

Can Physical Activity Improve Cognition in Breast Cancer Survivors?

October 20, 2017

Previous studies have reported that breast cancer survivors experience cognitive difficulties post-treatment. Now, new findings published in the journal *Cancer* suggest that increased physical activity can help improve their brain functions by more than half, reports [UC San Diego Health](#).

For the pilot study, researchers at the University of California San Diego School of Medicine evaluated 87 predominantly well-educated non-Hispanic white women for 12 weeks. Participants were then randomly split into two groups: an exercise arm and control arm. Those in the first cohort were enrolled in a physical activity intervention program specifically tailored to individuals' interests and abilities. The latter received emails that addressed women's health topics, healthy eating, stress reduction and general brain health.

The exercise cohort also wore Fitbit One activity trackers, so researchers could follow their activity levels, as well as provide feedback and support to engage in at least 150 minutes of moderate-to-vigorous physical activity per week.

Scientists used the National Institutes of Health Toolbox Cognition Domain, a comprehensive set of neurobehavioral measurements, and the Patient-Reported Outcomes Measurement Information System to assess the impact of physical activity on cognition from the start and end of the study.

According to study findings, women in the exercise arm showed more than double the improvements in processing speed (the pace in which a person can understand and react to information) compared with the control arm. Those in the intervention group who were recently diagnosed (two years or less) were also four times more likely to show improvements. What's more, the exercise cohort had three times the improvements in self-report cognition abilities. Overall, there was a 100-minute increase in physical activity each week for participants in the experimental group.

"Survivors often report that their thinking is slower or feels more foggy," says Sheri Hartman, PhD, an assistant professor in the Department of Family and Preventive Medicine and co-director of the diet and physical activity shared resource at UC San Diego Moores Cancer Center. "By providing a program with support, women are more likely to make difficult behavioral changes that lead to an increase in physical activity."

Hartman notes that early intervention may play a crucial role in the kind of impact physical activity has on the cognitive function of these cancer survivors.

Although the tests examined different areas of cognition, only speed processing showed significant improvement, which is why researchers insist that larger and longer trials be conducted to assess the effect physical activity has on other parts of cognition. In addition, the study's authors say that future research in cancer populations with greater diversity is needed.

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