

Want Youth? We can help!

**PHYSIOTHERAPY
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The Fountain of Youth

In his explorations of Florida, Ponce de Leon came up empty handed when searching for the Fountain of Youth. de Leon continued to explore the Caribbean and Florida, discovering new lands and unique sightings. Unfortunately, he died at the age of 61, due to complications of an arrow wound to his thigh.

In today's world, de Leon was relatively young when he died. His injury most likely would have been successfully treated by our advanced medical system and he would have lived on to discover more new lands and change history.

Wouldn't it be nice if achieving youth was as simple as drinking from a select pool of water? Yet there is a 'Fountain of Youth' available to all of us – well, maybe more a 'Punch of Youth'. This 'Punch' includes the ingredients of physical and mental



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exercise, a healthy diet, positive attitude and good genes. All of the population can control at least one of these factors.

In previous articles I have discussed the role of exercise in slowing or reversing the effects of osteoporosis, a disease that can lead to non-traumatic fractures, usually in seniors, and the associated health problems, health care tax dollars and societal costs.

Well now there is more good news from the scientific community about the benefits of exercise. It has been commonly observed in studies of sedentary adults that as we age, we lose muscle mass and strength. A 2011 article by *A.P.Wroblewski, F. Amati, M.A.Smiley, B.Goodpaster and V. Wright* in the journal **'The Physician and Sportsmedicine'** showed results contrary to this observation, in a study of 'masters athletes' ranging in age from 40-81 years. This study group underwent tests assessing health, activity level, body composition and magnetic resonance imaging of the quadriceps muscles (the large muscle on top of your thigh) for its size.

These master athletes trained 4-5 times per week, in high level exercise, and had been doing so long before the age of 40. The results were that the quadriceps muscle had minimal fat infiltration even though body fat content increased with age. The quadriceps muscle area was 20% less in the 70 and older age group compared to the 40-59 year olds. However, mid- thigh muscle area (quadriceps, hamstring and adductor muscles) did not lessen and quadriceps strength did not lessen past the age of 60.

Research has shown that as one loses muscle strength there is an increased risk of falling. With falling comes the potential of head injuries, and musculo-skeletal injuries including fractures. With extended periods of bed rest required for these injuries to heal comes the inevitable complication of further muscle loss, and possible complications of pneumonia, pressure sores and progression of osteoporosis. Thus a fall can be multifaceted in its impact,

possibly limiting the lifespan of an individual as well as the staggering health care and societal costs. Thus, there are many good reasons for exercising.

It must be noted that this study has some limitations. Only 40 subjects were studied and they do not represent the general population of aging adults who are not athletes. But this study eliminated the factor of sedentary living, to show that strength can decline due to lack of exercise, not simply an inevitability of aging. That's enough to give me a little more motivation to increase my exercise time and I hope you to.



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