

Chuck Salmon and Susanne Salmon

Physical Activity *and* Aging



It is a fact that people who maintain a physically active lifestyle will have a better quality of life in their senior years.

Genetics will occasionally counteract that statement but, for the majority of people, it is true.

The physical activity associated with land surveying is a good example.

Many land surveyors have spent countless hours in the field, hiking in flat or mountainous terrain, cutting line, and breathing the fresh air in the backwoods. This physical activity is a good start to a healthy lifestyle.

Today, land surveyors tend to spend more time in the office working at a desk on their computer, meeting with clients, or handling numerous telephone calls.

To achieve a healthy lifestyle, these land surveyors will have to become involved in physical activity outside the workplace. This need for activity is also prevalent in other professions.

As we age, it is important to be cognizant of how we can maintain a healthy lifestyle and avoid the pitfalls of inactivity.

Aging happens to everyone. It is a complex phenomenon influenced by genetic, environmental, and lifestyle factors.

As a person ages, several changes happen within the body.

- Decrease in muscle mass and elasticity
- Decrease in water content and an increase in fat cells in relation to muscle cells
- Decrease in bone mass and minerals, so bones are more brittle
- Deterioration in range and flexibility of the articulating surfaces and joints
- Decrease in vision and hearing
- Reduced mental capacity
- Increased predominance of chronic diseases
- Loss of muscle control, strength, and endurance
- Decrease in liver and kidney functions
- Decrease in heart and lung fitness

One way to slow these processes is to participate in regular physical activity.

One way to slow these processes is to participate in regular physical activity. It has been shown that regular physical activity helps reduce the risk of cardiovascular disease, certain cancers, high blood pressure, depression, osteoporosis, and type 2 diabetes.

Regular activity also improves body composition, fitness, longevity, the ability to perform daily activities, and the management of arthritis.

Injuries and falls in older adults are a costly public-health problem and a major reason that older people lose their independence and move to institutions. Among those over 65 who live in community (rather than institutions), falls are the leading cause of injury and death.

- For people over 71 years of age, over 87 percent of injuries resulting in hospitalization are caused by falls; 75 percent of those injuries lead to death.
- About 33 percent of older people have a fall each year; the percentage is much higher in long-term care institution facilities.

The annual estimated direct and indirect cost to the health care system for fall-related injuries by older adults is nearly \$3 million in Canada.

Numerous studies show exercise protects your body by maintaining vital capacity and the ability to take in and use oxygen, therefore helping you sustain adequate oxygenation of your tissues. Sitting like a slug reduces your ability to take up and use oxygen—muscles, organs, and the brain become partially oxygen-deprived.

In addition, inactivity reduces cardiac output—the heart’s ability to pump blood around the body. The tissues of the couch potato become doubly deprived. They get less oxygen and less blood and thus less of the essential nutrients that blood contains.

Cardiovascular disease is our biggest health problem in Canada. *Statistics Canada* says that in 2003, a total of 74,185 people died of cardiovascular disease. The number of people who died of all cancers that year was significantly lower, at 66,040.

The word “cancer” strikes fear in all of us. Maybe we should be more afraid of the word “inactivity.”

The second-biggest cause of aging and degeneration is gravity. To combat gravity, you must protect your skeleton and the muscles that hold it up. Immobilize a joint for even a few hours and it begins to stiffen and decay.

The majority of skeletal and muscular systems degenerate prematurely, simply from our sedentary lifestyle. Bones become thin and weaken because our skeleton requires continuous resistance exercise to grow new bone matrix. A combination of inactivity and poor bone nutrition is the major cause of the new epidemic of osteoporosis in Canada.

Columbia University philosopher Irwin Edman once visited the home of a colleague. At 2 AM Edman’s colleague began to yawn pointedly.

When Edman didn’t take the hint, the man said, “Irwin, I hate to put you out, but I have a 9 o’clock class tomorrow morning.”

“Good Lord!” Irwin replied. “I thought you were in **my** house!”

Some people call this a “senior moment,” but many older people suffer from a lapse in memory. This is another good reason to get or stay physically active. Physical exercise is perhaps the single most important thing you can do to protect and enhance your brain.

Table tennis is the world’s best brain sport.

Moderate exercise improves the heart’s ability to pump blood throughout the body and increase the blood flow to the brain. This can protect the short-term memory structures in the temporal lobes (*hippocampus*) from high-stress conditions.

Stress causes the adrenal glands to produce excessive amounts of the hormone cortisol, which has been

found to kill cells and hurt memory. People with Alzheimer’s have higher cortisol levels than normal aging people. Exercise actually stimulates neurogenesis, the ability of the brain to generate new neurons.

Table tennis is the world’s best brain sport. It is highly aerobic, uses both the upper and lower body, and is great for hand-eye coordination and reflexes. It causes you to use many different areas of your brain at once as you track the ball, plan shots and strategies, and figure out spins. It’s like aerobic chess—and it causes very few head injuries.

Seniors are bombarded with what they should and shouldn’t do, mostly by well-meaning friends and family. They are told they should **not** dress a certain way, drive a car at night, work too hard, walk or travel alone, and act their age. They are told they are losing their memories, their eyesight, and their abilities to do almost everything.

This negative information has got to take its toll. Seniors come to believe middle age is the beginning of the end and they should resign themselves to the diminishment of their bodies and minds. For those who live a healthy lifestyle, that is not true.

Society would do well to embrace the fact that the average healthy, active senior is an untapped valuable resource.

Take heed now. Become more physically active. We know the body loves to move, needs to move, and will suffer and die prematurely without movement. ▲

I would like to thank Susanne Salmon, my wife, for the research and information provided in this article. Susanne is studying Sociology at the University of Victoria; the information provided comes from her latest course, “The Sociology of Aging.”

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