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No age limit for exercise



Getting older is not a handicap for getting fit or staying that way. On the contrary, studies support the saying, “You don’t stop moving because you age – you age because you stop moving!”

FOR BEGINNERS It’s never too late to start exercising. Physical fitness can be achieved at any age. Studies on our aging population show they can easily build aerobic (heart/lung) endurance and muscular strength.

In as little as six weeks of training (two to three times per week), mature adults have increased their aerobic capacity from 11 to 76 percent. Active sixty-year-olds have the same aerobic capacity as moderately active young adults and a much greater aerobic capacity than inactive twenty-year-olds.

Age is not a problem in developing muscular strength and endurance, either. Improvements in muscular strength in senior adults range from 6 to 50 percent after only six weeks of training, and (depending on body type) muscular definition is just as visible as it is in a younger person.

For an older adult who has never followed an exercise program, their exercise recommendations are the same as those given to an inactive person of any age. Many symptoms we blame on aging are also the symptoms of inactivity.

There is about a 3% decline in metabolism every ten years after age thirty. However, the decline is five times as much every ten years if you are inactive. A slower metabolic rate can affect your body weight,

the efficiency of your body to absorb nutrients from your food, and the effectiveness of your immune system. Inactivity places you at greater risk for many disorders and diseases, thereby lessening the quality of life.

An unfit person, not used to an exercise program, needs a longer warm-up before their workout and a longer cool-down period afterward. This is especially important the older you are. Even after becoming more fit, always begin your workout slowly, and don't push yourself harder until at least ten to fifteen minutes into the workout.

Cooling down and stretching for five to ten minutes should always follow your activity, regardless of age or fitness level.

Regardless of age, regular activity prevents fatigue, improves sleep and memory, decreases cholesterol levels and increases self-esteem. In addition, it will reduce muscle loss, keep bones dense, and lower the risk of developing diseases and disorders as we age. Physical activity can also help maintain a youthful attitude and appearance.

FOR FAT LOSS TOO

Several studies have examined the relationship between resistance training and post-exercise fat burning. For example, in a 2000 study, researchers measured the effects of resistance training on resting metabolic rate and fat burning and discovered a 62% increase in fat burning 16 hours post-exercise. An earlier study in the *Journal of Applied Physiology* also found similar results in older women. After 16 weeks of resistance training, fat burning at rest had increased by 63%.

CARDIOVASCULAR BENEFITS

Various research studies show adaptations to aerobic training are similar to those in younger subjects. For example, one study found after 9-12 months of moderate to high-intensity training, VO₂max (the maximum capacity of an individual's body to transport and use oxygen) increased from 20% to 38% in inactive older men and women (ages 57 – 70).

A study in the *Journal of Applied Physiology* found endurance training in sedentary older men and women showed significant cardiovascular improvement with exercise. The effects of prolonged endurance training were studied in 11 older individuals with an average age of 63. The subjects were evaluated before training, after six months of low-intensity training, and again after six months of higher-intensity training. There was an overall improvement of 30%. These findings show that older individuals can adapt to prolonged endurance training with a significant increase in aerobic power.

MUSCULAR BENEFITS

You're never too old to build muscle! And older adults must do so to maintain functional abilities such as climbing stairs and lifting things around the house (including yourself out of a chair). A 90-year-old has nearly the same capacity to create new muscle fibre as a 30-year-old.

Sadly, most people slow down and stop pushing themselves as they age. When muscles aren't asked to produce much force, whether moving furniture, picking up the grandkids or lifting a heavy weight, they adapt by dialing it down a notch. This muscle atrophy, known as sarcopenia, is common with aging. But the truth is that much of the weakness in older age is preventable if muscles are kept active.

Age-related muscle mass losses are approximately 6% per decade after age 50. Improving muscular strength is associated with increased functional ability in older adults. Resistance training programs for older adults can decrease the risk of falling and are also critical in preventing osteoporosis. Strength and mass gains can exceed as much as 30% after two months of resistance training in older men and women. Interestingly, two decades of strength and mass loss can be reversed after undergoing resistance training for at least two months. In one study, one year of progressive, high-intensity resistance training in post-menopausal women found strength increased by 74%, 35%, and 77% in knee extension, leg press, and lateral pull-down exercises following training. Half of the strength gains observed in these subjects occurred in the first three months of the training program. Another study found significant increases in muscular strength after a one-day per week, high-intensity resistance training program compared to two and three day per week programs.

In a Tufts University Research Center study, nine women and men, ages 87 to 101, strengthened their arms and legs by exercising with resistance weights. In eight weeks, they increased strength in the front thigh muscles by an average of almost 175 percent. One of the participants, Dr. Abraham Datch, a 101-year-old retired dentist, increased his strength by 200 percent over what it was at 95. Given adequate training stimulus, older men and women show similar or greater strength gains compared with young individuals as a result of resistance training, say the Tufts researchers.

Research finds that typically, people lose about 30 percent of their strength between 50 and 70, and another 30 percent per decade after that. But increased physical activity can significantly slow this.

Strength training into our senior years will improve overall health, reduce heart disease risk, relieve arthritis and enhance the immune system, says SFU kinesiologist Eric Banister. His research finds seniors who weight-train reap the benefits of renewed strength and energy, just as younger people do. Banister says about a third of muscle mass (mostly due to inactivity) is lost by the age of 80, but lost muscle can be regained through strengthening exercise.

FOR OLDER ATHLETES

Although they can't turn back the clock, elderly athletes are showing us it's never too late to start being physically active – and continue for as long as we like.

Older experienced athletes say the recovery process takes longer as you age, so listening to your body and training is essential. As for the older novice athlete, or those just starting to become active, it's wise to prevent the complications associated with inactivity and improve the quality of life!

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