Can exercise truly slow down brain aging? A recent study.

Fernando E Milan*

Department of Sports and Physical Education, University of Valencia, Valencia, Spain.

Introduction

A recent study followed nearly 600 senior citizens to assess their fitness and cognitive health. Unexpectedly, a recent study found that mindfulness and exercise did not improve elderly people's brain health. The study, which included more than 580 senior men and women, examined if beginning an exercise or mindfulness programme, or even both, improved older people's capacity for thought and memory or changed the structure of their brains. We anticipated benefits from both exercise and mindfulness, especially when the two were combined [1]. The findings appear to cast doubt on the efficacy of exercise and other lifestyle modifications in preventing cognitive loss with ageing. However, they also raise fresh concerns over whether or not we actually comprehend the brain and mind well enough or how to research them to know if we are altering them when we walk or practise meditation. Given that prior studies have established a strong link between mindfulness and exercise and cognitive and brain health, the new study was not conducted by the author, who has extensively studied exercise and the brain. Any of us who believe staying physically active helps keep wits sharp far past middle age may be affected by the results [2].

Past studies indicate that exercise enhanced brain health.

Undoubtedly, a wealth of prior studies indicates that our lives affect the health of our brains. The quality of our thinking and memory as we age appears to be significantly influenced by exercise in particular. There is accumulating evidence that both aerobic and resistance exercise are important for sustaining cognitive and brain function in old age, a 2011 review of earlier studies concluded. According to a well-known 2011 study of 120 older men and women, those who began moderate exercise, primarily walking, saw improvements in memory tests and an increase in the size of their hippocampus, a region of the brain essential to memory function [3]. In contrast, those in the control group who were sedentary saw declines in hippocampal volume and memory abilities.

In a similarly, mindfulness has been linked to some cognitive and memory enhancements in the elderly, probably as a result of its ability to lessen stress and distractions.

However, a large portion of this research was either epidemiological, meaning it revealed suggestive associations between physical activity or mindfulness and sharper minds but did not establish they directly improve people's brains, or it was short-term and small-scale, comprising only a few dozen participants [4].

What distinguishes the latest study as notable? They began hiring 585 healthy but inactive men and women between the ages of 65 and 84 in 2015. Although none of the individuals had received a dementia diagnosis, they all expressed concern to the researchers that their reasoning and memory were becoming less sharp than before. Everyone was subjected to a series of cognitive tests by the researchers, with an emphasis on working memory, attention, and recall of words or images. They also measured hippocampus volume before randomly assigning participants to different groups. One began working out twice a week in supervised, 90-minute exercise classes, switching between light weight training, balancing drills, and walking or other cardiovascular exercises. After six months, they brought their routines home and continued working out for a further year, primarily on their own.

A second group studied mindfulness-based stress reduction for a year on their own after six months of instruction under supervision, which included yoga, meditation, and mental exercises. While a control group attended twice-weekly classes on healthy living, a third group engaged in regular exercise and meditation. After six months and again after 18, the researchers repeated the cognitive tests and brain scans. Whether they exercised, meditated, or not, practically everyone's hippocampus volume had decreased by the end [5]. Their results should have been higher than those of the control group if exercise or meditation had genuinely improved people's cognitive abilities.

Conclusion

According to study, exercise and mindfulness did not help with some cognitive tasks in this study, but they might help with other types of thinking or their benefits might vary depending on how much of a problem with remembering a person already has. She also raised concerns about the limitations of the precise tests and analysis that were used to track changes in people's cognitive abilities. By the end of the trial, other brain-scanning methods might have also detected significant changes within participants' brains.

References:

1. Baker LD, Frank LL, Foster-Schubert K, et al. Effects of aerobic exercise on mild cognitive impairment: a controlled trial. Arch Neurol. 2010;67(1):71-9.

***Correspondence to:** Fernando E Milan, Department of Sports and Physical Education, University of Valencia, Valencia, Spain., E mail: fernando.milan@uv.es

***Received:** 03-Jan-2023, Manuscript No. AAJPTSM-23-85741; **Editor assigned:** 05-Jan-2023, PreQC No. AAJPTSM -23-85741;(PQ); **Reviewed:** 18-Jan-2023, QC No AAJPTSM -23-85741; **Revised**: 20-Jan-2023, QC No AAJPTSM -23-85741; **Published:** 26-Jan-2023, DOI:10.35841/aajptsm-7.1.132*

***Citation:** Milan F E. Can exercise truly slow down brain aging? A recent study. J Phys Ther Sports Med. 2023;7(1):132*

2. Mitchell JH. Neural circulatory control during exercise: early insights. Experimental physiology. 2013;98(4):867-78.

3. Ahlskog JE, Geda YE, Graff-Radford NR, et al. Physical exercise as a preventive or disease-modifying treatment of dementia and brain aging. Mayo Clin Proc. 2011;86(9):876-884.

4. Lanza IR, Short DK, Short KR, et al. Endurance exercise as a countermeasure for aging. Diabetes 2008; 57:2933–2942.

5. Radak Z, Marton O, Koltai E, et al. The Effects of Aging and Exercise on Protein Acetylation/Deacetylation: Role of Sirtuins. Juntendo Med. J. 2010;56(3):257-9.

Citation: *Milan F E. Can exercise truly slow down brain aging? A recent study. J Phys Ther Sports Med. 2023;7(1):132*