



Exercising against Age-Effects on the Brain

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Message from the Guest Editors

The interaction of physical activity and cognitive function with respect what we now call successful aging was and is extensively studied. In general, a wealth of studies indicate that short- and long-term physical activity can induce neuroplasticity even in the adult brain, affects cognitive performance positively and may reduce the risk of neurodegenerative dementia, a disease for which advanced age is the main risk factor.

However, the underlying neurobiological mechanisms of physical activity on the human central nervous systems are not fully understood. A deeper understanding of the effects of physical activity on molecular, structural and functional brain changes seems urgently needed since this would allow us to develop more efficient prevention strategies to influence the maladaptive processes of aging on brain functioning. The great potential to influence neurobiological processes throughout physical activity is of substantial scientific and public interest when considering the consequences of age-related cognitive decline in conjunction with the demographic change.





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