

# Episode #14 - COVID-19 - Tests

27 November 2020 | Science conversation

## WHO's Science in 5 on COVID-19 - Tests



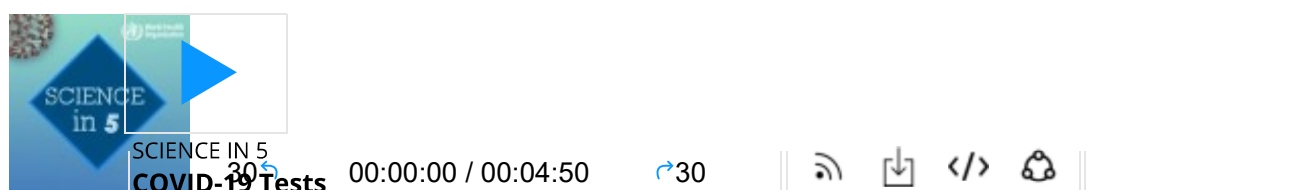
### Summary

What kind of COVID-19 tests are available? What are antigens and antibodies? What about the accuracy of these tests? WHO's Dr Hanan Balkhy explains COVID-19 tests in Science in 5

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# Transcript

## Vismita Gupta-Smith

Testing for COVID-19. That's what we're going to talk about in Science in 5 today. Hello, I'm Vismita Gupta-Smith and this is WHO's conversations in science. We are talking to Dr. Hanan Balkhy today, who's going to explain testing for COVID-19. Welcome, Hanan.

## Dr. Hanan Balkhy

Thank you very much, Vismita. It's a pleasure to be with you today.

## Vismita Gupta-Smith

Hanan, there are many kinds of tests that are available to the public. When a person decides 'I think I need testing', can you explain what are the different kinds of tests available to them and how they should choose?

## Dr. Hanan Balkhy

Thank you, Vismita. Yes, this indeed is one of the most popular questions. There are three categories of testing, if I would want to simplify them. The first one is to identify whether the actual COVID virus genetic material exists, and that's called a NAAT test, N-A-A-T. And it's the PCR testing where you would have a nasal pharyngeal swab or a pharyngeal swab taken. And then they look for the genetic material of the virus itself. The second type of testing is when they try to identify one of the outer proteins of the viral shell or envelope, if you will. And that's called antigen testing. So, they try to detect the outer protein of the virus. And the third type is to detect within the human body, whether they've developed antibodies. So, it looks for antibodies that are specific to the outer portion of the virus itself. So, it shows whether the individual has mounted an immune response or developed immunity towards that specific virus or to COVID. So, those are the three big categories of testing that exist.

## Vismita Gupta-Smith

Hanan, we hear the terms antigens and antibodies a lot. Could you please explain that in layman's terms?

## Dr. Hanan Balkhy

Very simply Vismita, the antigens are the proteins that exist on the outer shell of the virus itself. So, it's part of the virus itself. Antibodies are produced by the human body against those specific antigens. So, that's the simple way of understanding the two.

**Vismita Gupta-Smith**

Hanan, speak to us about the accuracies of these tests and also about the kinds of tests we can expect in the future.

**Dr. Hanan Balkhy**

The PCR testing, which is the NAAT testing or that tests the nucleic acid of the virus itself, are the most sensitive ones. And those, actually, to complete the testing process, they need to be done in quite a sophisticated laboratory setting. And, that's why the turnaround time for these tests can take several days. And, if there's an outbreak and there's lots of samples, it will take several days longer than what we would want to or hope for. The antigen testing that exists now in the market are what we call the antigen rapid diagnostic tests. Those look for the antigen on the outer surface of the virus itself. And those have been developed in a way that they can be done at the bedside or in the field so they do not need the sophisticated laboratory setting to conduct them. They are not as accurate as the PCR testing, but they have a very important value as one of the tools to address the COVID pandemic.

**Vismita Gupta-Smith**

Hanan, speak to us about the value of getting tested.

**Dr. Hanan Balkhy**

There are several aspects of that. The first one is to identify whether a person has the disease or not. And that's important to be able to provide therapy, treatment, but also to specify who do we need to go and test further of the contacts of that specific person. So that's a big value to address the pandemic. When we talk about the value of the antibody testing, they become very important to know whether the person was exposed in the past. And, when you hear about understanding the immunity of the population, if you will, that is done through antibody testing.

**Vismita Gupta-Smith**

There you have it. WHO's Dr. Hanan Balkhy explaining COVID-19 testing. If you found this information useful, please share it with your networks and be the source of trusted, evidence-based information. Until next timethen. Stay safe, stay healthy and stick with science.