



Dear State of Missouri Team:

You likely hear us talk often about testing as it relates to the COVID-19 crisis. Testing is a critical function of our response as a state and as a nation.

Lots of terms are thrown around when it comes to testing, which causes confusion. It is especially confusing at a time when there is already so much conflicting health information surrounding us on the news and in our social media feeds.

Let's talk about different types of testing for SARS-CoV-2. This is the virus that causes the disease, COVID-19.

Let's start with the most common type: **PCR (polymerase chain reaction) testing, or "the nasal swab" test.** A PCR test detects the viral RNA in the nose, throat, or other areas in the respiratory tract. It is often used to diagnose an active infection of SARS-CoV-2. Since February, more than 660,000 people in Missouri have been PCR-tested, and 46,750 of them have tested positive as of midday July 30.

**Antigen testing** is another type of diagnostic test. This one detects specific proteins on the surface of the virus and is, again, detected by nasal swab. An antigen test is often a point-of-care test. It can detect if a person currently has the pathogen within the nasal cavity. It can, however, be done at a clinic. Antigen testing has a higher rate of false negatives than PCR testing. It can be followed up by a PCR test if suspicion for infection remains high. This type of test is not yet as commonly used. Just under 1,000 antigen test results have been reported in Missouri to date with 291 of them being positive as of midday July 30.

Then there is an **antibody testing** (also called serology testing). An antibody test reveals if a person has already been exposed to an infection. It detects antibodies in the person's blood made by the immune system in response to a viral threat, such as a SARS-CoV-2. Antibodies usually start building after the first week of infection. By three weeks of having an infection, most people have detectable antibodies. Antibodies tend to persist in one's blood, but it is undetermined at this time what that means for the long-term immunity to this virus. Nearly

60,000 people in Missouri have been tested by serology with 2,114 receiving positive results as of midday July 30.

For PCR testing sites near you, please visit our [interactive site map](#) or contact your health care provider. Call the site you wish to visit first. Some locations still require a physician's order to be tested.

Much of this information is available on our dashboard at [health.mo.gov/dashboard](https://health.mo.gov/dashboard). You are always welcome to reach out to the DHSS team with questions or concerns from you, your loved ones or anyone that you think we may be able to help. You can call 877-435-8411 or email [info@health.mo.gov](mailto:info@health.mo.gov).

In good health,

Dr. Randall Williams

Director, Department of Health and Senior Services

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