Summary for Patients: What is the Antibody Response and Role in Conferring Natural Immunity After SARS-CoV-2 Infection? Rapid, Living Practice Points From the American College of Physicians (Version 1)

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Summaries for Patients are a service provided by *Annals* to help patients better understand the complicated and often mystifying language of modern medicine.

Who developed these practice points?

The American College of Physicians' (ACP) Scientific Medical Policy Committee developed these practice points. The ACP is a national organization of internal medicine doctors.

What is the problem and what is known about it so far?

Coronavirus disease 2019 (COVID-19) is a disease caused by a virus called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). When faced with an infection, the body produces substances called antibodies in response to fight the virus causing the disease and protect a person. Antibodies circulate in the bloodstream and can be measured. As such, the presence of antibodies related to a specific virus in the blood can indicate that a person has been infected by that virus, even if they did not feel sick. Antibody tests against the SARS-CoV-2 virus are widely available. However, we don't yet know the answer to such important questions as how long the antibodies last and if antibody levels prevent getting COVID-19 in the future. Whether antibodies can prevent future infection depends on how many antibodies are developed, how long they last, and how the virus may mutate or adapt in the community. Clinicians, the public, and public health professionals could benefit from clear advice on how to interpret SARS-CoV-2 antibody tests.

How did ACP develop these practice points?

The ACP Scientific Medical Policy Committee looked at published research studies that addressed how often people develop antibodies, how long the antibodies last, how many antibodies are present in patients diagnosed with COVID-19, and if having antibodies protects against getting sick with COVID-19 again in the future.

What does ACP advise patients and doctors to do?

The SARS-CoV-2 antibody levels may peak at different times and decline slowly with time, and how long they last depends on the type of antibodies. Some test results may be positive because of presence of antibodies against viruses that are similar to SARS-CoV-2 or because of vaccination. There are differences in how accurate the various tests are in measuring whether a person had COVID-19.

Currently, ACP suggests that SARS-CoV-2 antibody tests should not be used for diagnosing SARS-CoV-2 infection but that antibody tests can be used to estimate how many people in a given community have recently been infected with SARS-CoV-2. The current evidence is too uncertain to help us understand if and how long patients with antibodies are protected from getting infected again. The public should follow public health advice to prevent themselves or others from getting sick. This includes maintaining physical distancing in public, wearing surgical or cloth masks when physical distancing is not possible and using them appropriately, washing hands frequently, covering coughs and sneezes using a bent elbow or paper tissue, and cleaning frequently touched surfaces regularly.

What are the cautions related to these practice points?

These practice points only cover immunity that comes from the antibodies that are developed from having the disease (natural immunity). They do not address immunity that can come from vaccines.

Because ACP expects new studies to come out that may provide more information, ACP will update these practice points as more evidence becomes available. The usefulness of SARS-CoV-2 antibodies to estimate how many people in a given community have been infected may decrease as more people receive COVID-19 vaccines and develop antibodies in response to vaccination.

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