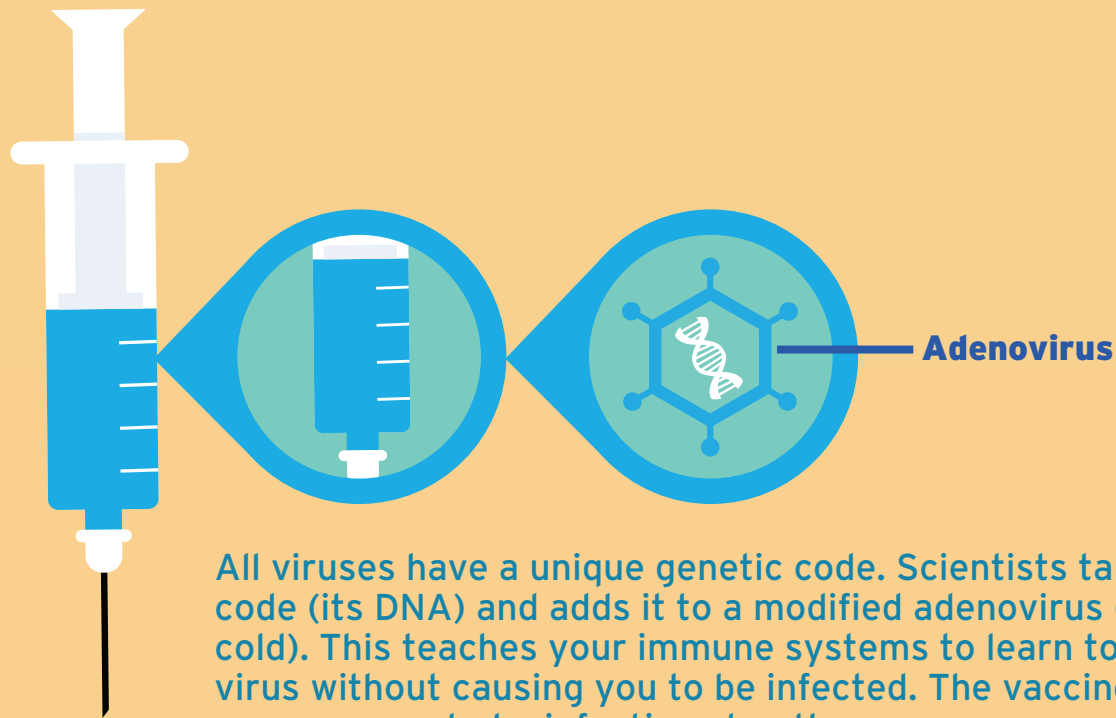
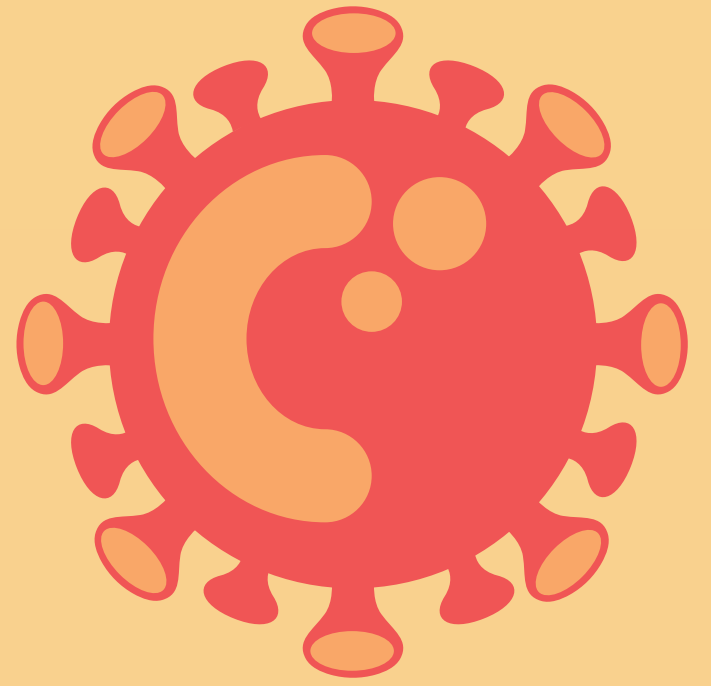


# How Adenovirus-based vaccines work

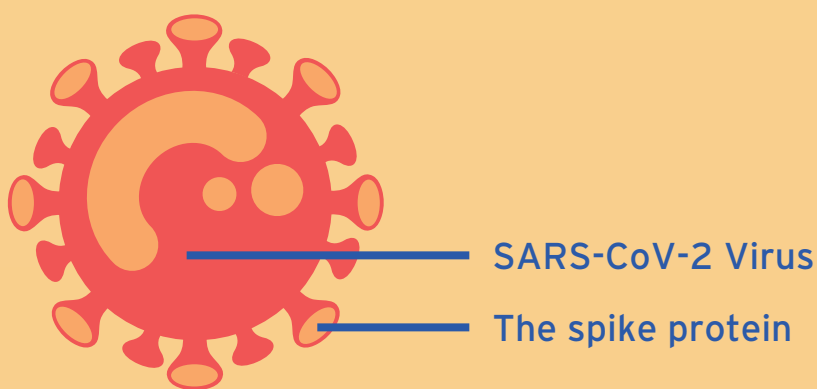
Every virus is different.

