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Exercise as Preventative Therapy against Neurodegenerative Diseases in Older Adults

Dear Editor,

Exercise could be effective as preventative remedy against neurodegenerative diseases in older adults.[1] Exercise is neuroprotective because it has been shown to improve skills, reduce motor discrepancies, upsurge new neuron development, amend neurological damages, obstruct age-related neuronal harm, and prevent cognitive decline among older adults.[2] Physically active aged rats in comparison to inactive aged rats show enhanced three-dimensional learning, improved memory retention, and reduced age-related deteriorations in spontaneous activity.[3] Humans produce fewer insulin-like growth factor 1 (IGF-1) during normal aging process; IGF-1 plays a key role in the growth of cellular structures in a matured brain; however, exercise was found to increase the uptake of neurotropic IGF-1 from circulation directly to precise areas such as the hippocampus.[4] Regarding the aging brain, there is deterioration in the antioxidant protective mechanisms, which increases the susceptibility of the brain to harmful effects of oxidative stress. Moderate intensity physical exercise increases antioxidant levels in older adults, thereby improving brain function and reducing oxidative stress.[5] Since exercise can counteract neurodegeneration, depending on the type, intensity, and duration, it could be an effective preventive tool for older adults genetically susceptible to neurodegenerative disease such as Alzheimer's and associated memory loss [Figure 1].

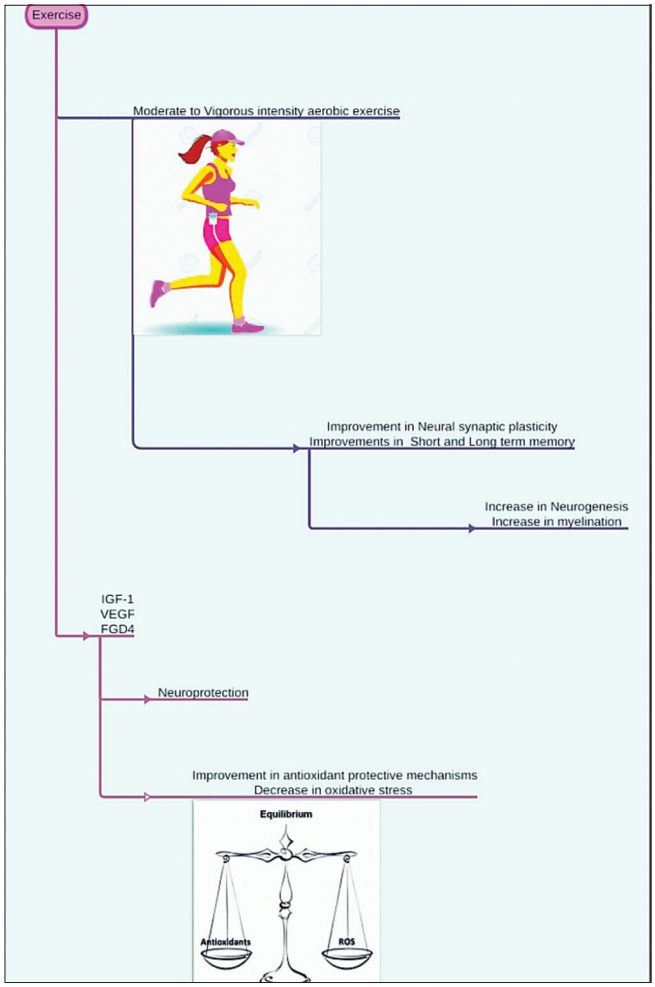

Figure 1: Possible role of exercise in neuroprotection

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Conflicts of interest

There are no conflicts of interest.

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