

## COVID-19 Testing

The two tests being offered today, the COVID-19 serology (blood) test and the PCR (nasal swab) are recommended to be performed together to best determine whether or not a patient has been infected by the virus, developed antibodies and possible immunity to the virus, and to determine if the patient can currently be spreading the virus to others. Results should be available from Quest Diagnostics within 2-4 days.

- **The PCR test has been authorized by the FDA under an Emergency Use Authorization (EUA) for use by authorized laboratories. The serology test has not been reviewed by the FDA as of 4/24/20.**
- Results from serology (blood antibody) testing should not be used as the sole basis to diagnose or exclude SARS-CoV-2 infection or to inform infection status.
- Positive results may be due to past or present infection with non-SARS-CoV-2 coronavirus strains, such as coronavirus HKU1, NL63, OC43, or 229E.
- Negative results do not rule out SARS-CoV-2 infection, particularly in those who have been in contact with the virus. Follow-up testing with a molecular diagnostic (PCR nasal swab) should be considered to rule out infection in these individuals.

### **What is COVID-19?**

COVID-19 is the disease caused by the SARS-CoV-2 virus. The virus, which can cause mild to severe respiratory illness, was first identified in Wuhan, China, and has now spread globally, including the United States. There is limited information available to characterize the spectrum of clinical illness associated with COVID-19 but it likely spreads to others when a person shows signs or symptoms of being sick (e.g., fever, coughing, difficulty breathing, etc.).

### **How the Serology (Blood) Tests Work**

Unlike the PCR (nasal swab) test designed to diagnose an active COVID-19 infection (specifically from the SARS-CoV-2 virus), serological tests can help identify individuals who have developed an immune response to the virus, either as part of an active infection or a prior infection. The tests detect the presence of antibodies (IgG) in the blood – if antibodies are present, that indicates that the person has been exposed to the virus and developed antibodies against it, which may mean that person has at least some immunity to the coronavirus. In the early days of an infection when the body's immune response is still building, antibodies may not be detected, which is why serological tests should not be used as the sole basis to diagnose or exclude infection with the SARS-CoV-2 virus.

### **Interpretation of Serology (Blood) Results:**

**Positive** – antibodies have been detected in the blood indicating the patient has been exposed to the virus and has developed antibodies against it, which may provide at least some immunity to COVID-19.

**Negative** – no antibodies have been detected in the blood indicating that either the patient has not been exposed to the virus and does not have immunity against it, OR the patient is in the early days of an infection when the body's immune response is still building.

If you are symptomatic, contact your healthcare provider to help you understand the next steps you should take.

## What is the Quest SARS-CoV-2 rRT-PCR (nasal swab)?

The test is designed to detect the virus that causes COVID-19 in respiratory specimens, for example nasal swabs.

## Interpretation of PCR (Nasal Swab) Results:

### What does it mean if I have a positive test result?

If you have a positive test result, it is very likely that you have COVID-19. There is a very small chance that this test can give a positive result that is wrong (a false positive result). Contact your healthcare provider or nearest health department to determine how best to care for you based on the test results along with medical history, and your symptoms.

**Persons with COVID-19 who have symptoms** are recommended to remain in isolation according to the following CDC guidelines:

- **If you will not have a follow-up test** to determine if you are still contagious, you can leave home after these three things have happened:
  - You have had no fever for at least 72 hours (that is three full days of no fever without the use of medicine that reduces fevers)  
AND
  - other symptoms have improved (for example, when your cough or shortness of breath have improved)  
AND
  - at least 7 days have passed since your symptoms first appeared
- **If you will have a follow-up test** to determine if you are still contagious, you can leave home after these three things have happened:
  - You no longer have a fever (without the use of medicine that reduces fevers)  
AND
  - other symptoms have improved (for example, when your cough or shortness of breath have improved)  
AND
  - you received two negative tests in a row, 24 hours apart.

**Persons with laboratory-confirmed COVID-19 who have not had any symptoms** may discontinue isolation when at least 7 days have passed since the date of their first positive COVID-19 diagnostic test and have had no subsequent illness provided they remain asymptomatic.

### What does it mean if I have a negative test result?

A negative test result means that the virus that causes COVID-19 was not found in your sample. For COVID-19, a negative test result for a sample collected while a person has symptoms usually means that COVID-19 did not cause your recent illness. However, it is possible for this test to give a negative result that is incorrect (false negative) in some people with COVID-19. This means that you could possibly still have COVID-19 even though the test is negative. If this is the case, contact your healthcare provider or nearest health department to consider the test result together with all other aspects of your medical history (such as symptoms, possible exposures, and geographical location of places you have recently traveled) in deciding how to care for you. If you are symptomatic, contact your healthcare provider to help you understand the next steps you should take.