The virus that causes COVID-19 is called SARS-CoV-2.



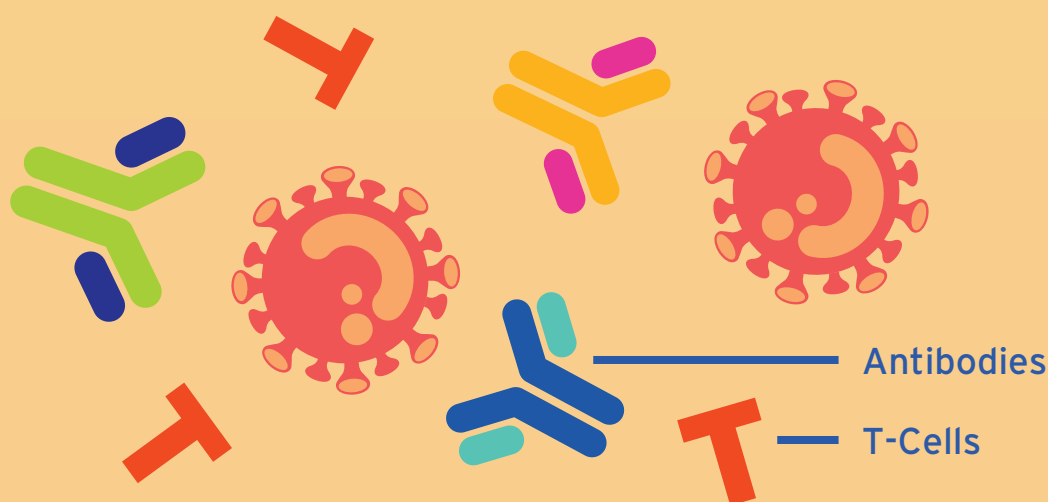
All viruses have a unique genetic code. Scientists take part of the SARS-CoV-2 virus's code (its DNA) and adds it to a modified adenovirus (the virus that can cause the common cold). This teaches your immune systems to learn to recognize and fight the SARS-CoV-2 virus without causing you to be infected. The vaccine will not give you the COVID-19 virus or cause you to be infectious to others.

This is what is included in the vaccine to help build an immune response.



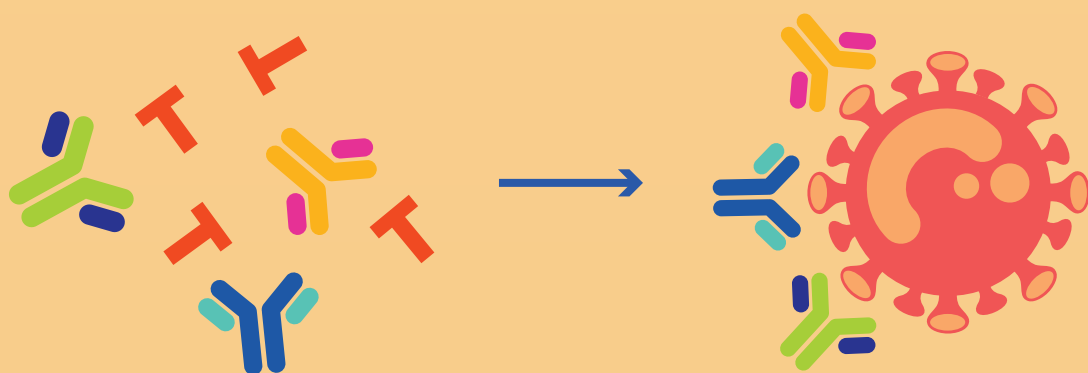
## CREATE

The DNA in the adenovirus tells the cells to make a specific part of the SARS-CoV-2 virus: the spike protein.



## LEARN

The immune system then produces antibodies and activates T-cells to destroy the spike proteins.



## PROTECT

If you are exposed to the virus in the future, your immune system will quickly recognize the spike protein and has the antibodies and T-cells ready to begin destroying the virus.

## The Benefit of Getting Vaccinated

The virus that causes COVID-19 replicates quickly. Without the vaccine, your body has to identify the virus, learn how to fight it and carry out an immune response. In the meantime, the virus can replicate to a level beyond what your immune system can handle – which means you feel sick. With the vaccine, your body can more quickly identify the virus and skip straight to starting its immune response.

## Adenovirus-based vaccine technology isn't new.

Adenovirus-based vaccines are a type of viral vector vaccine and are a product of decades of study by medical scientists. Adenovirus-based vaccines are being used in clinical and pre-clinical trials against HIV, Ebola virus, Zika virus, influenza virus and others. Viral vectors have been studied for gene therapy, to treat cancer and for molecular biology research.