

FAQs for PCR Testing of Individuals for SARS-CoV-2 (Updated May 25, 2020)

The FAQs below provide information and guidance for the University and are based on the May 4, 2020 guidance and FAQs issued by New York-Presbyterian Hospital.

These FAQs focus on the diagnostic PCR test for SARS-CoV-2 and our current understanding of the meaning of positive and negative PCR results in symptomatic and asymptomatic individuals.

Individuals who are SARS-CoV-2-positive, even without any symptoms, should self-isolate at home as described below. Guidance for return to work is also described below.

At this time, PCR testing is **not** recommended for asymptomatic individuals who have **not** been in contact with someone at work or at home with confirmed COVID-19 or symptoms of COVID-19.

1. What is the difference between SARS-CoV-2 and COVID-19?

SARS-CoV-2 is the new coronavirus that causes COVID-19 illness.

2. What kinds of tests are used to determine if people have COVID-19?

There are two different types of tests for COVID-19, one determines whether you have it now (being the time the test was collected) and the other determines if you have had it at some point in the past.

- *To detect of SARS-CoV-2 infection now: a nasopharyngeal (NP) or nasal swab are used to detect the virus or pieces of the virus. Tests using saliva samples are being developed and validated but are not presently in general use.*
- *To detect that an infection occurred at some point in the past: a serology blood test is used to detect antibodies to SARS-CoV-2.*

**Note: If antibodies are detected, whether they provide protection from SARS-CoV-2 infection is not clearly established at this time.*

3. How is the nasopharyngeal (NP) or nasal test done?

To do the NP or nasal swab test to detect SARS-CoV-2 virus or parts of the virus, a sterile, small, swab is gently passed into the nose back to the nasopharynx (in the case of NP swab) or rotated in the anterior part of the nose (in the case of nasal swabs) to obtain respiratory tract secretions, rotated and removed and placed in viral transport medium in a tube to be transported to the laboratory or can be tested directly depending on the type of test to be used.

4. What does the NP or nasal PCR test measure?

The PCR assays on the NP or nasal swab specimens detect the SARS-CoV-2 viral genetic material (RNA). PCR assays can detect live virus or dead virus or fragments of virus.

5. What are the current recommendations for testing using the NP or nasal PCR test?

The NP or nasal swab PCR test is currently recommended for two groups of individuals.

- *Individuals with symptoms consistent with SARS-CoV-2 infection. **Symptoms of COVID-19 include:** documented fever or subjective fever, cough, shortness of breath, sore throat, chills or shaking chills, congestion/runny nose, diarrhea, alterations of taste, or loss of smell.*
- *Individuals without symptoms who have had close contact with someone at work or at home with laboratory-confirmed COVID-19 or with symptoms consistent with COVID-19. Individuals without symptoms who had close contact do not need repeat testing, regardless of the result of the first test.*

**Note: Faculty & Staff should contact their primary care provider or visit a free-standing testing facility unless eligible to receive services at Workforce Health & Safety (WFHS) at CUIMC.*

Students: Contact [Columbia Health](#) (Morningside students) or [CUIMC Student Health Service](#) (CUIMC students)

6. In individuals with symptoms, what does a positive NP or nasal swab PCR test result mean?

*A positive PCR test from an individual with symptoms means that the individual has COVID-19 and can infect others. These individuals need to be isolated. In order to **return to work**, all of the following criteria need to be met:*

- *At least 10 days have passed since the onset of symptoms*
- *At least 72 hours have passed without fever and without the use of antipyretic medications, e.g., acetaminophen, ibuprofen*
- *Marked improvement in symptoms*

**Note: When these individuals return to work, they need to continue to use all protective measures against COVID-19 because we do not know yet if someone can be re-infected with SARS-CoV-2.*

7. In individuals* without symptoms, what does a positive NP or nasal swab PCR test result mean?

The PCR test can detect both live and dead virus (or viral RNA fragments). A positive PCR result in someone without symptoms could mean any of the following:

- *A person (with or without symptoms) has recovered from COVID-19, but is still shedding the virus and could transmit SARS-CoV-2 to others.*
- *A person (with or without symptoms) has recovered from the virus and the PCR is detecting dead virus or viral RNA fragments and SARS-CoV-2 cannot be transmitted to others.*
- *A person is pre-symptomatic or asymptomatic, meaning they may or may not develop symptoms, but are shedding the virus. Asymptomatic or pre-symptomatic people who are PCR-positive can sometimes transmit SARS-CoV-2 to others.*

That is why asymptomatic individuals who are SARS-CoV-2-positive will need to self-isolate at home. Generally, these asymptomatic individuals can return to work as long as they remain asymptomatic after 10 days have passed since the date that their NP or nasal swab was obtained. The NP or nasal swab does not need to be repeated before the individual can return to work.

