

# At-home exercise reduced depression levels significantly during COVID-19 lockdowns, says research

September 28 2021

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Researchers found at-home exercise reduced depression levels significantly during COVID-19 lockdowns. Credit: Jonathan Borba/Unsplash

At-home, app-based workouts were very effective at reducing people's

depression levels during the early months of the COVID-19 pandemic, finds a new UBC research trial whose findings were released today in the *British Journal of Sports Medicine*.

"We found that regardless of the type of movement that people did in a week—whether it was high-intensity interval training (HIIT) or yoga—their [mental health](#) improved," said Dr. Eli Puterman, an associate professor at UBC's school of kinesiology and the Canada Research Chair in Physical Activity and Health.

Dr. Puterman, who is also a health psychologist studying how [exercise](#) can benefit highly stressed people, says he noticed a lot of people suffering from isolation, loneliness and [depression](#) in the early days of the pandemic. One study found that global rates of depression and anxiety reached 28 percent and 26 percent, or more, in the beginning of the pandemic, respectively.

He says his findings show that low-cost and accessible exercises are important strategies for managing depression and should be implemented widely.

## **Big mental health benefits for people with high depressive symptoms**

In the first trial that examined the capacity of at-home app-based exercise programs to buffer against depression symptoms during the pandemic, Dr. Puterman and his team partnered with the mobile app company DownDog to run a six-week study between May and August 2020.

They randomized a group of 334 participants (a mix of both women and men between 18-64 years old who were, at the time, engaging in no or

low levels of regular physical activity) to a specific at-home workout. One group was assigned to yoga, one to HIIT, and another to a combination of both. A final comparison group was asked to maintain their current levels of activity.

The team measured the participants' depressive symptoms before beginning the study and in each of the six weeks after they were assigned to their specific exercise group.

All participants in the exercise groups improved in their depression symptoms compared to the control group.

The greatest change was seen among participants who began the study with high depression symptoms and were placed in the combination (HIIT+yoga) exercise group. At the end of the trial, 72 percent of these participants were no longer categorized as having significant depression symptoms.

"This is likely because the women and men in the HIIT+yoga group did more frequent at-home exercises (four times or more) per week consistently." Dr. Puterman said. The importance of having variety in one's exercise routines to maintain a physically active routine has been shown previously.

In all three exercise groups, 57 percent of the participants who were identified as having high depression symptoms had symptoms decrease significantly, while a minority did so in the control group.

## **Promising for widespread public health interventions**

The World Economic Forum projects that by 2030 mental illness will account for US\$6 trillion of the annual global economic burden, accounting for more than half the burden from all non-communicable

diseases.

"The findings show that we should be promoting at-home and app-based workouts as a beneficial tool to manage depression since it has little to no cost," Dr. Puterman says, "especially in light of the long-term mental health consequences COVID-19 will have on many adults even beyond the pandemic."

He strongly encourages widespread promotion of at-home and app-based exercises that can be done with little space and no equipment to improve people's mental health.

"I think there is an opportunity here to tell people you can work out at home and still feel better, especially during the pandemic when some people are still reluctant to be in large groups."

He hopes to see physical activity and exercise initiatives integrated into clinical and health policy initiatives in the future.

**More information:** Eli Puterman et al, COVID-19 Pandemic and Exercise (COPE) trial: a multigroup pragmatic randomised controlled trial examining effects of app-based at-home exercise programs on depressive symptoms, *British Journal of Sports Medicine* (2021). [DOI: 10.1136/bjsports-2021-104379](https://doi.org/10.1136/bjsports-2021-104379)

Provided by University of British Columbia

Citation: At-home exercise reduced depression levels significantly during COVID-19 lockdowns, says research (2021, September 28) retrieved 20 April 2024 from <https://medicalxpress.com/news/2021-09-at-home-depression-significantly-covid-lockdowns.html>

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