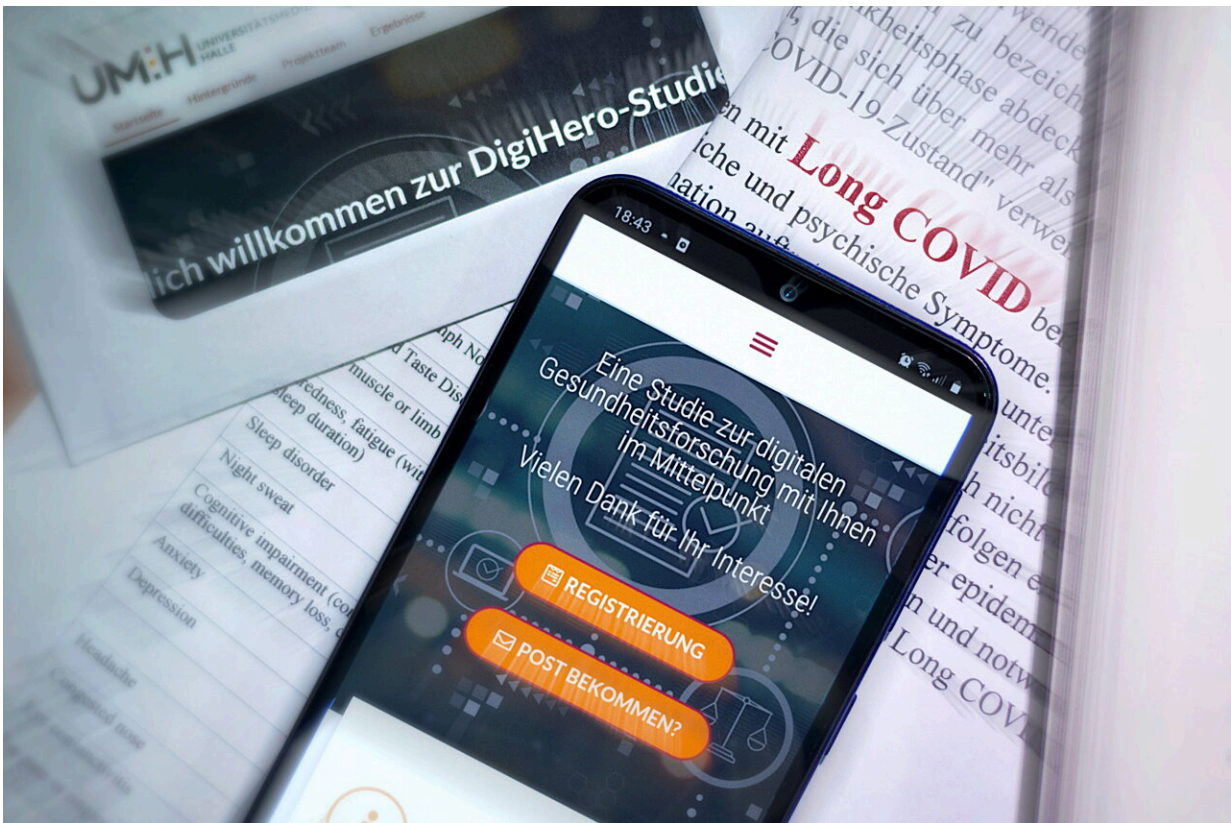


Study finds lower risk of long COVID after an omicron infection and after re-infection

September 13 2023, by Jonas Machner



The study was done as part of the DigiHero project. Credit: University Medicine Halle

The risk of developing long COVID is significantly lower following an infection with the omicron variant than after an infection with earlier

coronavirus variants. This was the finding of a study by University Medicine Halle, which was published in the [*International Journal of Infectious Diseases*](#).

The analysis looked at information gathered from 11,000 people about their infection history, vaccination status, and post-infection symptoms. The data provide strong evidence that the risk for [long-term effects](#) after a re-infection with the coronavirus is lower if the patient did not develop long COVID after the [initial infection](#).

Long-term symptoms can develop after a [coronavirus infection](#). This is commonly referred to as "long COVID" or "Post COVID-19 condition." The underlying risk factors are currently under intensive investigation. "We wanted to understand the connection between long COVID and different coronavirus variants, vaccinations, and past infections," explains Sophie Diexer, first author of the new study and researcher at the Institute of Medical Epidemiology, Biometry and Informatics at University Medicine Halle.

"Our study shows that the percentage of people who develop long COVID symptoms after an infection was lowest at the time when omicron was prevalent." The risk was found to be around three to four times lower after an omicron infection than after an infection with the wild-type [variant](#).

Around half of all wild-type infected individuals reported persisting symptoms. It should be noted, however, that the majority of all infections occurred while omicron was dominant. "In purely numerical terms, this means that most people developed long COVID following an omicron infection," says Diexer.

The study also provides strong evidence of a protective effect once the patient has recovered from a coronavirus infection.

"People who did not develop persistent symptoms after their initial infection had a significantly lower risk of developing long COVID following re-infection than people who were infected with the coronavirus for the first time. We were surprised by the scale of this effect," explains the researcher.

However, the scientists were unable to demonstrate that, in the event of a vaccine breakthrough, the vaccine had any protective effect against long COVID. Due to the timing of the study, it was not possible to analyze the vaccine that specifically targeted the [omicron variant](#).

The study is based on the Germany-wide DigiHero project, which more than 48,000 people participated in until June 2022.

"Studies have already looked at the relationship between the risk of long COVID and the different variants, but none has taken into account infection history," explains Professor Rafael Mikolajczyk, director of the Institute of Medical Epidemiology, Biometry and Informatics at University Medicine Halle. "Of the respondents, approximately 11,000 reported at least one coronavirus infection that had occurred in the 12 weeks prior to when the data was collected for our study. Classification was based on the predominant variant at the time of the reported infection."

Participants were questioned about 24 typical long COVID symptoms, with 2,822 individuals reporting that they had experienced such symptoms. Of these, 406 (14%) reported experiencing severe fatigue, 237 (8%) severe headaches, and 202 (7%) severe shortness of breath. The intensity of the symptoms was not related to the coronavirus variant.

Follow-up surveys are currently being conducted to explore the persistence of long COVID symptoms. "In addition to possible long-term symptoms following a coronavirus [infection](#), DigiHero is addressing a

wide range of health issues and other impacts of the COVID-19 pandemic," adds Mikolajczyk.

On the basis of DigiHero, University Medicine Halle has also launched the Long COVID Registry in cooperation with Otto von Guericke University Magdeburg and the Rechts der Isar Hospital of the TUM School of Medicine. The registry records, for example, long COVID symptoms as well as their progression, severity and alleviation through specific therapies.

More information: Sophie Diexer et al, Association between Virus Variants, Vaccination, Previous Infections, and Post COVID-19 Risk, *International Journal of Infectious Diseases* (2023). [DOI: 10.1016/j.ijid.2023.08.019](https://doi.org/10.1016/j.ijid.2023.08.019)

Provided by Universitätsmedizin Halle

Citation: Study finds lower risk of long COVID after an omicron infection and after re-infection (2023, September 13) retrieved 29 April 2024 from <https://medicalxpress.com/news/2023-09-covid-omicron-infection-re-infection.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.