

Tai chi shows promise for relief of depression and anxiety in stroke survivors

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A small feasibility study has suggested that tai chi has the potential to reduce depression, anxiety and stress plus improve sleep in people who have had a stroke. The research is presented today at

EuroHeartCare—ACNAP Congress 2021, an online scientific congress of the European Society of Cardiology (ESC).

Depression occurs in approximately one-third of stroke survivors and is linked with greater disability and mortality rates. Individuals with post-stroke [depression](#) frequently also report anxiety, [stress](#), and poor sleep.

Tai chi focuses on releasing tension in the body, incorporating mindfulness and imagery into movement, increasing awareness and efficiency of breathing, and promoting overall relaxation of body and mind.

"Mind-body interventions are commonly used among adults to lessen depressive symptoms," said study author Dr. Ruth Taylor-Piliae of the University of Arizona, Tucson, US. "Tai chi practice allows the individual to quiet the mind by dwelling in the present and setting aside unnecessary negative emotions, such as depression."

This study examined the feasibility of using tai chi in people with previous stroke. A total of 11 stroke survivors reporting [depression symptoms](#) were enrolled in the study. They were on average 70 years old, and 55% were men.

All stroke survivors attended the tai chi [intervention](#) classes, three times each week, for a total of eight weeks. The intervention had been planned for 12 weeks but was shortened due to the COVID-19 pandemic. Each class consisted of a 10-minute warm-up period, 40-minutes of tai chi exercise, and a 10-minute cool-down period. Participants were gradually taught 24 basic movements from the Wu style of tai chi (an average of two new movements per week).

Measurements were taken at the start of the study and repeated after the eight-week intervention. Symptoms of depression, anxiety and stress

were assessed using standardised questionnaires. Sleep was assessed during night-time using a triaxial accelerometer, which detects movement. Specifically, the researchers examined sleep efficiency (percentage of time spent sleeping), the amount of time awake after initially being asleep, and the total time awake after going to bed.

After eight weeks of tai chi, the researchers observed significant reductions in symptoms of depression, anxiety and stress compared to baseline, along with better sleep efficiency, less wakefulness after sleep onset, and less time awake.

Dr. Taylor-Piliae said: "At baseline the participants reported mild to moderate symptoms of depression, anxiety and stress. I was surprised and pleased with the improvements we observed in these self-reported symptoms and in sleep with just an eight-week intervention."

The researchers also took blood samples at baseline and eight weeks to measure markers of oxidative stress and inflammation which have previously been associated with post-stroke depression. They found lower activity of the oxidative stress marker after the intervention but no significant changes in any of the inflammatory markers.

Dr. Taylor-Piliae explained: "Our ultimate goal is to see whether tai chi lowers [depressive symptoms](#) in stroke survivors and also improves biochemical markers associated with depression."

She concluded: "The results of this feasibility study should be interpreted with caution because of the small sample size and lack of a control group. More research is needed before recommendations can be made about tai chi for people who have had a [stroke](#). We hope to do a randomised trial with a 12-week tai chi intervention in a larger group of patients."

Provided by European Society of Cardiology

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