

Covid-19 Testing Overview

[PCR COVID-19](#) testing are nasal swab tests. The collection process involves swabbing of nasal or oral passages. Depending on the lab that is provided the diagnostics, they can handle up to 100,000 samples a day and the results usually arrive within two days of arriving at the lab. To get a test kit, the client must meet with the provider and fill out an online assessment. After the assessment is reviewed, the kit can be picked up or shipped. While these tests are used for SARS-COV-2 or COVID-19, many other viruses and bacteria are revealed with these tests. Some other viruses include Respiratory Syncytial Virus, Rhinovirus, herpesvirus and Influenza. Bacteria that can be detected include Streptococcus, Bordetella Bronchiseptica and Legionella Pneumophila.

The PCR Nasal Swab Test should be taken in the early stages of the infection. This is a molecular test that uses a swab to take a sample from deep inside the nose or from the back of the throat. Special equipment is required for the test and the timing for it depends on the schedule of the manufacturer. This test can not tell if a recovered person has had the virus before. This test will say if the person has the virus or not.

The PCR Antigen Nasal Swab Test is usually taken between five and ten after being infected. This test is done with a nasopharyngeal swab. It is easily performed by health care providers in a point-of-care setting. This test allows health care workers to identify the symptoms the patient has or should have if the patient is asymptomatic.

Rapid antibody testing will be recommended as the first step in any type of large monitoring program. Due it's speed of results, they can help identify who might be at greater risk of contracting it. These are antibody or serology tests and can be performed after 5 days of symptoms. [Serology/antibody testing can detect COVID-19 virus antibodies](#) by drawing blood from a finger stick. This is performed by a medical professional at a point-of-care setting such as a hospital, pathology center and medical labs. The results are available between ten and fifteen minutes. One thing to keep in mind, this test alone should not be the sole basis of having or not having the virus. A positive SARS-CoV-2 virus result could be from a different coronavirus strain that this test also checks. This is why a PCR

Nasal Swab Test is always recommended for any positive antibody test unless you know when you had the disease.

The [IgM/IgG rapid COVID-19 test](#) is a way to check for COVID-19's IgM and IgG antibodies from the fingertip blood. The test kit has several parts to it. The first is a conjugate pad with a SARS-CoV-2 antigen, which is labeled with a quality control antibody marker and a colloidal gold marker. There is an NC membrane that has three lines on it. Two are coated and the third is for quality control. One line is for IgM and coated with a mouse IgM antibody that can detect COVID-19's IgM. The IgG line is coated with a mouse IgG antibody to detect COVID-19's IgG antibody. After the blood sample is placed at the quality control line, any present COVID-19 IgG or IgM antibodies will bind to the sample. If the bound molecules in either test turn the line purplish-red, then Coronavirus is present in the sample. If neither test changes color, then a negative result will show, and the blood will be kept for quality control.

The steps to using rapid antibody testing are simple. Wipe the fingertip with an alcohol swab and let it dry to sterilize the area. Then use the peripheral blood collector to prick the fingertip and collect about a drop of blood with the disposable dropper. Drip the blood into the sample diluent, close and shake until well mixed. Use a different disposable dropper to take about five drops of the sample. Add the sample to the test card with the disposable dropper and wait for about three minutes. Use another alcohol swab to wipe off the pricked fingertip when done. The [accuracy of tests can be found online](#) or at the FDA's website.

There are three results from this test and the first is a positive result. If the IgG antibody line and the IgM antibody line are both colored with the quality control line, then both antibodies are in the sample. If the quality control line and the IgG antibody line or the IgM antibody line are colored, then one antibody is present within the sample. The next result is negative, which only shows the quality control line colored. The last result is invalid. Both of the IgG and IgM could be colored, one of the antibody lines could be colored and none of the lines are colored. When invalid, the quality control line is never colored, and the person must be retested. After getting a positive result, there will be further testing and treatment needed.

The rapid antibody test or Serology test is used to detect various viral and bacterial antibodies including COVID-19. The way it does this is by testing the body's immune response to the illness. In the early stages of the disease, the body's immune response is still building, and the virus's antibodies could be missed. Therefore, the Serology test should be taken about a week after the first

symptoms. This makes detecting COVID-19 harder and is why this test should not be the sole test to check. PCR testing should check the initial symptoms and be followed by a rapid antibody test. A person should still self assess while working or traveling, as well.

The performance of the Serology test depends on understanding the limitations of the test. Having a positive result does not mean that the person has COVID-19. The presence of antibodies may be that they had it and recovered. Leftover antibodies may be immunity after having the virus. There isn't enough information to know that from the test. That's why the questionnaire is important to keep updated. Following up with their doctor is the best option. A true positive shows antibody and a true negative show no antibodies. These tests work best with a NAAT or nucleic acid amplification test. These tests will confirm if SARS-CoV-2 is present in the patient.

Coronavirus testing has two layers, which are PCR tests and rapid tests. When an employee goes back to work, a self-assessment and monitoring program should be started. All employees will start the process by filling out a questionnaire. This questionnaire will determine COVID-19 symptoms and identify co-morbidities. These questionnaires are used for extra information when health experts are reading the tests. The questionnaires should be updated every week. Any employees that go back to work or have to travel will have to monitor their symptoms or fever. Taking a temperature is a very simple way to check for a high temperature caused by a virus or bacteria.

Self-assessment is one of the most important things employees can do when traveling or working. Protective equipment will help keep everyone safe at work. Before going to work the two-layered test kit is an easy way to check the employees. The tests can only say whether a person has antibodies or has no antibodies of COVID-19. Other testing and more information from a personal physician can help. That's why questionnaires are important. These will provide a more detailed description of the employee's medical background. The tests and medical providers working together with the employee self-assessment will show who can return to work and when.