

## **Exercise as an alternative approach to improve quality of life of aging men and women**

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Obesity and physical inactivity are major public health problems as the main cause of coronary heart disease, stroke, diabetes and some cancer,“ in most developed countries. The prevalence of overweight or obese defined as having a body mass index of 25 or higher is about 25% in Japan, and passes over 50% in Western countries. Physical inactivity is more prevalent among women than men, and is more likely to be present among the older than the younger people. Regular physical exercise benefits the cardiovascular system improving hypertension, glucose and lipid metabolism, and obesity; the musculoskeletal system improving energy system in muscle cells and preventing osteoporosis; and the nervous system inducing brain-derived neurotrophic factor (BDNF) expression and improving autonomic nervous system functions. Physical activity makes more positive contributions to the health and well-being of postmenopausal women, because menopause is associated with a rise in multiple risk factors such as atherogenesis, osteoporosis, and Alzheimer's disease. Women who are active have better quality of life. Differences in exercise effects between men and women seem complex and multifactorial. More studies are necessary to determine the types, intensities, amounts, and patterns of exercise required for optimal health, with consideration of the social environment and the physiopathological effect.