	Molecular/PCR Tests	Antigen Tests	Antibody Tests
Why is the test used?	Molecular tests look for pieces of SARS-CoV-2, the virus that causes COVID-19, in the nose, throat, or other areas in the respiratory tract to determine if the person has an **active infection**. Molecular tests may be called polymerase chain reaction (PCR), RT-PCR, nucleic acid amplification test (NAAT), or LAMP test.	Antigen tests look for pieces of proteins that make up the SARS-CoV-2 virus to determine if the person has an **active infection**.	Serology looks for antibodies[1] against SARS-CoV-2 in the blood to determine if there was a **past infection**.
How is the test performed?	In most cases, a nasal or throat swab or saliva sample is taken by a healthcare provider and tested. Sometimes the test can be run while you wait, and sometimes the swab needs to be sent to a lab for testing.	In most cases, a nasal or throat swab is taken by a healthcare provider and tested. Sometimes the test can be run while you wait, and sometimes the swab needs to be sent to a lab for testing.	In most cases, a blood sample is taken and sent to a lab for testing.
What does a positive test result mean?	A positive molecular test means that the person being tested has an active COVID-19 infection.	A positive antigen test means that the person being tested has an active COVID-19 infection.	A positive antibody test means that the person being tested was infected with COVID-19 in the past and that their immune system developed antibodies to try to fight it off.
What does a negative test result mean?	A negative molecular test means that person was probably not infected at the time their sample was collected. However, it doesn't mean they won't get sick – it only	A negative antigen test means that SARS-CoV-2 viral proteins were not detected. However, a negative test does not rule out COVID-19. If there is still concern that a person has	A negative antibody test means that the person may not have had COVID-19 in the past. However, they could still have a current infection, and the antibody test was

	means that they didn't have COVID-19 at the time of testing.	COVID-19 after a negative antigen test, then that person should be tested again with a molecular test.	collected too soon to give a positive result.
When is it helpful?	• It can be used to determine who has an active infection. • It can help identify people who are contagious to others.	• It can be used to quickly determine who has an active infection. • It can help identify people who are contagious to others. • It is a less expensive test than a molecular test.	• It can identify people who had an infection in the past, even if they had no symptoms of the illness. • In some cases, it could help determine when COVID-19 illness occurred, since we know that IgM is formed before IgG and that IgM goes away before IgG. • It can help determine who qualifies to donate convalescent plasma (a blood product that contains antibodies against COVID-19 and can be used as a COVID-19 treatment). • If lots of people take the test in a community, it can help public health leaders and researchers know what percentage of the population has already had COVID-19.
When is it not as helpful?	• It does not help determine who had an infection in the past. • It also does not help determine if a person who was exposed to COVID-19 will develop active infection during the two weeks after exposure.	• It does not accurately rule out those who are not infected. • Antigen tests are less sensitive than molecular tests, meaning there may be false negative results. • Negative tests should be treated as presumptive. If a	• It may be negative if it is used too close to the beginning of an infection, which is why it should not be used to detect active COVID-19 infection. • In areas where there have not been many cases of COVID-19, many of the positive

	In some people, the virus can only be found by a molecular test for a few days at the beginning of the infection, so the test might not find the virus if the swab is taken more than a few days after the illness starts. • In some people, the virus can be found by a molecular test in the nose and throat for several weeks, even longer than the time that they are actually contagious to other people. • This test requires certain kinds of swabs that may be in short supply.	healthcare provider is concerned that the person has COVID-19, even after a negative antigen test, then the test result should be confirmed with molecular testing.	test results will actually be false positives (see Positive Predictive Value2). Some antibody tests have low sensitivity3 and specificity4 and thus may not produce reliable results. • Some antibody tests may cross-react with other coronaviruses that are not SARS-CoV2, the virus that causes COVID-19, leading to false test results. • We do not know yet if having antibodies to the virus that causes COVID-19 can protect someone from getting infected again or, if they do, how long this protection might last. Until scientists get more information about whether antibodies protect against reinfection with this virus, everyone should continue to take steps to protect themselves and others, including staying at least 6 feet away from other people outside of their home (social distancing), even if they have had a positive antibody test.
What public health activities will be conducted?	• If positive, the health department will conduct a case investigation. Contact tracing will be	• If positive, the health department will interview the antigen-positive person about	• If positive, the health department will interview the antibody-positive person about

performed to identify individuals who might have been exposed to the molecular test-positive person when they could have spread COVID-19. • If negative, no public health activities will be performed.	symptoms and if they were around someone who had COVID-19. Contact tracing will be performed. • If negative, no public health activities will be performed.	symptoms and if they were around someone who had COVID-19. If the person had symptoms or was around someone with COVID-19, the health department may recommend they get a molecular test. No contact tracing will be performed. • If negative, no public health activities will be performed.