



## COVID-19 TEAM – Mercer County

Different types of COVID-19 Tests being administered.

Compiled and distributed by Buhl Regional Health Foundation. This information is pulled directly from the FDA website (<https://www.fda.gov/consumers/consumer-updates/coronavirus-disease-2019-testing-basics>)\*\*\*

There are two different types of tests – **diagnostic tests** and **antibody tests**.

1. A **diagnostic test** can show if you have an active coronavirus infection and should take steps to quarantine or isolate yourself from others. Currently there are two types of diagnostic tests—**molecular** tests, such as RT-PCR tests, that detect the virus’s genetic material, and **antigen** tests that detect specific proteins from the virus.
2. An **antibody test** looks for antibodies that are made by your immune system in response to a threat, such as a specific virus. Antibodies can help fight infections. Antibodies can take several days or weeks to develop after you have an infection and may stay in your blood for several weeks or more after recovery. Because of this, antibody tests should not be used to diagnose COVID-19. At this time researchers do not know if the presence of antibodies means that you are immune to COVID-19 in the future.

## Diagnostic Tests with Alternative Options

- **Rapid, point-of-care** diagnostic tests use a mucus sample from the nose or throat but can be analyzed at the doctor’s office or clinic where the sample is collected and results may be available in minutes. These may be molecular or antigen tests.
- **Combination tests** can test for the flu and the coronavirus at the same time. Some can test for many different types of respiratory viruses, including the one that causes COVID-19.
- **At-home collection** tests, available only by prescription from a doctor, allow the patient to collect the sample at home and send it directly to the lab for analysis. Some at-home collection tests have a health care provider oversee the sample collection by video with the patient.
- **Saliva tests** allow a patient to spit into a tube rather than get their nose or throat swabbed. Saliva tests may be more comfortable for some people and may be safer for health care workers who can be farther away during the sample collection.

## Molecular Diagnostic Tests

Many companies and labs have developed tests to diagnose COVID-19 based on detection of the virus’s genetic material in a sample from the patient’s nose or throat. These steps may change as new technology becomes available, but currently the typical steps in molecular testing are:

1. A doctor, pharmacist, or other health professional orders a COVID-19 test. All COVID-19 tests, including those used with a home collection kit, require a prescription or order from a health professional.
2. You or a health care professional use a specialized swab to collect mucus from your nose or throat.
3. You or a health care professional put the swab in a sterile container and seal it for transport to a lab.

4. During the shipping process, most molecular test swabs must be kept within a certain temperature range so that the test will be accurate. The sample must arrive at the lab within 72 hours.
5. A lab technician mixes liquids with the swab to extract the genetic material of any virus that may be on the swab.
6. The lab technician uses special reagents, called primers and probes, and a high-tech machine to conduct several controlled heating and cooling cycles to convert the virus's RNA into DNA, and then make millions of copies of the DNA. Some tests use only one warming cycle to make copies of the DNA.
7. When specific probes bind to DNA, a special type of light is produced that can be seen by the machine and the test shows a "positive" result for infection with SARS-CoV-2, the virus that causes COVID-19.

### Different Types of Coronavirus Tests

	<b>Molecular Test</b>	<b>Antigen Test</b>	<b>Antibody Test</b>
<b>Also known as...</b>	Diagnostic test, viral test, molecular test, nucleic acid amplification test (NAAT), RT-PCR test, LAMP test	Diagnostic test	Serological test, serology, blood test, serology test
<b>How the sample is taken...</b>	Nasopharyngeal (the part of the throat behind the nose), nasal or throat swab (most tests)  Saliva (a few tests)	Nasal or nasalpharyngeal swab (most tests)	Finger stick or blood draw
<b>How long it takes to get results...</b>	Same day (some locations)  or up to a week (longer in some locations with many tests)	Some may be very fast (15 - 30 minutes), depending on the test	Same day (many locations)  or 1-3 days
<b>Is another test needed...</b>	This test is typically highly accurate and usually does not need to be repeated.	Positive results are usually highly accurate, but false positives can happen, especially in areas where very few people have the virus. Negative results may need to be confirmed with a molecular test.	Sometimes a second antibody test is needed for accurate results.
<b>What it shows...</b>	Diagnoses active coronavirus infection	Diagnoses active coronavirus infection	Shows if you've been infected by coronavirus in the past
<b>What it can't do...</b>	Show if you ever had COVID-19 or were infected with the virus that causes COVID-19 in the past	Antigen tests are more likely to miss an active COVID-19 infection compared to molecular tests. Your health care provider may order a molecular test if your antigen test shows a negative result but you have symptoms of COVID-19.	Diagnose COVID-19 at the time of the test or show that you do not have COVID-19

