Testing for COVID-19

What happens when you get infected with the SARS-CoV-2 virus?

The virus enters the body and infection may result in COVID-19 disease. The person may or may not have symptoms.

The specialised cells of the immune system help fight infection by producing **antibodies** that precisely match the invading **viral antigen**, which is a unique feature of the virus.

After the infection is over, protective antibodies can remain in the body to fight future infections with SARS-CoV-2.

How does testing work?

**PCR testing**

- **The test uses...**
  - Swabs from the nose and throat

- **The samples are used...**
  - ...in a lab test to identify the presence of SARS-CoV-2 genetic material

- **The test tells us...**
  -...who **currently** has an infection

- **The test does NOT tell us...**
  -...about someone’s immune response

- **When is the test used?**
  - During an active infection when the virus is in the body even if the person has no symptoms.

- **How accurate is it?**
  - PCR is an established technique providing a very sensitive test with high accuracy. False negative results are possible if the swab doesn’t pick up enough virus.

**Antibody testing**

- **The test uses...**
  - Blood sample

- **The samples are used...**
  - ...to test if there are any **antibodies** present that match and bind to the viral antigen

- **The test tells us...**
  -...who has **previously** had an infection

- **The test does NOT tell us...**
  -...whether someone is necessarily protected from future infection

- **When is the test used?**
  - From a week to several months after infection.

- **How accurate is it?**
  - Optimising, evaluating and validating these tests is important. There are two approved lab tests being used in the UK but neither are 100% accurate.