Most people are naturally armed against SARS-CoV-2: study
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To address this gap in knowledge, Mor and colleagues used molecular and bioinformatics techniques to compare B-cell responses in eight patients with severe COVID-19 and 10 individuals with mild symptoms, 1.5 months after infection. Very ill patients showed higher concentrations of RBD-specific antibodies and increased B-cell expansion. Among 22 antibodies cloned from two of these patients, six exhibited potent neutralization against SARS-CoV-2. Bioinformatics analysis suggests that most people would be capable of readily producing neutralizing antibodies against SARS-CoV-2 in severe cases of COVID-19. Moreover, combinations of different types of neutralizing antibodies completely blocked the live virus from spreading. According to the authors, these antibody cocktails can be further tested in clinical settings as a useful means to prevent and treat COVID-19.

"Even with a vaccine at our doorstep, arming clinicians with specific anti-SARS-CoV-2 therapeutics is extremely important," the authors add. "Combinations of neutralizing antibodies represent a promising approach towards effective and safe treatment of severe COVID-19 cases, especially in the elderly population or chronically ill people, who will not be able to so easily produce these antibodies upon infection or vaccination."

The COVID-19 pandemic, caused by SARS-CoV-2, has had a profound impact on global public health. Neutralizing antibodies that specifically target the receptor-binding domain (RBD) of the SARS-CoV-2 spike protein are thought to be essential for controlling the virus. RBD-specific neutralizing antibodies have been detected in convalescent patients—those who have recovered from COVID-19. Some of the recoverees tend to have robust and long-lasting immunity, while others display a waning of their neutralizing antibodies. The factors associated with an effective, durable antibody response are still unclear.


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