Physical fitness helps both the elderly and their caregivers

BY BRENDA RUSNAK, BSCPT

UNDERSTANDING the aging process can help, when caring for an elderly individual. Most people assume muscle weakening" is an inevitable part of the aging process and do not realize that disuse of muscles is actually a larger contributor to muscle deterioration, then aging. In other words, yes, we do lose muscle strength as we age. However, the fact that we do less physical activity and exercise as we grow older, is a more significant factor. The good news is, no matter how de-conditioned a muscle becomes, regular exercise can restore the muscle to its fullest age-related potential.

Without regular exercise, muscle mass will decline by an estimated 22% in individuals between the ages of 30 and 70. In addition, strength declines by 50% and power by 75%. Given these statistics it is easy to understand why many elderly individuals lose their functional independence. Exercise however, can slow the rate of loss of muscle mass, strength, and power.

In 1990, researchers from Tufts University in Boston studied frail adults, with an average age of 90. These individuals participated in a eight week program of high-resistance weight training. The nine individuals who completed the program averaged muscle strength gains of 174% and mid-thigh muscle size increases of 9%. Mean tandem gait (walking speed) also improved by 48%.

Another group of researchers, published a landmark study in 1994, revealing the effects of strength training on frail, older adults. Of the 100 nursing home residents aged 72-98 years old who participated in the study, 94 completed the high–intensity strength training program. In just ten weeks, these frail individuals saw increases in muscle strength of 113% and cross-sectional thigh muscle of 2.7%. The researchers also noted significant improvements in gait velocity (walking speed) and stair climbing power.

It is also good to know that once older adults have increased their strength and muscle mass, they can maintain this improvement with relatively little effort. Another study conducted at Ball State University in Indiana shows that these gains can be preserved by participating in one training session per week, involving three sets of 10 repetitions at 80% of the one repetition maximum.

So, instead of making the erroneous assumption that declining independence and function is a result of aging and something that cannot be prevented, care-givers can reduce their own work load and improve the quality of life of their elderly relatives by getting them involved in a structured exercise program. This is not to suggest that they take out a membership at their local gym. Clearly, one has to use caution when establishing suitable exercise programs for the elderly. The exercise program should be developed and implemented by a registered physiotherapist with a specialization in geriatrics. Care has to be taken to avoid injuries such as sprains, strains and fractures which can cause major set backs and lead to even greater dependence. A physiotherapists is able to recognize potential risks and suitably modify an exercise program to ensure safety at all times.

Elderly individuals must remain strong in order to maintain their independence. Studies support the fact that they can increase and maintain muscle strength through regular exercise. Greater independence will enhance the life of both the elderly individual and their caregiver, keeping everyone happier and healthier. After all, isn't that the name of the game?

Brenda Rusnak is a physiotherapist by profession and the CEO of ACTIVE Health Management, an organization that specializes in the provision of rehabilitation and restorative care for the elderly. Throughout her career, Brenda has regularly appeared on television and radio talk shows and is often invited to speak at conferences and seminars on issues of aging. She has numerous published articles and is a contributing author of a booked entitled "Fundamentals of Disability Management" – 1997, edited by Anne Leckie.