

The Aging Process and How Lifestyle and Alternative Exercise Modalities Can Influence Health Span

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KEYWORDS

• Health span • Aging • Antiaging • Alternative exercises • Longevity

KEY POINTS

- Preventive measures are an indispensable part of promoting a healthier aging process.
- Careful attention to nutrition, environmental factors, and lifestyle could lead to a longer health span.
- As we age, more leisure time is available and the risk of a sedentary life increases; exercise is a very powerful promoter of health.
- Diet modifications and the use of supplements show promise in decreasing chronic inflammation by activating antioxidant pathways.
- Activity, alternative exercises, meditation, and sleep can all affect and improve our health span.

ALTERNATIVE TREATMENT MODALITIES AND THEIR EFFECT IN OLDER POPULATIONS

According to the Centers for Disease Control and Prevention, most of the leading causes of death are result of chronic conditions. Aging leads to lower physical activity (PA) and PA options.¹ In adults aged 65 years and older, PA includes leisure time PA (for example, walking, dancing, gardening, hiking, swimming), transportation (eg, walking or cycling), occupational (if the individual is still engaged in work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities (World Health Organization).² In order to improve cardiorespiratory and muscular fitness and bone and functional health and reduce the risk of noncommunicable diseases, depression, and cognitive decline, the American College of Sports Medicine recommends³ the following:

- Older adults should do at least 150 minutes of moderate-intensity aerobic PA throughout the week or do at least 75 minutes of vigorous-intensity aerobic PA

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throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.

- Aerobic activity should be performed in bouts of at least 10 minutes' duration.
- For additional health benefits, older adults should increase their moderate-intensity aerobic PA to 300 minutes per week or engage in 150 minutes of vigorous-intensity aerobic PA per week or an equivalent combination of moderate- and vigorous-intensity activity.
- Older adults, with poor mobility, should perform PA to enhance balance and prevent falls on 3 or more days per week.
- Neuromotor exercise (sometimes called functional fitness training) is recommended for 20 to 30 minutes per day, 2 or 3 days per week. Exercises should involve motor skills (balance, agility, coordination, and gait), proprioceptive exercise training, and multifaceted activities (tai chi and yoga) to improve physical function and prevent falls in older adults.

When older adults cannot do the recommended amounts of PA because of health conditions, they should be as physically active as their abilities and conditions allow. There is a consistency of findings across studies and a range of outcome measures related to functional independence; regular aerobic activity and short-term exercise programs confer a reduced risk of functional limitations and disability in older age. Although a precise characterization of a minimal or effective PA dose to maintain functional independence is difficult, it seems moderate to higher levels of activity are effective and there may be a threshold of at least moderate activity for significant outcomes.⁴ PA improves overall life satisfaction and enjoyment. As we age we also face barriers to staying physically active. These barriers include economic constraints, lack of social resources, retirement, living on a fixed income, health, and death of spouse, among others. Moderate to vigorous PA and cardiorespiratory fitness have been independently, statistically significantly associated with reduced risk of mortality.⁵ Whereas high individual variations are inherent to the response to exercise, most studies have reported that exercise can attenuate motor and cognitive declines associated with aging and dementia.⁶

Even though aerobic and resistance exercises are the best known and more commonly practiced forms of exercise, other alternatives with lower-impact activities and exercises have shown great success in older adults. Cognitive aging is the cognitive decline seen in aging in the absence of specific dementia characteristics. It is not certain what we can do to maintain mental abilities; but certain exercise programs and practices may be helpful, as most types of supplements have failed to show any consistent benefits.

Tai Chi

- It is a multicomponent mind and body exercise that is grounded in the holistic model of traditional Chinese medicine. Tai chi (TC) is a form of meditation in motion, the idea of challenging the body to stay centered and balanced while moving and concentrating on several things at once.
- The gentle nature of TC makes it a natural physical therapy tool for people with joint problems, low bone density, Parkinson disease (PD), and other ailments. Connection to the breath is vital to healing, enhanced balance, and flexibility. Many TC stances increase leg strength and develop the muscles to protect fragile joints, such as the knees and hips. This activity is very beneficial for mature adults and seniors. It is a safe activity with high levels of adherence and enjoyment.

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