

Covid-19 Testing - What We Know and Don't Know

Currently, there are two main types of COVID-19 testing. As of May of 2020, here is a summary of what we know and, most importantly, what we don't know.

Covid-19 RT-PCR (antigen test) - via nasal/pharyngeal (back of throat) swab.

Technique: -Nasal swab obtained by trained and well-covered personnel, usually outside.

Indications: -Best test for ACTIVE infection, if you are currently sick.
-Might be requested (for asymptomatic) pre-operative or as a pre-screen to certain places.

Accuracy: -Very accurate if positive (COVID +) result.
-Small chance of false negative result due to poor sample technique, sample size, or too early.

Action: -If ill, regardless of result, self-quarantine is essential to keeping others safe.
-If abnormal (COVID+), isolation is required for at least 10 days from the start of symptoms and/or until symptom free for 3 days; PCR retesting is not usually required.

Covid-19 Antibody testing (serology) - blood sample.

IgM antibodies: produced as "first responder" antibodies that appear within a week after infection.

IgG antibodies: produced as "memory" antibodies 2-4 weeks after infection to be ready for future exposures.

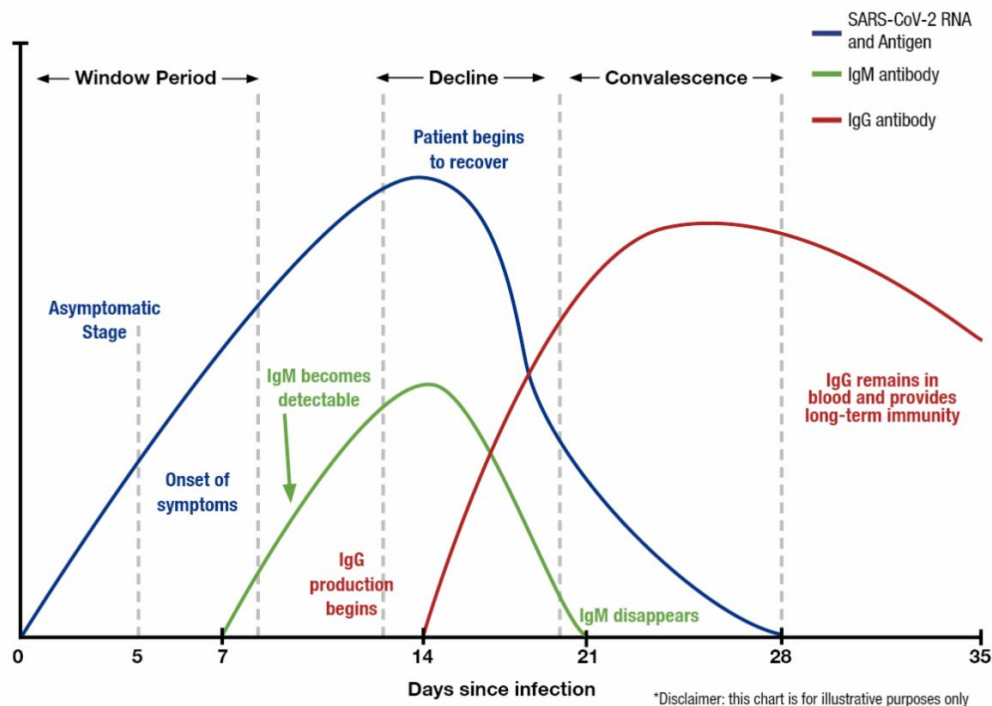
Technique: -Venous blood draw at office or lab facility; we do NOT recommend rapid finger stick tests.

Indications: -IgG testing preferred > 2 weeks after an illness and once resolved to determine if IgG +.
-IgM is not used often; if a person is newly sick and likely contagious, RT-PCR is preferred.

Accuracy: -False positives with some other coronaviruses (common cold).
-False negatives with early timing or lack of a person's immune response (poor responders).

Action: -Not known if/how a positive test translates to protection (immunity) from future infection.

This means that we do not know at this time if testing + for antibodies make you immune to the virus.



Additional Antibody Testing Details from the CDC website:

<https://www.cdc.gov/coronavirus/2019-ncov/testing/serology-overview.html>

If you test positive (IgG):

- A positive test result shows you have antibodies that likely resulted from an infection with SARS-CoV-2, or possibly a related coronavirus.
- It's unclear if those antibodies can provide protection (immunity) against getting infected again. **This means that we do not know at this time if antibodies make you immune to the virus.**
- If you have no symptoms, you likely do not have an active infection and no additional follow-up is needed.
- If you have [symptoms](#) and meet other [guidelines for testing](#), you would need another type of test called a nucleic acid (PCR) test, or [viral test](#). This test uses respiratory samples, such as a swab from inside your nose, to confirm COVID-19. An antibody test cannot tell if you are currently sick with COVID-19.
- It's possible you might test positive for antibodies and you might not have or have ever had symptoms of COVID-19. This is known as having an asymptomatic infection, or an infection without symptoms.

If you test negative (IgG):

- If you test negative for COVID-19 antibodies, you probably did not have a previous infection that has gotten better. However, you could have a current infection. It's possible you could still get sick if you have been exposed to the virus recently, since antibodies don't show up for 1 to 3 weeks after infection. This means you could still spread the virus.
- Some people may take even longer to develop antibodies, and some people may not develop antibodies.
- If you have [symptoms](#) and meet other [guidelines for testing](#), you would need another type of test called a nucleic acid (PCR) test, or [viral test](#). This test uses respiratory samples, such as a swab from inside your nose, to confirm COVID-19. An antibody test cannot tell if you are currently sick with COVID-19.

We are hoping that there will be more accurate and detailed (quantitative) testing options available in the future to give us more definitive guidance on immune status. Therefore, due to all the unknowns, please consider waiting on antibody testing in the future when such tests are available.

Thank you for trusting us with your health!

-The BWPC Team.

