

# COVID-19 Serology (Antibody) Testing – June 4, 2021 1200

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## What is COVID-19 Serology Testing?

- Serology testing measures the body's immune response to COVID-19 infection or vaccination in the form of antibody production against the SARS-CoV-2 virus.
- There is a single COVID-19 serology order available in Epic, however, the Spectrum Health laboratory performs testing to detect total antibody (IgA, IgM, IgG, etc) against both the viral nucleocapsid and spike antigens, with each reported as positive or negative.
- This serology testing is not expected to cross-react with other circulating coronaviruses that cause the common cold.

## What does a positive COVID-19 Serology test indicate?

- A positive anti-nucleocapsid result suggests recent or prior infection with SARS-CoV-2. A positive anti-spike result suggests either recent infection or vaccination.
- The detection of antibodies cannot currently be used to predict immunity or protection against future infection with SARS-CoV-2.
- This test should not be used to detect acute COVID-19 disease. Symptomatic patients suspected to have acute COVID-19 infection should be tested using a molecular assay.

## Does a positive COVID-19 Serology test indicate a need for isolation?

- Because a positive antibody result indicates previous infection, there is no need to initiate isolation based upon a positive serology test.
- Per routine care, isolation should be initiated based upon a patient's symptoms, travel screen, and/or positive molecular assay for COVID-19.

## Who can be tested?

- Serology testing is expected to be positive for individuals at least 10-14 days either post-symptom onset or following an exposure to individuals with confirmed COVID-19 infection. Patients tested prior to this time may be falsely negative for antibodies.
- Immunocompromised patients may have a delayed antibody response or may not have detectable levels of antibodies with exposure.
- Serology testing should NOT be utilized in place of routine pre-operative or pre-admission screening.

## Inpatient indications for SARS CoV-2 antibody testing include:

- *Adults:*
  - Assessing for presence of antibodies to evaluate for potential convalescent sera donation in a patient without a history of previous positive COVID-19 molecular test.
- *Pediatrics:*
  - Incomplete or complete Kawasaki Disease
  - Pediatric multisystem inflammatory syndrome in children (MIS-C)

*It is strongly discouraged that SARS CoV-2 antibody testing be performed for inpatients unless any of the above indications are met.*

**Ambulatory indications for SARS CoV-2 antibody include determination of previous exposure in patients who have had:**

- COVID-19 compatible symptoms > 10 days prior
- Known or possible exposure > 10 day prior
- No previous history of positive COVID-19 molecular test

**Do all potential candidates for convalescent sera donation need a COVID-19 antibody test?**

- Patients with a previous history of confirmed COVID-19 by molecular testing DO NOT need antibody testing to be considered for potential convalescent plasma donation.
- Antibody testing for potential convalescent plasma donation is warranted in patients with a recent history of an illness suspicious for COVID-19 that was not confirmed by molecular testing or had exposure to a known case of COVID-19.

**How does testing occur?**

- Testing requires an order from a provider, but is not restricted to certain patient groups based on symptoms or risk factors for severe disease.
- Testing specifics:
  - Epic Order: "COVID-19 Total Antibody" LAB1230810
  - A serum specimen (gold top tube) is required for testing.
  - Turnaround time from collection to result is expected to be less than 24 hours.
  - The list price for serology testing is \$45 per test, but it is anticipated that most insurance plans will support COVID-19 serology testing.
  - Spectrum Health draw sites for specimen collection:  
<https://www.spectrumhealth.org/locations>