

Exercise to Counteract Aging

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As you probably know, our bodies change as we age. Some changes are more obvious than others. A person's physiological age may differ from their chronological age depending upon how fit and healthy they are.

To counteract the effects of aging, a healthy diet and a regular exercise program may slow down the progression.

Many changes in our musculoskeletal system result more from dormant lifestyles rather than from aging. Statistically, Americans over 50 are the most sedentary group. Los Alamos does not seem to fit those statistics.

One of the reasons we moved here was because we wanted to grow older like many of our seniors here in Los Alamos. For example, Bill Hudson, who addresses local senior athletes in his book, "Words of Wisdom from the Old Coach", talks about the "Old Timers Club". He states that in 1990 he gave Dan Miles a t-shirt on his 70th birthday saying, "never looked better". Dan Miles is a National Masters Swimming Champion, Senior Olympic Swimming Champion, and English Channel Relay Swimmer. Bill Hudson was also on the English Channel relay team at age 65 and he ran 60 miles on his 60th birthday.

Aaron Goldman, at age 72, still competes in ultra-marathons. He recently ran an "Across the Years" race held in Phoenix, Arizona. He completed the run of 92 ½ miles in 24 hours resulting in a placement of 11th out of 40 contestants.

Inez Ross, at age 73, most recently placed first in her division at the Corrida de los Locos race in Santa Fe, which was held on January 24, 2004. She still competes in triathlon relays and 5K races and she reports that racing helps her to continue training and staying in good shape.

I asked myself, "How have these people aged so gracefully?" The answer is their level of fitness conditioning. They all exercise regularly and have healthy diets. For these individuals and others, regular exercise is the answer. Long-term regular exercise slows down the loss of muscle mass and can prevent the increase in age-associated body fat.

Let me explain more specifically what the effects of aging are.

Muscles

As muscles age they shrink and lose mass. A sedentary lifestyle increases the rate of loss. Other decreases are the number and size of muscle fibers, the water content of the tendons, and the amount of blood being pumped to the muscles.

Metabolic Rate

The body's metabolic rate slows down as we age. This rate is equivalent to how the body converts food into energy. When the body's metabolic rate slows, obesity sets in and an increase in bad cholesterol accumulates.

Basal metabolic rate refers to the amount of calories your body burns. The more muscle a person has, the more calories get burned because it takes fuel to feed muscles.

Metabolic rate is linked to the amount of exercise that is being performed and the amount of calories taken in. Balancing a moderate caloric intake with a high volume of exercise will help you stay lean and will assist your body in staying healthy.

Bones

As our bodies age, loss of bone tissue takes place due to an imbalance between bone absorption and bone formation. The mineral content of the bones decreases, which causes more fragility in the bony structure.

As bones lose mass, osteoporosis can occur which can lead to crushed vertebrae in the spine. People can actually lose height due to the decrease in bone mass as well as the fluid loss in the supporting joint cartilage.

Ligaments, which are the tissues between bones, become less elastic and the joints begin to lose flexibility. When joints become stiffer due to the tendon and ligament changes, inflammation and arthritis begins to occur.

Determining True Body Age

Fitness tests exist which measure how old your body is, not the actual chronological age of your body. These tests are made up of flexibility, strength, cardiac output, lung capacity, body fat percentage, and various other tests. It is worthwhile to determine what your body's functional status is in order to determine a targeted exercise program, which will improve all of the above-mentioned areas.

The key to anti-aging for all of us baby boomers is to exercise regularly and to eat healthy. Regular physical activity has been shown to fight the destructive effects of aging.