Serology Testing for COVID-19

CDC has developed a new laboratory test to assist with efforts to determine how much of the U.S. population has been exposed to SARS-CoV-2, the virus that causes COVID-19.

What CDC wants to learn

The serology test looks for the presence of antibodies, which are specific proteins made in response to infections. Antibodies can be found in the blood and in other tissues of those who are tested after infection. The antibodies detected by this test indicate that a person had an immune response to SARS-CoV-2, whether symptoms developed from infection or the infection was asymptomatic.

Antibody test results are important in detecting infections with few or no symptoms.

Currently, CDC's serologic test is designed and validated for broad-based surveillance and research that will give us information needed to guide the response to the pandemic and protect the public's health. The test is not currently designed to test individuals who want to know if they have been previously infected with COVID-19.

The results of these studies will allow us to estimate how many people have been infected nationally. The results will also provide information about the percentage of U.S. residents who have not had COVID-19 and are still at risk for infection. This research is designed to help us understand who has been infected with SARS-CoV-2 and determine factors that confer protection against this virus.

Next Steps

During the week of March 30, CDC and public health partners began the first stage of what will grow to be wide studies of community transmission of SARS-CoV-2. These initial studies use serum samples collected in the state of Washington and New York City. The second stage will expand to include serologic testing in more areas with high numbers of people with diagnosed infections. It will also include studies of households in some states.

CDC is evaluating commercially manufactured serologic tests in collaboration with the Biomedical Research and Development Authority, the Food and Drug Administration, the National Institutes of Health, the Department of Defense, and the White House Office of Science and Technology Policy. This evaluation is expected to be completed in late April.

- Commercially manufactured serologic tests that check for SARS-CoV-2 antibodies in individuals are becoming increasingly available for use through healthcare providers.
- Serologic test results have limitations that make them less than ideal tools for diagnosing people who are sick.
- It typically takes one to two weeks after someone becomes sick with COVID-19 for their body to make antibodies; some people may take longer to develop antibodies.
- Depending on when someone was infected and the timing of the test, the test may not find antibodies in someone with a current COVID-19 infection.

Additional Resources

Information for Laboratories

CDC Grows SARS-CoV-2 Virus in Cell Culture

Requests for Diagnostic Tools and Virus

FDA Statement on Serological Tests

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