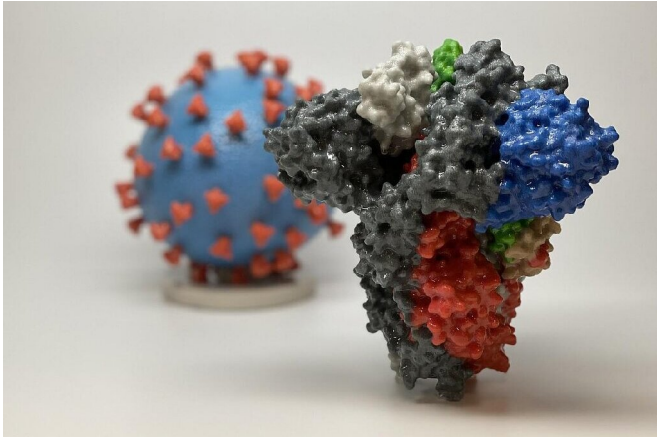


Immune system 'remembers' coronavirus for at least 6 months: study

18 January 2021, by Kelly MacNamara



How long people can fight off reinfection to the new coronavirus and what immune process is involved are key to predicting the dynamics of the pandemic

People may be able to fight off reinfection for at least six months after they recover from COVID-19 thanks to cells that can "remember" the virus, according to research published Monday.

Researchers in the United States and Switzerland studied dozens of people who had recovered from COVID-19 and found that while their antibodies may fade over time, they maintained levels of specific [memory B cells](#).

These cells can remember the pathogen and can, if faced with reinfection, prompt the immune system to reinitiate the production of virus-fighting antibodies.

"Memory responses are responsible for protection from reinfection and are essential for effective vaccination," concluded the study published in the journal *Nature*.

"The observation that memory B cell responses do not decay after 6.2 months, but instead continue to

evolve, is strongly suggestive that individuals who are infected with SARS-CoV-2 could mount a rapid and effective response to the virus upon re-exposure."

The authors assessed 87 people with a confirmed COVID-19 diagnosis at a little over one month and six months after infection.

While they found that virus neutralising antibody activity decreased with time, the number of memory B cells remained unchanged.

Researchers said their study indicated that the memory B cell response against the [coronavirus](#) evolves during the six months after infection in the presence of viral remnant proteins in the body—enabling the cells to produce more potent antibodies.

How long people can fight off [reinfection](#) to the new coronavirus and what immune process is involved are key to predicting the dynamics of the pandemic.

Previous research has caused concern by showing that neutralising [antibodies](#) can decline quickly after infection with SARS-CoV-2.

But more recent studies have highlighted the role of other parts of the immune system in longer-term immunity.

One paper published in the journal *Science* this month suggested that nearly all major parts of the [immune system](#) that can learn to recognise and repel a new pathogen could continue to respond to the [virus](#) for at least eight months.

This included protein spike specific memory B cells, which the researchers found actually increased in the blood six months after infection.

The paper was based on analyses of blood samples from 188 COVID-19 patients.

More information: Evolution of antibody immunity to SARS-CoV-2, *Nature* (2021). [DOI: 10.1038/s41586-021-03207-w](https://doi.org/10.1038/s41586-021-03207-w) , www.nature.com/articles/s41586-021-03207-w

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