

## Physical Activity and Healthy Aging

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### Purpose

The purpose of this study is to examine the role of physical activity in promoting healthy aging, focusing on its impact on physical, cognitive, and psychosocial outcomes in older adults.

### Problem statement

Population aging is accompanied by an increased prevalence of chronic diseases, frailty, functional decline, and cognitive impairment. Sedentary lifestyles exacerbate these issues, yet a significant proportion of older adults remain insufficiently active due to physical limitations, environmental barriers, and low awareness of the benefits of exercise.

### Approach

This study integrates evidence from peer-reviewed studies published between 2018 and 2025, including interventions involving aerobic training, resistance exercise, balance and flexibility training, and multicomponent programs targeting adults aged 60 and above.

These results have been published in prestigious journals such as British Journal of Sports Medicine, Ageing Research Reviews, International Journal of Nursing Studies, and Journal of Clinical Medicine, incorporating both global health guidelines and large-scale cohort studies.

### Result

The evidence consistently shows that regular physical activity improves muscle strength, balance, cardiovascular fitness, and bone density, thereby reducing the risk of falls, fractures, and mobility limitations.

Mental benefits include enhanced executive function, memory, and reduced risk of dementia, with positive effects noted in both healthy older adults and those with mild cognitive impairment.

Psychosocial outcomes such as reduced loneliness and improved mood are particularly associated with group-based and peer exercise programs.

Multicomponent and resistance-based training show long-term benefits, with some interventions maintaining gains in muscle strength and functional ability for up to four years.

### **Conclusion**

Physical activity is a basis of healthy aging, delivering benefits that preserve independence, prevent chronic disease, and enhance quality of life. Healthcare providers should advocate for personalized and culturally tailored exercise programs, supported by policy frameworks that increase accessibility and adherence. Integrating physical activity promotion into community health initiatives and geriatric care plans is essential to meeting the needs of rapidly aging populations worldwide.