

EXERCISE & DIET



THE ANTI-AGING FORMULA THAT REALLY WORKS

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WE REACH OUR PHYSICAL PEAK IN OUR 30'S ...

that's good news if you are in your 20's but for the rest of us it means there is only one way to go! Whilst we are unable to stop the inexorable decline in physical capacity we can slow the rate of attrition. Exercise and diet are the key elements to any anti-aging programme that can lead to an improved quality and length of life.

Our health is defined by health habits, heredity, environment and previous illness. To that end, chronological age is a poor predictor of health. A more accurate way of defining health and physical capacity is through our physiological age, sometimes termed biological or functional age. There is an inverse relationship between aerobic fitness and a number of risk factors associated with cardiovascular disease and all-cause mortality. In other words, the fitter we are, the healthier we are and therefore; the younger we are! Adopting the positive health habits of exercise and a balanced diet can significantly reduce our physiological age. It is true that a 70 year old can have the health and physical capacity of a 40 year old.

As we move into our 3rd decade and beyond a reduction in the performance of co-ordination, flexibility, strength, speed and endurance is observed. Maximum aerobic capacity declines at a rate of 8-10% per decade as a result of a reduced cardiac output, capillarisation, endothelial function and skeletal muscle mass. Furthermore, strength is gradually lost due to a reduction in the number of motor units and muscle fibres; a condition termed 'Sarcopenia', that appears to accelerate more rapidly after the age of 50.

SO WHY DOES IT HAPPEN? ...

There are number of theories that attempt to explain the age related fall in physical capacity. One such theory is the ‘free radical theory’ that suggests oxygen free radicals are responsible for the age-related damage at the cellular and tissue level. This suggests that interventions aimed at targeting free radicals may help slow the rate of the decline with aging. Exercise is an excellent way of improving our anti-oxidant defences and reducing the free-radical damage associated with aging. In addition, research studies have suggested anti-oxidant supplements such as vitamin E may help in the fight against free-radical damage. Thus, exercise combined with a diet rich in anti-oxidants can combat the ravages of age and help maintain physical capacity and quality of life.

BUT ALL IS NOT LOST ...

In moderately actively individuals the rate of reduction in aerobic fitness is reduced from 10% to 4-5% and in highly trained individuals the rate of reduction is as low as 2%. Furthermore, resistance training reduces the rate of Sarcopenia leading to the maintenance of muscle mass, strength and functional capacity. In combination with resistance training diet appears to play a crucial role in limiting the effects of aging. It is generally agreed that moderately increasing daily protein intake beyond 0.8g.kg⁻¹.day⁻¹ may enhance muscle protein building and reduce the rate of loss of muscle mass with age. Studies have also demonstrated that the addition of the essential amino acids (proteins) leucine and arginine can stimulate growth hormone secretion a key hormone helping to maintain muscle mass and aerobic capacity and reducing fat mass. Other studies have shown that the addition of conjugated linoleic acid may enhance the beneficial effects of resistance training.

IN ADDITION ...

In addition to a reduction in physical capacity, aging leads to a gradual reduction in bone mineral density that increases the potential for bone fractures. Implementing weight bearing exercise to reduce the rate of mineral loss and balance training to decrease the risk of falls are important elements in any exercise programme in later life. Recent evidence supports the role for vitamin D and calcium supplementation alongside exercise to reduce the age related decline in bone mineral density.

PRACTICAL RECOMMENDATIONS FOR WEIGHT MANAGEMENT IN LATER LIFE ARE CHALLENGING ...

Despite a reduction in appetite and calorie consumption that is common in older individuals our body composition changes in favour of a decrease in muscle mass and an increase in fat mass. The increasing prevalence of obesity in later life is often termed the 'obesity paradox' and is strongly associated with a reduction in physical activity. Increasing our level of physical activity can maintain muscle mass, reduce fat mass and improve appetite.

Another key element in the age related increase in fat mass and decline in muscle mass and aerobic capacity is the progressive reduction in growth hormone secretion, particularly in our later years. Exercise, particularly high intensity exercise, has been shown to increase the secretion of growth hormone helping to maintain muscle mass, aerobic capacity and improve body composition. The improvement in body composition observed in active individuals not only improves physical capacity and quality of life but it also reduces the chances of developing a large number of chronic diseases including coronary heart disease, diabetes and cancer.

In addition to the physical benefits, recent studies have demonstrated that the demands on co-ordination and aerobic endurance counteract age-related neural cellular loss, synapsis atrophy, and improve neurogenesis and capillarisation in the brain. This phenomenon is called 'exercise neuroscience' and suggests that as well as maintaining physical agility in later life exercise can maintain mental agility!

As we get older we become increasingly concerned with our financial security. However, concentrating on our 'fiscal fitness' is only part of the story as making sure we maintain our physical fitness is crucial if we are to enjoy our financial investments. In line with fiscal fitness, the sooner you start investing in your future by making exercise and a healthy diet part of your daily life the greater the interest you will make on your investment. The best time to start is now and it's never too late, so start investing in your physical as well as your fiscal fitness to ensure a long, active, healthy and enjoyable life.