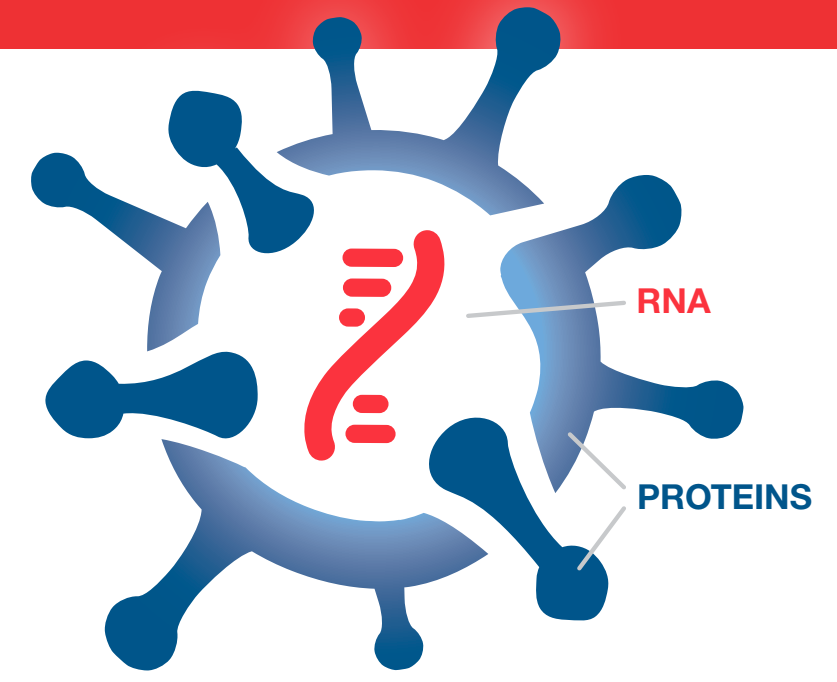


# COVID-19 PCR and antigen tests: get the facts



There are **different types of technologies** used to test for SARS-CoV-2.

### PCR tests

- Detect viral **RNA**.
- SARS-CoV-2 **RNA** is extracted from the sample (throat swab, nasal swab, or saliva sample).
- PCR—a type of nucleic acid amplification test—is then used to detect the viral genome.

### Antigen tests

- Detect the antigen—in this case, viral **proteins**.
- The sample (most commonly a nasal swab) is added to a surface coated with **antibodies** that bind to specific viral **proteins**; this is used to create a signal that detects the virus.

When to use a **PCR** or **antigen** test

### When to ask for a PCR test

- When you need **accurate** results with high **confidence**.
- Ideal for diagnostic and population surveillance testing, especially in a high-volume setting.
- If you have symptoms and a positive antigen test result, get a PCR test for confirmation.

### When to ask for an antigen test

- When you need **convenience** and **speed** to quickly determine if a person may have the virus.
- Ideal for point-of-care testing and screening high-risk congregate settings—not for asymptomatic populations.

**Accuracy** takes into account sensitivity and specificity by measuring how the test can correctly identify if a sample is infected with SARS-CoV-2.

### How sensitive is a PCR test?

- PCR tests have **>99%** sensitivity for detection of the virus and are considered the “gold standard” for detecting whether the virus is present.
- Highly sensitive PCR tests can detect low viral loads, especially in the absence of symptoms.

Test result: + + + + +

### How sensitive is an antigen test?

Test result: - - + + +  
False negative

- Antigen tests have an average sensitivity of **64%** in **symptomatic** cases, meaning 36% (~2 in 5) positive cases receive a negative result (known as **false negatives**).\*
- Antigen tests have an average sensitivity of **36%** in **asymptomatic** cases, meaning 64% (~3 in 5) of positive cases receive a negative result (**false negatives**).\*

\* [cdc.gov/mmwr/volumes/70/wr/mm7003e3.htm](https://www.cdc.gov/mmwr/volumes/70/wr/mm7003e3.htm)

**Turnaround time** for each type of test

### How long does it take to get PCR test results?

- It can take as little as **24 hours** to get results.

### How long does it take to get antigen test results?

- It can take up to **30 minutes** to report out each individual result, especially if the result is negative.

**Make sure you know what type of test you are receiving.**

For the latest guidelines, you may refer to:

The European CDC  
<https://www.ecdc.europa.eu/en/publications-data/options-use-rapid-antigen-tests-covid-19-eueea-and-uk>

The World Health Organisation  
<https://www.who.int/publications/i/item/antigen-detection-in-the-diagnosis-of-sars-cov-2infection-using-rapid-immunoassays>

