

## **COVID-19 Viral Testing**

Viral tests are recommended to diagnose acute infection of both symptomatic and asymptomatic individuals, to guide contact tracing, treatment options, and isolation requirements.

**Molecular/polymerase chain reaction (PCR)** tests detect the virus’s genetic material. This test remains the “gold standard” for diagnostic detection of SARS-CoV-2 and typically requires a sample being sent to a laboratory.

**Rapid antigen** tests, which detect protein on the surface of the virus, are relatively inexpensive and can be used at the point-of-care. However, antigen tests for SARS-CoV-2 are generally less sensitive and less specific than the PCR test. This means they miss some infections that would be detected by a PCR test, and they may be positive in someone who does not actually have the infection. Proper interpretation of antigen test results is important for accurate clinical management of patients with suspected COVID-19, or for identification of potentially infected persons when used for screening. Understanding antigen test performance characteristics is important for recognizing potentially false negative or false positive results and to guide patient management and public health actions.

The clinical performance of rapid antigen diagnostic tests largely depends on the circumstances in which they are used. Rapid antigen tests perform best when the person is tested in the early stages of infection with SARS-CoV-2 when viral load is generally highest. Antigen tests are recommended for use in symptomatic individuals within 5-7 days of symptom onset, according to the FDA emergency use authorization particulars of that specific test. They also may be informative in diagnostic testing situations in which the person has a known exposure to a confirmed case of COVID-19. There are limited data to guide the use of rapid antigen tests as screening tests on asymptomatic persons to detect or exclude COVID-19. Until more data are available, LDH does not recommend antigen tests for screening of asymptomatic individuals with no known exposure to a person diagnosed with COVID-19.

LDH interim recommendations for antigen testing in community settings are differentiated according to the following testing circumstances:

**Diagnostic Testing:** Diagnostic testing for SARS-CoV-2 is intended to identify current infection in symptomatic individuals or those with recent exposure to COVID-19.

- Symptomatic individuals: Testing individuals with signs or symptoms consistent with COVID-19
- [Close Contacts](#) of an individual diagnosed with COVID-19: Testing individuals with recent known close contact to a person with COVID-19, regardless of symptoms

**Screening Testing:** Screening testing for SARS-CoV-2 is intended to identify infected persons who are asymptomatic and without known or suspected exposure to SARS-CoV-2.

## **LDH Interim Guidance for SARS-CoV-2 Viral Testing in Community Settings**

### **Viral testing for individuals with signs or symptoms consistent with COVID-19:**

LDH recommends COVID-19 testing for individuals with [clinically compatible symptoms](#), with or without known contact with someone with COVID-19.

- If a person with COVID-19 symptoms tests positive using either a PCR or antigen test, they are a positive case and must follow [CDC’s end of isolation guidance](#) to know when it’s safe to be around others.

- If a person with COVID-19 symptoms tests negative with a PCR test and has no known contact with someone with COVID-19, it can be assumed that person does not have COVID-19 and may return to work or school 24 hours after symptom improvement.
- If a person with COVID-19 symptoms tests negative with a PCR test but is a close contact of someone with COVID-19, they still must still complete the full 14-day quarantine.
- If a person with COVID-19 symptoms tests negative by an antigen test, a confirmatory PCR test should be done within 48 hours of the antigen test:
  - The person with symptoms should stay in isolation until the follow up PCR test is complete and results are back.
  - If the follow up PCR test result is positive, they are a positive case and must follow [CDC's end of isolation guidance](#) to know when it's safe to be around others.
  - If the follow up PCR test result is negative and the person has no known contact with someone with COVID-19, it can be assumed that person does not have COVID-19 and may return to work or school 24 hours after symptom improvement
  - If a person with COVID-19 symptoms tests negative with a PCR test but is a close contact of someone with COVID-19, they still must complete the 14-day quarantine.
- If a person with COVID-19 symptoms tests negative by an antigen test and does not complete confirmatory PCR testing, they should be treated as a potential COVID-19 case based on their clinical presentation and must follow [CDC's end of isolation guidance](#) to know when it's safe to be around others.

#### **Viral testing for Close Contacts of an Individual Diagnosed with COVID-19:**

LDH recommends COVID-19 testing of symptomatic and asymptomatic close contacts of an individual who has been diagnosed with COVID-19.

- If the person tests negative during quarantine with either a PCR or antigen test, **they still must complete a 14-day quarantine.** They should also continue to monitor for signs and symptoms consistent with COVID-19.
  - If COVID-19 signs or symptoms occur within the 14-day quarantine, the person should be retested and follow LDH recommendations for viral testing for individuals with signs or symptoms consistent with COVID-19.
- If the person tests positive during quarantine with either a PCR or antigen test, they should be considered a positive case and follow [CDC's end of isolation guidance](#) to know when it's safe to be around others.

#### **Viral testing for screening of individuals who are asymptomatic and without known or suspected exposure to SARS-CoV-2:**

At this time, LDH does not recommend antigen tests for screening of asymptomatic individuals with no known exposure to a person diagnosed with COVID-19. Limited guidance regarding antigen tests for screening purposes is included below in the event that antigen testing is performed outside of the recommended uses.

- If a person with no symptoms and no known contact with someone with COVID-19 tests negative with a PCR test, they can be considered negative.
- If a person with no symptoms and no known contact with someone with COVID-19 tests negative with an antigen test, they should be counseled on the limitations of antigen testing in this setting.
- If a person with no symptoms and no known contact with someone with COVID-19 tests positive with a PCR test, they should be considered a positive case and they should follow [CDC's end of isolation guidance](#) to know when it's safe to be around others.

- If a person with no symptoms and no known contact with someone with COVID-19 tests positive with an antigen test, a confirmatory PCR test should be done within 48 hours of the antigen test.
  - The individual should stay in isolation until the follow up PCR test is complete and results are back.
  - If the follow up PCR test is negative and the person remains without symptoms, it can be assumed that person does not have COVID-19 and they may return to work or school.
  - If the follow up PCR test is positive, they should be considered a positive case and follow [CDC's end of isolation guidance](#) to know when it's safe to be around others.
- If a person with no symptoms and no known contact with someone with COVID-19 tests positive with an antigen test and does not complete confirmatory PCR testing, they should be considered a presumptive COVID-19 positive case and must follow [CDC's end of isolation guidance](#) to know when it's safe to be around others.