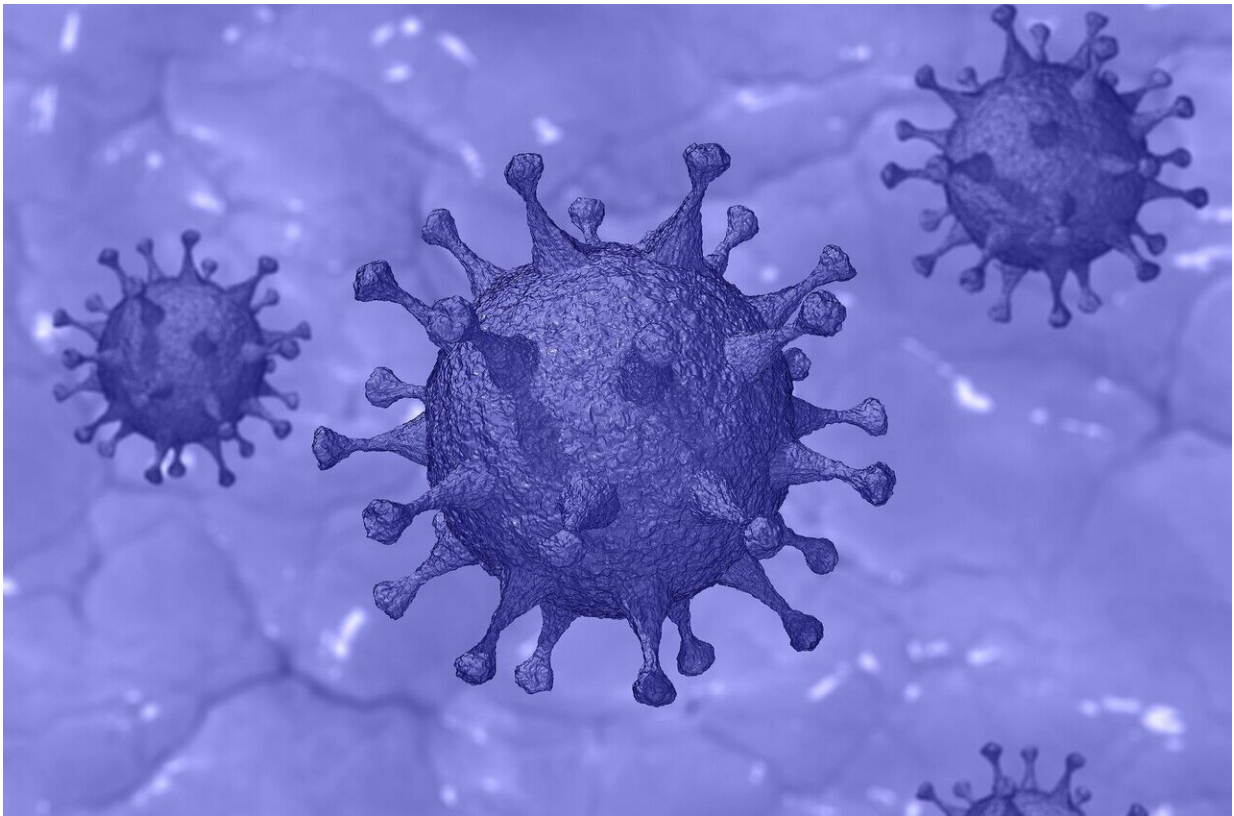


What happens to immunity levels post COVID-19 infection?

February 22 2021



Credit: CC0 Public Domain

Australian scientists have described the evolution of immunity levels up to four months following COVID-19 infection, finding that while antibody levels drop dramatically in the first one to two months, the

decrease then slows down substantially.

The findings suggest that protective COVID-19 vaccines should ideally generate stronger antibody responses than natural infection.

The research team, including University of Melbourne Dr. Jennifer Juno, a Senior Research Fellow at the Peter Doherty Institute for Infection and Immunity (Doherty Institute), have been investigating how the [immune system](#), particularly B and T cells, responds to the COVID-19 spike protein.

The spike protein enables SARS-CoV-2 to attach and enter cells in humans and is crucial in inducing neutralizing antibodies to protect from re-infection.

B cells are responsible for producing the antibodies that recognize SARS-CoV-2, while T cells play an important role in supporting the development of the B cell response.

Dr. Juno said one of their striking observations was that over the four months they were tracking the patients, the number of B cells recognizing the spike protein actually increased in almost all of them, regardless how severe their disease was.

"This is interesting because our work and other recent studies suggest these B cells are continuing to accumulate and potentially evolve over time. That should be useful for protection in the event of another exposure in the sense that those 'memory' [cells](#) should be able to be activated again," Dr. Juno said.

"While we still don't know how much antibody you actually need to be protected, either through a vaccine or through natural infections, the recent results from phase 3 vaccine trials should soon allow us to

understand how long natural immunity should last.

"In addition, what remains to be understood is whether these changes in B cell memory can help the immune system to recognize and be protected against new SARS-CoV-2 variants that are currently emerging."

Dr. Juno said recent data on the leading vaccines show they are eliciting at least double the [antibody levels](#) as natural infection, which is very encouraging.

More information: Adam K. Wheatley et al. Evolution of immune responses to SARS-CoV-2 in mild-moderate COVID-19, *Nature Communications* (2021). [DOI: 10.1038/s41467-021-21444-5](https://doi.org/10.1038/s41467-021-21444-5)

Provided by Doherty Institute for Infection and Immunity

Citation: What happens to immunity levels post COVID-19 infection? (2021, February 22) retrieved 6 May 2024 from <https://medicalxpress.com/news/2021-02-immunity-covid-infection.html>

<p>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.</p>
