THE INFLUENCE OF PHYSICAL ACTIVITY ON THE COGNITIVE FUNCTIONING IN OLD AGE

Summary

Physical activity is one of the factors influencing the process of aging. It has been demonstrated that high level of cardiovascular fitness and regular engagement in physical activity may reduce the risk of developing age-related cognitive decline and dementia. High level of physical activity has been shown to correlate with the speed of information processing as measured by reaction time, however, the results concerning the association between activity and other measures of cognitive abilities are inconsistent. In several studies long-lasting fitness training was applied to evaluate its influence on brain and cognition. Participation in training program resulted in the improvement of both cognitive functioning and well-being. Moreover, several advantageous changes have been observed in brain structure and function as a result of aerobic fitness training. The exact neural basis of these changes has not been discovered yet, but on the basis of animal research it may be assumed that neurogenesis, increasing brain vasculature and neurotransmitters level changes play an important role in these processes. To sum up, it seems that regular and whole-life lasting engagement in physical activity, especially activity that increases cardiovascular fitness, may constitute an important factor delaying or even preventing age-related cognitive decline.