

INCREASED PHYSICAL TRAINING AS SUPPORTIVE THERAPY IN PARKINSON'S DISEASE – RESEARCH IN
HUMANS AND ANIMALS

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Summary

Parkinson's Disease (PD) is a neurodegenerative disorder in which progressive deterioration of the nigro-striatal dopaminergic pathway leads to motor disturbances. The underlying etiology responsible for the pathological changes observed in PD is still unclear. Currently available treatments are only symptomatic, and their effectiveness decreases with the progression of the disease. For this reason, it is of paramount importance to search for new forms of therapy which may accompany pharmacological treatment. Therefore the aim of this paper is to present the current knowledge concerning the impact of physical activity on the reduction of PD symptoms. Based on the results of studies performed in human and animal models of PD, it has been shown that long-term increased physical activity improves behavioural patterns of movement, and enhances angiogenesis, neurogenesis and synaptogenesis in the brain. It also affects the activation of signaling pathways of neurotrophic factors. The forms of physical activity which are currently known to provide relief for the symptoms of PD are – breathing exercises, gait and balance exercises, strengthening exercises, stretching, relaxation, Tai Chi and dancing.