

BACKGROUND

COVID-19 is the name of the disease that is currently causing infection around the world. It is caused by the virus SARS-CoV-2, which infects the respiratory tract. Coughing, sneezing, shouting or cheering—even talking or singing—can cause it to spread. This is why wearing a mask helps prevent spread of the virus.

WHAT IS AN ANTIBODY?

When a person is infected with the virus that causes COVID-19, their body responds by making antibodies. This is part of how your immune system works. Antibodies are protein molecules that attack and stick to the virus, which helps your body fight the infection and get better. Antibodies made by the body are very specific to a target invader like the SARS-CoV-2 virus. If you have antibodies in your blood specific to the SARS-CoV-2 virus, you were infected at some point in the past. You may not recall ever being sick or being tested for COVID-19, as some people with infection don't get symptoms or see a doctor to get a test. Or you may remember being sick with a cough-like illness or have had a previous positive test.

WHAT IS SEROLOGY OR A SEROLOGY TEST?

Serology is the process of studying the molecules in blood after the red cells and white cells have been removed (the serum). This serum is analyzed in a laboratory to see if there are different molecules, like antibodies, against specific viruses or microorganisms that can be detected. Simply put, blood is collected and looked at in a laboratory to detect specific antibodies to the virus that causes COVID-19.

WHAT IS SEROPREVALENCE?

Seroprevalence is a term that tells us how many people have a condition detected by analyzing serum among a group of people. This is often described as a percent of the people in the group that is being looked at. So if we do serology to look for antibodies to SARS-CoV-2 among 200 people and we find that 50 people have these antibodies and 150 don't, that means that among this group of 200 people, there is a 25 percent seroprevalence to the SARS-CoV-2 virus. Another way to say this is that 25 percent of these people had a past COVID-19 infection.

POSITIVE TEST RESULTS: SPECIFIC QUESTIONS

WHAT DOES IT MEAN IF I HAVE ANTIBODIES TO THE SARS-COV-2 VIRUS?

If you have a positive antibody test, then antibodies to SARS-CoV-2 were found in your blood. This means that you were infected at some point in the past. It often takes the body up to two weeks after infection for there to be enough antibodies in the blood to be detected by a laboratory test. For this reason, when we find antibodies in people, they are almost always past the point where they can spread the virus to others. You may not recall ever being sick or being tested for COVID-19, as some people who are infected don't get symptoms or see a doctor to get a test. Or you may remember being sick with a cough-like illness and or have had a previous positive test.

IF I HAVE ANTIBODIES, WHERE DID I GET THE VIRUS FROM?

If you were not previously tested for COVID-19, and don't remember being sick or being part of an outbreak where other people in your household or work were known to have COVID-19, then we won't ever really know where you became infected. The virus became widespread in the United States in March 2020.

DOES HAVING ANTIBODIES AGAINST COVID-19 MEAN I CAN INFECT OTHER PEOPLE?

It takes up to two weeks for the body to produce enough antibodies to be detected after infection or from the start of any symptoms someone might get. By the time someone has a positive antibody test, enough time has gone by that they are no longer spreading virus from their nose or mouth.

DOES HAVING ANTIBODIES AGAINST COVID-19 MEAN I AM PROTECTED FROM BEING INFECTED AGAIN?

We don't know at this time. Antibodies often give protection from the same virus or microorganism if someone is exposed to that virus or microorganism again. Different types of antibodies last longer in the body, and some have better ability to recognize and attach to the same virus in the future if someone gets another exposure. For people with antibodies to SARS-CoV-2, we don't have enough information about people who may have been infected again, gotten sick again, or were completely protected from getting sick after they were exposed again. More will be understood about the answer to this question as time goes by.

IF I AM POSITIVE FOR SARS-COV-2 ANTIBODIES, DO I NEED TO GET THE VACCINE?

At this time, the answer is yes. Because we don't know if having antibodies to SARS-CoV-2 gives you protection from reinfection, we want to give you every opportunity to not get sick again, or to not become infected where you might spread the virus to other people. Getting the vaccine when it becomes available to you is the right move.

DO I HAVE TO WEAR A MASK WHEN AROUND OTHER PEOPLE IF I HAVE ANTIBODIES TO SARS-COV-2?

Yes. We don't know if having antibodies mean that you won't be infected again in the future and if you can be, then you may be able to spread the disease to other people. When you wear a mask, it disrupts the spread of the virus and protects other people around you. This is very important if you work or live with senior citizens or people with a health problem like heart, lung, or kidney disease.

IF I HAVE A POSITIVE ANTIBODY TEST TO COVID-19, DO I NEED TO KEEP GETTING TESTED?

Having a positive antibody test means that you were previously infected with SARS-CoV-2 in the past, but we don't know at this time if that means you are protected from future infection, or if you could spread the virus to other people. If you work or live in a high-risk setting (healthcare or long-term care facility for example), you will need to follow their recommendations for ongoing testing. A positive antibody test does not change this.

NEGATIVE TEST RESULTS: SPECIFIC QUESTIONS

WHAT DOES IT MEAN IF ANTIBODIES WERE NOT DETECTED TO THE SARS-COV-2 VIRUS FROM MY BLOOD?

If the laboratory does not detect antibodies to SARS-CoV-2 in your sample, then you can believe that you were never infected with the virus in the past. This means that you can become infected if you are exposed to the virus in the future.

SHOULD I BELIEVE THE NEGATIVE TEST RESULT?

The tests that look for antibodies in blood are very good at doing this, but not everything is perfect. Collecting and processing the blood sample and running the tests must be done carefully. You should believe the test result unless told about a problem with your sample. This is very unlikely to occur.

I REMEMBER BEING SICK AND THOUGHT I HAD COVID-19. IS IT POSSIBLE THAT I DON'T HAVE ANTIBODIES EVEN THOUGH I HAD THE DISEASE?

In general, if a person had infection with SARS-CoV-2, then they should have detectable antibodies in their blood. Some people lose antibodies over time, and this is different for different diseases. We don't know enough about how long antibodies to SARS-CoV-2 last in people after infection, but early reports are showing antibodies last at least five months.