

PCR vs. Antibody testing



COVID-19 is caused by a virus called **SARS-CoV2**. There are **two** main accepted ways to check whether a person has been exposed to this virus: **RT-PCR** (or just “PCR”) and **antibody testing**. They **check for different things** and are useful for different purposes.

Source: [May 29 COVID-19 update video](#) from the Immune Deficiency Foundation Physician Advisory Board.

Method	RT-PCR (or just called “PCR”) 	Antibody Testing (Serology) 
Sample	Swab from the inside of the nose or back of the throat	Blood , commonly drawn from the arm
Does the test work on people with immune deficiencies?	Yes.	It depends on the ability of the person to make antibodies.
What does the test check for?	It checks for the presence of the pieces of genetic material (RNA) specific to the virus by making stable and detectable copies of the viral RNA pieces.	It checks for the presence of antibodies (IgM or IgG) that our immune systems make against the virus .
When is the test designed for?	To see if a person has SARS-CoV2 at the moment of providing the sample	To see if a person had COVID-19 a few weeks ago (It takes at least 1-2 weeks to start making antibodies)
What are the advantages of the test?	Quick: Results are available in only a few hours. Sensitive: Detection is possible even if very little viral RNA is available. Specific: The test does not detect RNA of other coronaviruses.	It can be used for diagnosis but only for people who are about a week into their disease. It allows public health agencies to estimate the proportion of people who have been infected in a community.
What do we need to beware of?	Just because the test detects viral RNA, it does not always mean that infectious intact viruses are present. Even viruses that are disabled or dead can still leave RNA around. People who have completely recovered from the symptoms of COVID-19 may still test positive.	Antibodies may not protect against repeated infections. Not all commercial antibody tests work well. False positives or false negatives can happen. Antibody test results should not determine if someone can return to work or gather socially.

