

TO YOUR HEALTH

Carleton-Willard Village Out-Patient Clinic - 100 Old Billerica Rd., Bedford, MA 01730

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Strength Train = Strong Muscles Equates Active Life

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During the past few years, there has been a lot of interest in the aging process and strategies for

delaying degenerative problems. Although we all grow older, physical inactivity appears to accelerate the adverse effects of aging. Aerobic activities such as walking, cycling and dancing are beneficial to the cardiovascular system, but they do little to prevent deterioration of the musculoskeletal system. Start strength training for a healthy weight, stronger muscles, greater balance and living a more active life.

Research suggests that adults older than 50 years who do not perform resistance training lose nearly $\frac{1}{4}$ pound of muscle mass per year (*nih.gov/Dec 2011*). Research reveals that adding 3 pounds of muscle increases resting metabolic rate by up to 7% and increases daily caloric requirements by up to 15% (*Campbell et al. 1994*). At rest, a pound of muscle requires approximately 35 calories per day for tissue maintenance. By increasing muscle mass, one will be able to lose those unwanted pounds easier than just dieting alone.

For many older adults, aging seems to involve an inevitable loss of strength, energy and vigor. The frailty and decreased energy we associate with aging, such as difficulty walking for distances, climbing stairs or carrying groceries is largely due to muscle loss. This muscle loss results mainly from inactivity. But, there is good news!

One of the best ways to keep muscles healthy and strong is through exercises called strength training (sometimes known as weight lifting or resistance training). Studies at Tufts University have shown that strength training is one of the best ways to fight the weakness and frailty that can come with age. Exercise is safe and effective for men and women of all ages, including those who are not in perfect health. (*Friedman School of Nutrition Science at Tufts University, 2002*).

Many Residents feel they are physically active. So, what is the difference between physical activity and exercise? Physical activities get your body moving, such as gardening, walking the dog or vacuuming the house. Exercise is a form of physical activity that is specifically planned, structured and repetitive, such as weight or strength training, aerobic classes and tai chi. Exercise can make physical activities more enjoyable and seem less strenuous.



Most Residents have limited time and energy to give to a strength training program. The American College of Sports Medicine recommends one exercise for each major muscle group. Those groups include the quadriceps, hamstrings, lower back, chest, abdominals, upper back, shoulders, biceps and triceps. CWV's equipment involves more than one muscle group, so the machines are usually sufficient. Joining a few of the classes that are offered would round out your exercise regime.

In terms of strength development, a study found that two and three training sessions per week produces similar muscular benefits. The exercise frequency factor may be a matter of personal preference and scheduling ability (*Westcott, W.L (2006) American Fitness Quarterly, 3*). Training sessions should be performed on non-consecutive days. The weight lifted should be between 70 and 80 percent of maximum resistance, performing 10 - 12 repetitions per set.

Due to age-related decreases in muscle function and joint flexibility, it is important for seniors to develop strength throughout their full range of joint movement. Research has shown that full-range exercise movements are necessary for building full-range muscle strength. (*Westcott, W.L & Thomas R. Baechl(1999) Strength Training for Seniors, an Instructor Guide to Developing Safe and Effective Programs*). For best results, seniors should perform each exercise through the complete range of joint movement, working from their fully stretched position to their fully contracted position. However, if any part of the exercise action causes discomfort, the

movement range should be abbreviated accordingly. If you are unable to exercise particular parts of your body, that should not stop you from exercising the rest of your body, Example: If your shoulder hurts, then work your lower body until the pain subsides. The Fitness Staff can advise you as to the proper position, weight and range of motion on the machines.

Regular strength training is an effective means for replacing muscle tissue, increasing metabolic rate and reversing some of the degenerative processes. Specifically, strength exercise may increase bone mineral density, improve blood lipid levels, improve glucose metabolism, accelerate gastrointestinal transit, decrease back pain and reduce arthritic discomfort. (*Phillips, W.T., 1995. "Muscular Fitness-Easing the burden of disability in elderly ." Journal of Aging and Physical Activity*).

It's never too late to start a resistance training program. Even if you think you're too old or too out of shape to exercise, becoming active on a regular basis will give you more energy and the ability to do the things you like easily, faster and for longer. If you are already active, keep up the good work. If you don't exercise now, it's never too late to start. Just check with your doctor first. Our Fitness Staff is happy to introduce you to exercise!

HEALTH EDUCATION LECTURES

On Wednesday, January 7,
Dr. Carl Virusso will present a health
education talk on
"The Benefits of Chiropractic"
Dr. Virusso has been coming to CWV since
2011. Come join us for this
interesting presentation in the
Auditorium Center from 10:30-11:30 am