## **MEDPAGE TODAY**°

## Op-Ed: Quit Ignoring Natural COVID Immunity

— Antibody testing and proof of prior infection can allow more people to return to normal

by Jeffrey Klausner, MD, MPH, and Noah Kojima, MD May 28, 2021

Epidemiologists estimate over 160 million people worldwide have recovered from COVID-19. Those who have recovered have an astonishingly low frequency of repeat infection, disease, or death. That immunity from prior infection protects many people now where vaccines are not yet available.

Earlier this month the World Health Organization released a scientific update stating that most people who have recovered from COVID-19 develop a strong protective immune response. Importantly, they summarize that within 4 weeks of infection, 90% to 99% of people who recover from COVID-19 develop detectable neutralizing antibodies. Furthermore, they conclude -- given the limited amount of time to observe cases -- that the immune response remains strong for at least 6 to 8 months after infection.

This update echoes what the NIH reported in January 2021: The immune response of more than 95% of people who recovered from COVID-19 had durable memories of the virus up to 8 months after infection. The NIH went further to state that those findings "provide hope" that people who get vaccinated will develop similar lasting immunity.

So why are we so focused on vaccine-induced immunity -- in our goals to reach herd immunity, our gatekeeping on travel, public or private events, or mask use -- while ignoring natural immunity? Shouldn't those who have natural immunity also be able to return to "normal" activities?

Numerous scientists have found that there is a decreased risk of re-infection and extremely low rates of hospitalization and death due to repeat infection. The range of reduction of re-infection from COVID-19 was between 82% to 95% among six studies that encompassed nearly 1 million people conducted in the U.S., the U.K., Denmark, Austria, Qatar, and among U.S. Marines. The study in Austria also found that the frequency of re-infection from COVID-19 caused hospitalization in only five out of 14,840 (0.03%) people and death in one out of 14,840 (0.01%).

In addition, newer U.S. data, released after the January NIH announcement, found protective antibodies lasting up to 10 months following infection.

As public health policymakers reduce the discussion of immunity to vaccination status, largely ignored are the complexities of the human immune system. There are multiple highly encouraging research reports showing that blood cells in our body, so called "B cells and T cells," contribute to the cellular immunity after COVID-19. If SARS-CoV-2 immunity is similar to other severe coronavirus infections like SARS-CoV-1 immunity, that protection could last at least 17 years. However, tests to measure cellular immunity are complex and expensive, making them hard to get and preventing their use in routine medical practice or in public health surveys of the population.

The FDA has authorized numerous antibody tests. As with any test, they require financial costs and time to obtain results, and there are important differences in the performance of each test in terms of what the positive antibodies actually represent. A critical distinction is that some tests only detect antibodies found after natural infection, "N" antibodies, and some cannot differentiate between natural or vaccine-induced antibodies, "S" antibodies. Doctors and patients should beware of this and ask which antibodies the tests actually measure.

Last week, on May 19, the FDA issued a public safety communication stating that while SARS-CoV-2 antibody tests play an important role in identifying people who have been exposed to the SARS-CoV-2 virus and may have developed an adaptive immune response, antibody tests should not be used to determine immunity or protection against COVID-19. Huh?

While it is important to note that message, it is confusing. The FDA presented no data in their warning and left those alerted uncertain about why antibody testing should not be used to determine immunity or protection against COVID-19. The FDA statement went on to say that antibody tests should be used by those experienced with antibody testing. Not helpful.

Like many aspects of the Federal Government's response to COVID-19, the FDA's comment lags behind the science. Given that 90% to 99% of people who recover from COVID-19 develop detectable neutralizing antibodies, doctors can use the correct test to inform people of their risk. We can counsel patients that those who have recovered from COVID-19 have a strong protective immunity, protecting them from repeat infection, disease, hospitalization, and death. In fact, that protection is similar to or better than

vaccine-induced immunity. Putting that together, people who have recovered from prior infection or those with detectable antibodies should be considered protected, similarly to someone who is vaccinated.

Moving forward, policymakers should include natural immunity as determined by an accurate and reliable antibody test or the documentation of prior infection (previous positive PCR or antigen test), as evidence of immunity equal to that of vaccination. That immunity should be given the same societal status as vaccine-inducted immunity. Such a policy will greatly reduce anxiety and increase access to travel, events, family visits, and more. The updated policy will allow those who have recovered to celebrate their recovery by informing them of their immunity, allowing them to safely discard their masks, show their faces, and join the legions of those vaccinated.

Jeffrey Klausner, MD, MPH, is a clinical professor of preventive medicine at the University of Southern California Keck School of Medicine in Los Angeles, and a former CDC medical officer. Noah Kojima, MD, is an internal medicine resident at University of California Los Angeles.

## **Disclosures**

Klausner is medical director of Curative, a testing company, and disclosed fees from Danaher, Roche, Cepheid, Abbott, and Phase Scientific. He has previously received funding from the NIH, CDC, and private test manufacturers and pharmaceutical companies to study new ways to detect and treat infectious diseases.

Kojima has received payments from Curative for clinical research services.