

NeuroExercise

The effects of an extensive exercise program on the progression of mild cognitive impairment (MCI)

Epidemiological studies have shown that leisure-time physical activity at midlife is associated with a decreased risk of dementia later in life. Although initial studies indicate enhanced behavioural performance in dementia patients after three months of exercise, little is known about the effect of an extensive, controlled and regular exercise regimen on the progressive neuropathology of dementia after disease onset.

This project aims to determine the effects of an extensive exercise program on the progression of mild cognitive impairment (MCI), which can be classified as an early stage of dementia. 225 previously-sedentary patients in which MCI has been recently diagnosed, will undergo a standardized one year extensive aerobic exercise intervention. Changes in the progression of Alzheimer's disease will be monitored including cognitive testing, psychomotor/executive functioning and activities of daily living as well as structural and functional MRI and epigenetic testing. Dementia patients will be compared to a matched sedentary group and a second group undergoing gymnastic exercises.

It is hypothesized that an intensive exercise program will have a positive impact on the progression of MCI.

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