Faculty and staff with positive PCR tests should obtain guidance regarding their health and how to protect their close contacts from their primary care provider or from Workforce Health & Safety (WFHS) at CUIMC, if test was done there.

Students should follow up with [Columbia Health](#) (Morningside students) or [CUIMC Student Health Service](#) (CUIMC students).

**Note: When these individuals return to work, they will need to continue to use all protective measures against COVID-19 because it is not known if someone can be re-infected with SARS-CoV-2.*

8. Does an individual who is PCR-positive need a follow-up NEGATIVE PCR test to return to work?

No, individuals can return to work as per the criteria described above. No further PCR testing is required to return to work.

9. In individuals with symptoms, what does a negative NP or nasal swab PCR test result mean?

People with COVID-19-like symptoms can have a negative test for several reasons.

- *This may be a false negative test meaning that the person does have COVID-19, but that the PCR test did not detect the virus or virus particles because the level of viral RNA was below the limit of detection. Levels of viral RNA are usually highest in the first 5 days of symptoms of the illness.*
- *False negative tests can also occur due to inadequate or improper NP or nasal swab collection or problems in the transport of the specimen.*
- *Sometimes people with symptoms can have a negative test because they have other reasons for their symptoms such as seasonal allergies, another infection or asthma.*

10. In individuals without symptoms, what does a negative NP or nasal swab PCR test result mean?

It is likely that a person without symptoms with a negative NP or nasal swab PCR test does not have COVID-19. If these individuals have had close contact with a person who is known to be positive, these individuals should continue to self-monitor for symptoms of COVID-19 for 14 days from the time of exposure as there is continued risk of transmission.

11. For individuals without symptoms obtaining a PCR, how long will it to get their PCR test result back and how will they be told about their test results?

The time it takes to get PCR test results back varies based on the laboratory where the test is done. Your clinician will generally securely call or text the individual with their test results.

12. Can individuals without symptoms work while waiting for their PCR test result?

While testing of asymptomatic individuals without contact with a COVID-19 case is not recommended, if a test is conducted, such individuals can continue to work while awaiting their test result. As per current guidance, they should continue to wear face covering/ mask whenever they are around others and wear appropriate PPE.

If asymptomatic individuals with close contact of a COVID-19 case get tested, then such individuals should self-quarantine for 14 days from the time of exposure.

Note. *For individuals in patient-facing positions, self-quarantine of close contacts is not required, consistent with New York-Presbyterian Hospital policies for health care workers.*

13. Will Columbia trace the contacts at work of known cases?

No. The laboratory that performs the test is required to notify the NYC Department of Health. New York City is responsible for identifying and tracing the contacts of the case and informing individuals who have had contacts that put them at risk of infection, advising them regarding self-quarantine and testing, and providing the necessary support, in addition to maintaining confidentiality.

14. What does an indeterminate NP or nasal swab PCR test mean?

*Occasionally a person will have an indeterminate NP PCR test result. This is considered a positive result and represents a low level of virus. It does **NOT** need to be repeated and individuals should follow the guidance as if the result were positive.*

15. What does an invalid NP or nasal swab PCR test mean?

*Occasionally, a person will have an invalid NP PCR test result, which is the result of excessive mucus in the sample, which interferes with the test. This person **SHOULD** have a repeat NP or nasal swab sent for SARS-CoV-2 testing.*

Notes:

The information provided herein is based on current knowledge and is subject to change as new information becomes available.

The term PCR testing is used to indicate tests for the diagnosis of infection with SARS-CoV-2, the virus that causes COVID-19. These tests detect viral nucleic acid utilizing the common methodology referred to as reverse transcriptase (RT) – polymerase chain reaction (PCR) amplification (Rt-PCT). Tests which detect viral proteins by immunoassay (antigen detection tests) are under development and some were recently made available.

Serological tests are another type of COVID-19 related test. Serological tests detect antibodies which are developed by an individual's immune system. They indicate previous SARS-CoV-2 infection. Additional information on testing can be found at the following:

<https://covid19.columbia.edu/content/testing-and-treatment>

<https://www.cdc.gov/coronavirus/2019-ncov/testing/serology-overview.html>