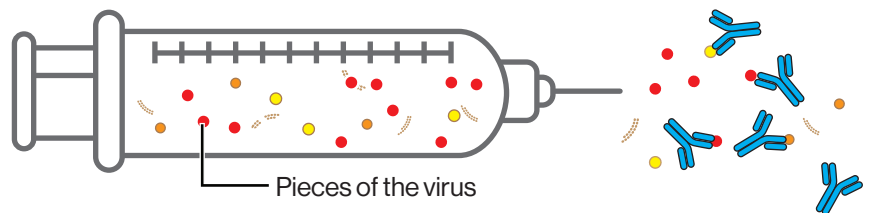


How do the COVID-19 vaccines work?

Vaccines expose us to pieces of either a bacteria or a virus. Our body mounts an immune response by making antibodies against those pieces. Antibodies are proteins that fight germs like viruses and bacteria by latching onto and disabling them. The goal is that our body will then recognize those pieces and use the antibodies to fight off any future exposure to the real bacteria or virus.

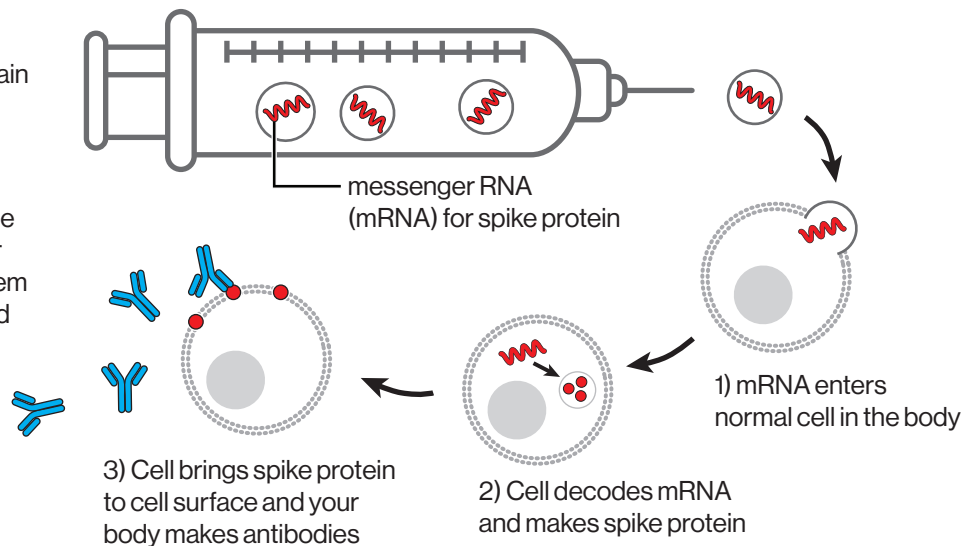
There are several different types of vaccines.

Traditional vaccines include pieces of the virus in them. This causes your immune system to react by making antibodies against those pieces.



The **Pfizer and Moderna vaccines** are called “**messenger RNA**” vaccines. They do not contain pieces or proteins from the virus. Instead, they contain instructions for your cells, called “messenger RNA.”

This messenger RNA tells your cells to make the COVID-19 spike protein themselves. Once your cells make the spike protein, your immune system will make the antibodies that fight COVID-19 and protect you from getting sick from this virus.



The **Johnson & Johnson vaccine** also instructs your cells to make the COVID-19 spike protein themselves, but it delivers those instructions by using a harmless adenovirus, similar to a common cold virus, rather than using messenger RNA.

