

# Study finds high levels of physical activity lower risk of developing COVID-19 infection and hospitalization

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A cohort study of older adults found that those who followed recommended exercise guidelines before the pandemic had significantly

lower odds of being infected or hospitalized from COVID-19 than those who did not follow guidelines

Need another reason to keep up with your exercise routine? Staying active just might protect you from infection and hospitalization from COVID-19.

A new study led by investigators from Brigham and Women's Hospital, a founding member of Mass General Brigham, suggests that higher levels of physical activity before the [pandemic](#) began in 2020 were associated with a lower likelihood of contracting COVID-19 or developing an infection from it that was severe enough to require hospitalization.

The study found that adults who adhered to U.S. and World Health Organization physical activity guidelines before the pandemic had 10% lower odds of becoming infected with COVID-19 and 27% lower odds of being hospitalized from it compared to people who were inactive. The results are published in *JAMA Network Open*.

"The COVID-19 pandemic provided a very unique opportunity to look at a potential benefit of physical activity from data that was collected before it began," said lead author Dennis Muñoz Vergara, DVM, MPH, instructor at the Osher Center for Integrative Medicine and the Division of Preventive Medicine at Brigham and Women's Hospital.

The study combined data from three ongoing, prospective, randomized clinical trial cohorts (COSMOS, VITAL and WHS) and included 61,557 adults with an average age of 76, who provided prepandemic self-reports on lifestyle factors and exercise, including the time they spent on activities such as biking, walking, running, and climbing stairs.

Participants were then categorized as either inactive, insufficiently active, or sufficiently active based on [physical activity guidelines](#). From

May 2020 through May 2022, those sufficiently active had a 10% reduction in COVID-19 infection and 27% reduction in hospitalization due to COVID-19 compared to those inactive. The findings also suggest that the benefits of physical activity on COVID-19 may be stronger in females.

Some of the study's limitations include that it is observational, uses self-reported data, and cannot account for health behavior changes that may have occurred during the pandemic. Further studies are needed to generalize these findings to different groups of people.

The research team plans to further investigate the association between physical activity leading into the COVID-19 pandemic and other aspects of health and well-being such as depression and social connectedness.

Howard D. Sesso, ScD, MPH, senior author and Associate Epidemiologist at the Division of Preventive Medicine and Osher Center at BWH, said, "This large, unique study in [older adults](#) as they navigated the onset of the pandemic provides important support for physical activity in preventing COVID-19 [infection](#) and hospitalization that may extend more broadly to enhanced immune function and lessening vulnerability to infections."

**More information:** Muñoz Vergara, D. et al, Prepandemic Physical Activity and Risk of COVID-19 Diagnosis and Hospitalization in Older Adults., *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2023.55808](https://doi.org/10.1001/jamanetworkopen.2023.55808)

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