

Does prior omicron infection shield against future infection? Maybe not, new research finds

August 21 2023, by Cara Murez



People may assume that a COVID-19 infection protects them the next time they encounter the virus, but that's not necessarily true.

A new study of 750 vaccinated seniors living in [retirement homes](#) and [long-term care facilities](#) found that those infected during the first omicron wave were actually more vulnerable to reinfection with a later wave.

"This research highlights the need for continued vigilance and underscores the importance of ongoing preventive measures against COVID-19," said study co-author Dawn Bowdish, an immunologist and associate professor of medicine at McMaster University in Ontario, Canada.

"We must remain cautious and proactive in our approach to protecting [public health](#)," she said in a university news release.

Bowdish and her colleagues said the findings underscore the need to consider COVID vaccine boosters this fall.

This should serve as a warning that there are still unknowns about how previous infections will affect susceptibility to the variants now in circulation, said co-author Andrew Costa, an epidemiologist and associate professor in McMaster's Department of Health Research Methods, Evidence and Impact.

"These findings strongly suggest broader research is required to understand whether the wider population shares the same susceptibility as the seniors our group studied," Costa said in the release. "Until we know more, we think it's smart for everyone to protect themselves."

Bowdish said long-term care residents are easier to study because COVID-19 infections were, until recently, monitored more closely. The

results may not be the same in the wider population, but it's important to learn more, she said.

The region where the study participants lived has seen four major waves of omicron. Those included the first wave, with omicron BA.1 and BA.2 variants, which caused [older adults](#) to be more susceptible to infections in the third wave, which was caused by the omicron BA.5 [variant](#), according to the study.

Researchers were not able to identify which [omicron](#) variant a person had, but the initial infections occurred during the BA.1/BA.2 wave, and the reinfections occurred during the summer of 2022 when the BA.5 variant was responsible for the vast majority of infections.

"We found that some individuals had normal immune responses after the first [infection](#), while others had very low levels of protective antibodies, which we believe was one contributing factor to why they got reinfected," Bowdish said.

"Our current vaccine schedules are based on the assumption that having had an infection provides some level of protection to future infections, but our study shows that may not be true for all variants in all people," Bowdish said.

The findings were published Aug. 21 in *eClinicalMedicine*

More information: Jessica A. Breznik et al, Early Omicron infection is associated with increased reinfection risk in older adults in long-term care and retirement facilities, *eClinicalMedicine* (2023). [DOI: 10.1016/j.eclinm.2023.102148](https://doi.org/10.1016/j.eclinm.2023.102148)

The U.S. Centers for Disease Control and Prevention has more on [COVID-19 reinfection](#).

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