

Tandem cycling linked to improved health for those with Parkinson's and care partners

February 29 2024



Credit: Pixabay/CC0 Public Domain

Pedaling on a stationary bicycle built for two may improve the health and well-being for both people with Parkinson's disease and their care partners, according to a small, preliminary study released today,

February 29, 2024, that will be presented at the [American Academy of Neurology's 76th Annual Meeting](#) taking place April 13–18, 2024, in person in Denver and online.

"Our study found that a unique [cycling](#) program that pairs people with Parkinson's disease with their care partners can improve the physical, emotional and mental well-being of both cyclists to improve their quality of life," said Jennifer Trilk, Ph.D., of the University of South Carolina School of Medicine in Greenville. "It is just as important that care partners also receive care, so that is why we included them as the [cycling partner](#). The goal of our small study was to determine if tandem cycling was beneficial. The next step will be to confirm the results with subsequent studies that would include more participants."

The study included 18 participants, nine with Parkinson's disease and their corresponding nine care partners.

For the tandem cycling program, pairs of people with Parkinson's disease and their care partners cycled on indoor, stationary tandem bicycles while using a virtual reality platform two times per week for eight weeks. During each session, all participants could visualize themselves cycling along real life, scenic outdoor routes by watching large television screens that were synced to the cycling intensity. The tandem cycling set-up also allowed the care partners to help adjust the cycling pace and facilitate a higher pedaling rate for greater health benefits.

Prior to starting the cycling program, all participants completed a series of tests. Participants repeated the same tests two days after the final cycling session eight weeks later.

For a test of resiliency, participants ranked a series of six statements regarding their perceived ability to bounce back or recover from stress.

Statements were ranked on a scale of one to five, with higher numbers indicating stronger agreement. Statements included "I tend to bounce back quickly after hard times" and "I usually come through difficult times with little trouble."

While people with Parkinson's disease did not show improvements in resiliency, researchers found care partners demonstrated individual improvements in overall resiliency, which Trilk noted may help to decrease care partner burden. Care partners also demonstrated statistically significant improvements in depression scores after the cycling intervention.

Those with Parkinson's disease completed additional disease-associated tests, including a questionnaire on how often they experienced difficulties in daily living, including relationships, social situations and communication. They also completed physical tests, including a test used to gauge the severity and progression of their disease as well as a walking speed test.

People with Parkinson's disease improved across their respective tests.

In the test measuring overall perception of difficulties in [daily living](#), where higher scores indicate a lower quality of life, on a scale of zero to 100, participants decreased their [total score](#) by nearly five points, indicating improved overall [quality of life](#). Participants with Parkinson's disease also showed significant improvements in mobility on this test, in which they had a decrease of nearly 14 points, indicating improved overall physical function.

Researchers additionally found that participants with Parkinson's disease had a decrease of eight points in the test gauging the overall motor severity and progression of their disease, where higher scores indicate greater disease burden. Overall scores range from zero to 132.

Participants also improved their walking speed, with an increase of 0.27 meters per second.

Provided by American Academy of Neurology

Citation: Tandem cycling linked to improved health for those with Parkinson's and care partners (2024, February 29) retrieved 27 April 2024 from

<https://medicalxpress.com/news/2024-02-tandem-linked-health-parkinson-partners.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.