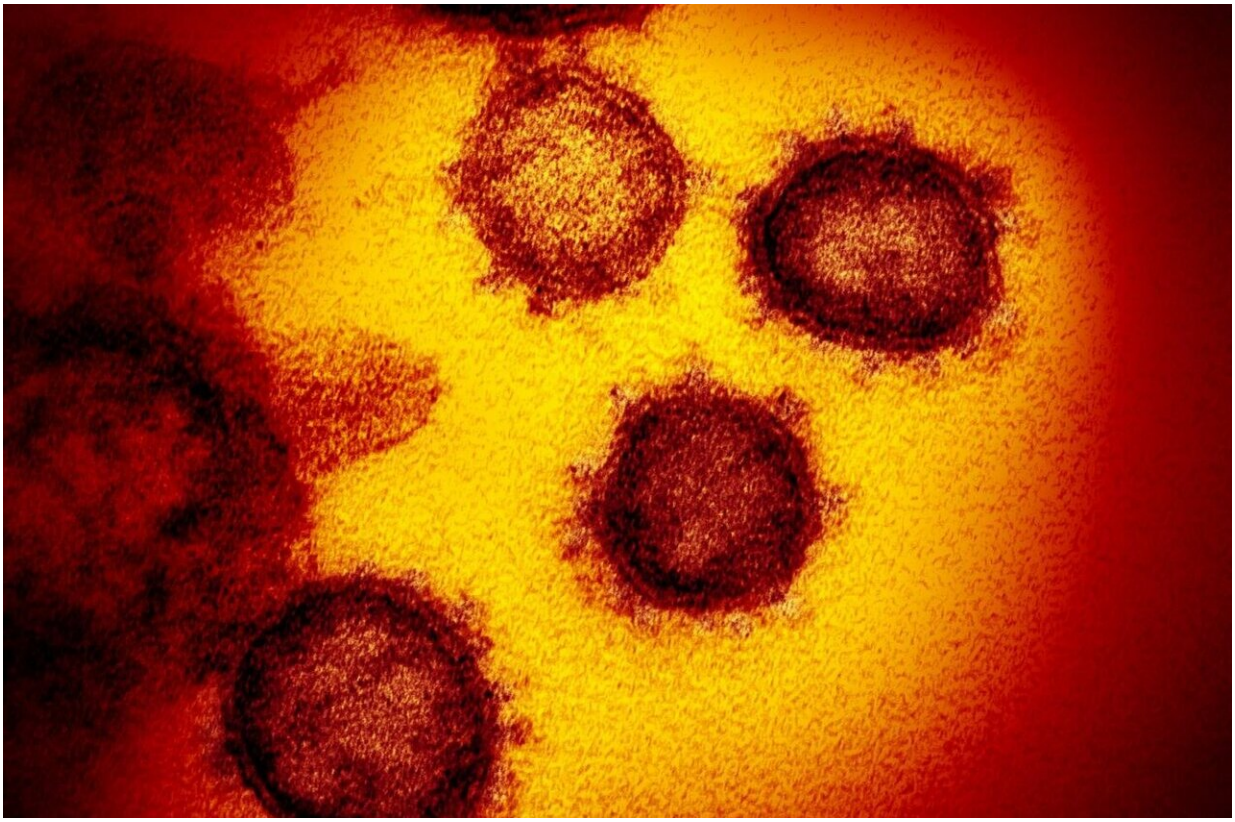
What level of antibody response protects against COVID-19 death?

October 6 2021



Transmission electron microscope image of SARS-CoV-2, the virus that causes COVID-19, emerging from human cells. Credit: NIAID

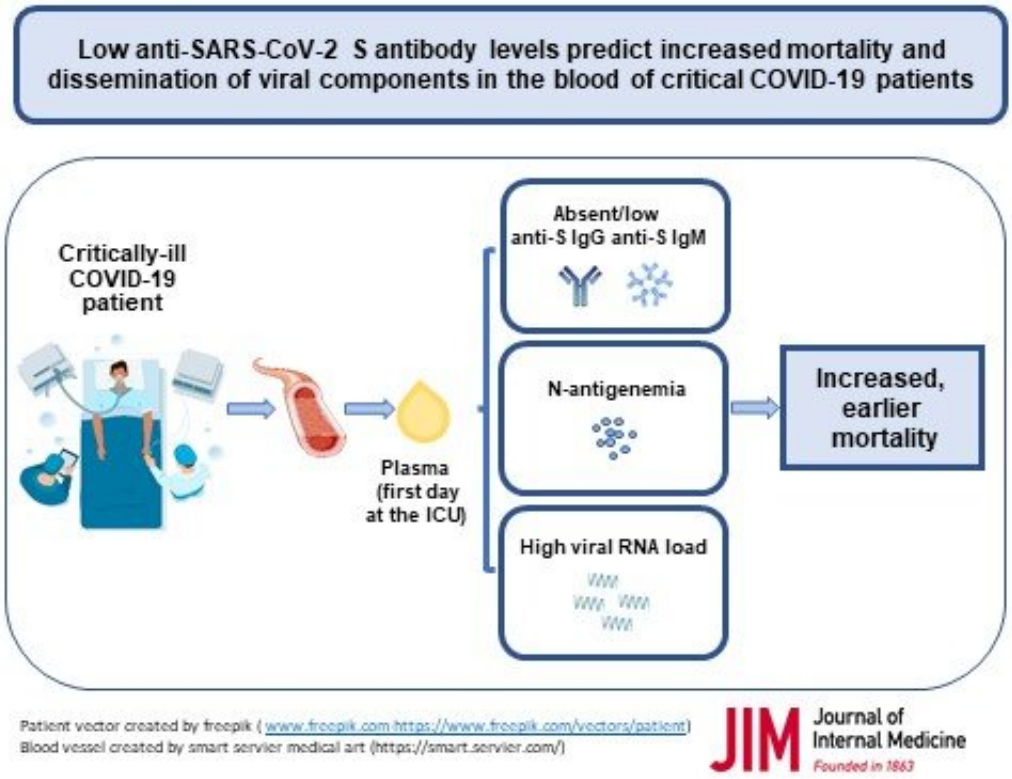
In a study of patients with COVID-19 being treated in intensive care units, people who mounted only a low antibody response against the

SARS-CoV-2 virus faced a higher risk of dying.

The study, which is published in the *Journal of Internal Medicine*, also found that patients with strong antibody responses against the virus had low levels of viral RNA in their blood. On the contrary, those with poor antibody responses had high viral RNA levels and disseminated viral proteins in the blood.

The results could help establish the optimal antibody levels needed for an individual to overcome COVID-19 when critically ill. The study also provided evidence of the importance of antibodies against the spike protein of SARS-CoV-2 to block the virus' replication. These are the antibodies that are induced by vaccination.

"Our findings support that treatment with exogenous antibodies in COVID-19 should be personalized, reserving this therapy for those patients with absent or low endogenous antibodies levels", said co–senior author Jesús F. Bermejo-Martin, MD, Ph.D., of the Instituto de Investigación Biomédica de Salamanca (IBSAL) & CIBERES, in Spain.



In a study of patients with COVID-19 being treated in intensive care units, people who mounted only a low antibody response against the SARS-CoV-2 virus faced a higher risk of dying. Credit: *Journal of Internal Medicine*

More information: *Journal of Internal Medicine*, DOI: 10.1111/joim.13386

Provided by Wiley