr. Westcott says.

Another roadblock for the 50-plus crowd is that they often don't get enough protein, scientists say. Caroline Apovian, director of the Nutrition and Weight Management Center at Boston Medical Center, recommends that all older adults, particularly those who are strength training, ingest 1.5 grams of protein per kilogram of body weight, spread throughout the day. (Take two-thirds of your weight in pounds, and the resulting number is roughly how many grams of protein a day Dr. Apovian recommends.)

Quality of life

The good news: Even though older individuals gain muscle less rapidly than their younger peers, the fact that they are starting from a weaker base means the relative gains are larger, resulting in significant differences in quality of life, researchers say.

This was the case for Elaine Denniston, a 75-year-old retired lawyer from Dorchester, Mass., who thought she hated exercise until she started a class at Kit Clarke Senior Services, a center in her neighborhood that offers exercise classes developed by Tufts scientists. She persevered, motivated by the friendly social atmosphere in the class, and says that, thanks to leg-strengthening exercises, she has been able to ditch the elastic ankle supports she had been wearing for arthritis.

Retired thoracic surgeon Benedict Daly, 75, began strength training three years ago after spinal pain—a consequence of years hunched over patients in the operating room—made it painful to walk more than a block or two. Within about six months of starting the training, he was playing nine holes of golf twice a week, and he walked 6 miles a day last summer while exploring Venice.

Watch your form

To get the most out of his workout, he relied heavily on trainers at Quincy College, who gave tips on form, such as keeping his shoulders firmly on the bench while doing chest presses. “They watch you like a hawk,” he says.

For many, the first and most difficult step in strength training is making the time commitment. Dorothy Bardin, 75, of New York works part time in a clothing store and trains for a marathon three times a week. She squeezes in two short strength-training workouts a week, but hasn't yet started a more rigorous program recommended by her sports-medicine physician.

“I never gave it a fair try” she says. “Maybe I should—starting tomorrow.”