

How Protein Subunit COVID-19 Vaccines Work

Understanding the virus that causes COVID-19.

Coronaviruses, like the one that causes COVID-19, are named for the crown-like spikes on their surface, called **spike proteins**. These **spike proteins** are ideal targets for vaccines.

What is a protein subunit vaccine?

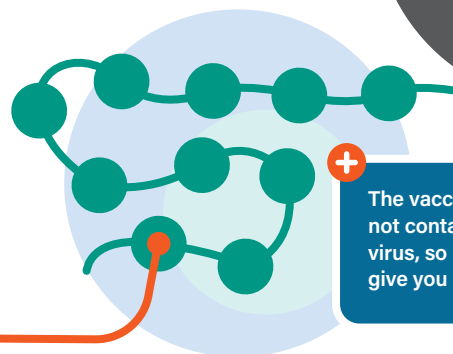
Protein subunit vaccines are a type of vaccine that contains harmless copies of the COVID-19 spike protein. These vaccines do not contain the entire virus.

What is in the vaccine?

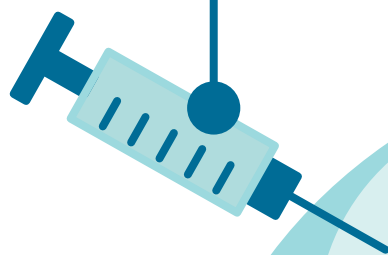
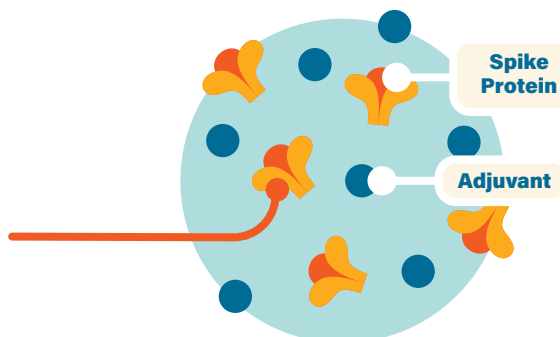
The vaccine contains virus pieces called **spike protein** and another ingredient called an **adjuvant**.

How does it work?

When you are vaccinated, nearby cells pick up the proteins. The immune system recognizes that these proteins do not belong. The adjuvant helps the immune system produce antibodies and activate other immune cells to fight off future infections.

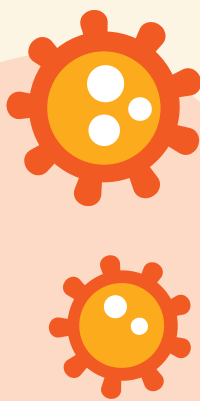


The vaccine does not contain any live virus, so it cannot give you COVID-19.



Antibody

Once vaccinated, our bodies recognize the protein should not be there. Antibodies will fight the virus that causes COVID-19.



When your body responds to the vaccine, it can sometimes cause side effects such as mild fever, headache, or chills. This is completely normal and a sign that the vaccine is working.

GETTING VACCINATED?

For more information about COVID-19 vaccine, visit [cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)

