



Q&A: Coronavirus (COVID-19) Testing

Q: How many types of COVID19 tests there are?

A: There are three different types of tests:

1. Molecular/PCR test
2. Antigen(rapid) test
3. Antibody test



Q: What is a molecular/PCR test?

A: Molecular COVID-19 tests **detect the genetic material** of the virus. Molecular diagnostics require samples from the patient that are likely to contain virus and are taken from the throat and nose - nasopharyngeal swabs.

Q: What is an antigen test?

A: An antigen test **detects one or more specific proteins** from a virus particle and indicates that a person has an active infection. These tests are fast (less than hour) an inexpensive and are taken by nasopharyngeal swabs.

Q: What is an antibody test?

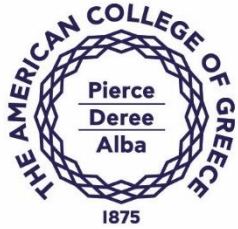
A: Antibody testing determines whether you had COVID-19 in the past and now have antibodies against the virus. They are mainly used for epidemiological purposes. This test requires a blood sample.

Q: What test should I get to see if I suspect I have COVID-19?

A: 1st choice is a molecular/PCR test to detect SARS-CoV-2 and confirm infection. This test amplifies viral genetic material to detectable levels, but it is recommended to wait 5-7 days after exposure before getting tested. The 2nd option is an antigen test, however it must be carried out within the 1-5 days after exposure and is less accurate.

Q: If I am asymptomatic, can I do the antigen test?

A: There is limited data to guide the use of rapid antigen tests as screening tests on asymptomatic persons to detect or exclude COVID-19, or to determine whether a previously confirmed case is still infectious.(CDC)



Consult your
doctor for the
appropriate
test



Q: Do RT-PCR molecular and rapid antigen tests have the same accuracy?

A: The sensitivity of rapid antigen tests is generally lower than RT-PCR (CDC, ECDC, FDA). Virus levels in specimens collected beyond 5-7 days of the onset of symptoms may drop below the limit of detection of the test. This may result in a negative test result, while a more sensitive test, such as RT-PCR, may return a positive result.

Q: What is the similarity between PCR and antigen tests?

A: Both tests diagnose **active** Coronavirus infection.

Q: What is the difference between the antigen and molecular tests?

A: Antigen tests usually provide results **faster** and **at a lower cost** than molecular tests and tend to be highly specific but are typically less sensitive than molecular tests (have a higher chance of missing an active infection)

If an antigen test shows a negative result indicating that you do not have an active coronavirus infection, your health care provider may order a molecular test to confirm the result.

Q: When should I get a COVID-19 diagnostic test (PCR or antigen) vs an antibody test?

A: A COVID-19 diagnostic test is recommended if you have symptoms or you've had close contact with someone who tests positive for the COVID-19 virus or is suspected of having the virus. To get antibody testing, you have to be fully recovered from COVID-19.

Information in this post was accurate at the time of its posting. November 2020
For the latest updates on the COVID-19 pandemic, regularly check the WHO and CDC coronavirus pages.
<https://www.who.int/covid-19>,
<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Authored by: Angeliki Adam, Senior Nurse, ACG Health & Wellness Center
Edited by: Christina Drakonakis, Associate Dean of Students

Sources: <https://www.mayoclinic.org/diseases-conditions/coronavirus/diagnosis-treatment/drc-20479976>, www.fda.gov,
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub>, <https://pubmed.ncbi.nlm.nih.gov/32311668/>,
<https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html>, <https://www.centerforhealthsecurity.org/resources/COVID-19/molecular-based-tests/>

Pictures' source: www.freepik.com