

FACT SHEET FOR SARS PATIENTS

UNDERSTANDING YOUR TEST RESULTS

A blood sample or other specimen was recently obtained from you so that you could be tested for the agent(s) that might be causing the severe acute respiratory syndrome (SARS). Some test results have been returned to you, but it can be hard to know just what these results mean. The questions and answers that follow will help you understand your results. You will learn why you were tested, what a positive result means, what a negative result means, if you will need more tests, and much more.

What was I tested for?

Scientists have found a new coronavirus in some patients with SARS. The scientists suspect that this virus causes SARS, but they are checking to see if there might be other causes.

Scientists have developed several tests that can detect this new coronavirus or the body's response to it. In the United States right now, these tests are available only at the Centers for Disease Control and Prevention (CDC). The tests are still being developed and improved, but CDC is using them now because they can help us understand how or if SARS and human coronavirus are connected.

What tests for human coronavirus are being reported?

Several types of newly developed tests are being used to test for coronavirus in different ways. At this time, we do not know which tests perform best at which time points after the illness begins. The current tests are listed below.

- **Antibody testing:** There are two types of tests being used to see if antibodies to the new coronavirus can be found in specimens from SARS patients. A positive antibody test result means that both tests were done and that antibodies were found with both.
- **PCR:** This test can detect the virus's genetic material in specimens from patients. The specimens that are tested include blood, stool, and nasal secretions.
- **Culture:** In this test, a patient's specimen is put into culture material. If the virus grows in this material, the test result is positive.

If you are a SARS patient and have a positive test for this new coronavirus, it means that you are, or recently were, infected with the virus. This virus may have caused you to get SARS.

What does it mean if all my test results for the new coronavirus are negative?

SARS is diagnosed by a patient's symptoms and exposures not on lab test results. There are several reasons for negative tests in a patient with SARS:

- You may not have been infected with this new coronavirus. It can sometimes be difficult to find out which germ (virus, bacteria, etc.) is causing a person to be ill with fever, respiratory symptoms, and pneumonia. For example, only about half of the cases of pneumonia that are diagnosed have a specific germ detected. Also, SARS and illnesses like SARS might be caused by something other than this new coronavirus.
- The tests might give an incorrect (“false-negative”) result. As the tests are improved, CDC might test your specimens again. Results from more sensitive, improved tests might be positive.
- Your samples might not have been collected at a time during the infection when test results will show as positive. The PCR test will only be positive if there is viral genetic material in the specimen. This may be for a brief period, depending on the type of specimen tested.

Which tests are done and why?

The number of tests that can be done is limited by the amount and type of specimens and the test type. If there is enough of the specimen, both types of antibody tests and the PCR are done. Viral culture is the most difficult test and takes the longest time, so it cannot be done on all patients.

What does it mean if the CDC test results are positive for human metapneumovirus?

CDC has tested some specimens from SARS patients for a variety of viruses, including human metapneumovirus. Human metapneumovirus is another virus that scientists are beginning to understand. It is related to the viruses that cause a broad range of respiratory and childhood illnesses, including mumps, measles, and croup. Human metapneumovirus is genetically related to respiratory syncytial virus, which is a common cause of lower respiratory tract infection in children. Several laboratories have reported positive test results for human metapneumovirus in patients with SARS. There is not enough information to determine what role, if any, human metapneumovirus might have in causing SARS.

What should I do if my test results for the new coronavirus are negative?

A negative coronavirus test does not mean that you do not have SARS. You are still considered to have SARS because of your symptoms and exposures. Do not go to work, school, out-of-home childcare, or other public areas until ten days after your symptoms have ended. Advice to help you from spreading SARS to other persons can be found on the [CDC website](#). You should follow these instructions while sick and for 10 days after your symptoms have ended.

Should anyone exposed to me get tested?

Not unless the CDC or health department asks them to be part of an investigation. We do not know yet how to interpret test results for people who are not ill.

Should a person who is not ill but who traveled to an area where there is SARS be tested?

Not unless the CDC or health department asks them to be part of an investigation. We do not know yet how to interpret test results for people who are not ill.

What other investigations related to SARS are planned?

The state health department or CDC may contact some SARS patients regardless of whether the coronavirus test was positive or negative. These patients might be asked to participate in investigations that are trying to understand more about coronavirus and SARS and how they are related to each other. If you agree to take part in those investigations, your permission would be requested to collect more specimens for testing.

FREQUENTLY ASKED QUESTIONS ABOUT CORONAVIRUSES

What is the cause of SARS?

Scientists at CDC and other laboratories have detected a new coronavirus in some patients with SARS. While the new coronavirus is still the leading hypothesis for the cause of SARS, other viruses are still under investigation as potential causes.

What are coronaviruses?

Coronaviruses are a group of viruses that have a halo or crown-like (corona) appearance when viewed under a microscope. These viruses are a common cause of mild to moderate upper-respiratory illness in humans and are associated with respiratory, gastrointestinal, liver, and neurologic disease in animals. Coronaviruses can survive in the environment for as long as three hours.

What evidence is there to suggest that coronaviruses may be linked with SARS?

CDC scientists were able to isolate a virus from the tissues of two patients who had SARS and then used several laboratory methods to characterize the agent. Examination by electron microscopy revealed that the virus had the distinctive shape and appearance of coronaviruses. Tests of serum specimens from patients with SARS showed that the patients appeared to have recently been infected with this coronavirus. Other tests demonstrated that coronavirus was present in a variety of clinical specimens from patients, including nose and throat swabs. In addition, genetic analysis suggests that this new virus belongs to the family of coronaviruses but differs from previously identified coronaviruses. These laboratory results do not provide conclusive evidence that the new coronavirus is the cause of SARS.

If coronaviruses usually cause mild illness in humans, how could this new coronavirus be responsible for a potentially life-threatening disease such as SARS?

There is not enough information about the new virus to determine the full range of illness that it might cause. Coronaviruses have occasionally been linked to pneumonia in humans, especially people with weakened immune systems.

Has new information about coronavirus changed the recommendations for medical treatment for patients with SARS?

The possibility that a new coronavirus is the cause of SARS has not changed treatment recommendations. The new coronavirus is being tested against various antiviral drugs to see if an effective treatment can be found.

Are there any long-term health problems for people who get coronavirus infections?

We do not know the long-term health consequences for people who have an infection with the new coronavirus. One goal of the investigations being done now is to help answer this question. No long-term health problems from infections with other types of human coronaviruses have been reported.

Where can I find out more about SARS and coronaviruses?

More information on SARS is available at the CDC website
<http://www.cdc.gov/ncidod/sars/faq.htm#personal>.