

CORONAVIRUS • COVID-19

UNDERSTANDING TESTING, RESULTS, AND IMPORTANCE OF QUARANTINE

The most common tests for COVID-19 look for isolated sections of the virus from a swab taken from a person's nose or throat. Tests taken at YKHC are typically sent to ANTHC to be processed on the Abbott m2000 RealTime system, but they can also be sent to the State of Alaska to run a real time Reverse Transcriptase (RT) Polymerase Chain Reaction (PCR) diagnostic panel. YKHC also has limited availability to conduct two types of on-site rapid testing using the Abbott ID-NOW and Cepheid Xpress PCR tests.

All of these tests look for a specific section, or sections, of the virus' genetic material. Depending on lab backlogs and transit times, tests may require several days, and possibly up to two weeks, to return results. Test results for on-site rapid testing completed at YKHC may come back between 2-6 hours. Because of how the tests work, if a test result comes back positive, it is almost certain that the person has contracted the virus.

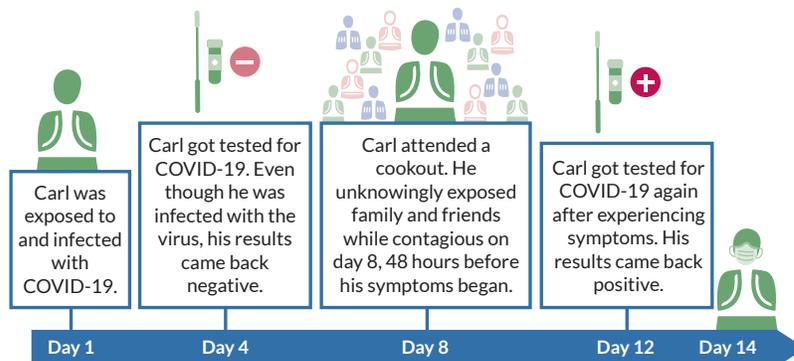
A negative test result is less definitive. A person infected with COVID-19 could get a "false negative" result if the swab missed the virus or there were errors in DNA replication with the PCR tests. Test results are also more likely to return a positive when the test is taken at certain points during the course of illness, as our bodies shed different levels of virus.

The chances that a COVID-19 test will give you a false negative—leading you to believe that you do not have the virus when you actually do—depend on the type of test you have and when in the course of your infection the test is performed. A test could return as negative if it is performed after a person is exposed to the virus, but before becoming symptomatic because the body has not yet started to shed the virus. This period of time is

different for different people and can range from three to 14 days—although most people start developing symptoms between five and eight days from exposure.

Despite a negative test, a person may still be infectious in the period of time between exposure and symptoms, which is why quarantining after travel is so important. As the graph above illustrates, an individual can be exposed to the virus on day one, be tested on day three, and receive a

negative test result a few days later. If the patient was tested again on day 10, after symptoms begin, they would get a positive result. This means an individual could spread the virus the entire duration between day 3 and 10, putting their community and the public's health at risk.



14 Day Incubation Period of COVID-19

Testing negative for COVID-19 does not guarantee you are not infectious with the virus. It can take up to 14 days from time of exposure for you to test positive for COVID-19.

According to a Harvard report, an individual will receive a false negative about 40% of the time when tested four days after exposure to COVID-19. Even if someone has developed symptoms, false negative test rates can be as high as 20% of the time when tested three days after symptoms begin.

The risk of false negatives is well-documented. The time between exposure and symptoms is the period when viral shedding and the possibility of spreading to other people is the highest. Symptoms, even subtle, could be due to COVID-19. Anyone exposed to someone known to be infected, traveled to high-risk areas including Anchorage, or engaging in other high-risk activities that could result in exposure must quarantine for 14 days, even if they test negative for coronavirus. Our community's health is everyone's responsibility.

REFERENCES

- <https://www.health.harvard.edu/diseases-and-conditions/if-youve-been-exposed-to-the-coronavirus>
- <https://virologydownunder.com/politically-infectious-period/>
- <https://community.pepperdine.edu/healthcenter/gethelpnow/continuing-care-during-covid19.htm>