

Information from New York State Department of Health on What your Antibody Test Results May Mean

To assist healthcare providers in their discussions with patients about what their test result may mean for them, the following questions and answers (Q&A's) are provided:

Q: What is SARS-CoV-2?

A: SARS-CoV-2 is the name for the virus that causes COVID-19. It is part of a large family of coronaviruses, all of which typically cause respiratory disease in humans.

Q: What are antibodies?

A: Antibodies are proteins that develop when the immune system responds to a pathogen, such as a virus. There are different types of antibodies, including ones called IgM and IgG. IgM is the first antibody that develops after someone has an acute viral infection. This is followed by the development of IgG antibodies. Once IgG antibodies have been developed, if a person comes into contact with the same virus again, the IgG antibodies help the immune system respond faster and more effectively than it did the first time and may prevent illness.

Q: If a serology test for SARS-CoV-2 antibodies is negative, does this mean I do not have the virus?

A: No. A serology test looks for the presence of proteins, called antibodies, which can be used to help understand if you were exposed to the virus recently or in the past. A person with a negative serology test could have the SARS-CoV-2 virus, but it is too early to detect the antibodies on the serology test. Only a molecular diagnostic test can be used to determine the presence or absence of the virus. Results from a serology test should not be used as the sole basis for diagnosing if someone had COVID-19.

Q: If a serology test for SARS-CoV-2 antibodies is negative, but I had a molecular test that said I was infected with the virus, what does this mean?

A: A person with a negative serology test could have the SARS-CoV-2 virus, but the serology test is negative because it is too early to detect the antibodies since these take time for the body to develop. A person can also have a negative serology test because their immune system did not make enough of the antibodies to be detected by the test after they were infected. Your healthcare provider will talk with you about what the next steps should be, which may include repeating the serology test in the future.

Q: If the serology test is positive, does that mean that I have antibodies to the SARS-CoV-2 virus?

A: If the test used is only able to detect antibodies to SARS-CoV-2, then yes, a positive test would indicate that you have antibodies to the SARS-CoV-2 virus. However, some tests that detect antibodies to SARS-CoV-2 can yield false positive results due to infection from other related coronaviruses; for these tests, a positive result may indicate a previous exposure to a related virus and/or exposure to SARS-CoV-2. Your healthcare

provider will talk with you about what a positive serology test may mean for you based on the kind of test that was used.

Q: If the serology test is positive and shows that I have antibodies to SARS-CoV-2, does that mean I am immune to the virus?

A: Based on our knowledge of how the body reacts to an infection, we presume that the presence of IgG antibodies could mean that you have some level of immunity to a virus. However, at this time, it is unclear whether the presence of SARS-CoV-2 IgG antibodies will result in immunity to prevent future COVID-19 infections. We will better understand immunity to SARS-CoV-2 as we study what happens to people who test positive for SARS-CoV-2 IgG antibodies and are again exposed to SARS-CoV-2, to determine if any of them are confirmed to have new infections.

Q: If the serology test is positive and shows that I only have IgM antibodies to SARS-CoV-2, does that mean I currently have COVID-19?

A: No, only a molecular diagnostic test can be used to determine the presence or absence of the virus. Results from a serology test should not be used as the sole basis for diagnosing if someone has or recently had COVID-19, but it can be used to screen individuals who should receive molecular testing.