What causes COVID-19?
COVID-19 is caused by a virus. This virus has spikes on its surface that make it look like a crown. That’s why we call it a coronavirus: “corona” means “crown” in Latin. These spikes are “spike proteins.” They make great targets for vaccines.

What is mRNA?
mRNA is short for “messenger RNA.” It sends orders to your cells. These orders tell your body how to make proteins.

What is in the vaccine?
The vaccine is made of mRNA wrapped in a coating. It’s like a piece of chocolate covered by a candy shell. This coating helps the orders get to your cells quickly and safely. Then, it melts away.

How does the vaccine work?
The mRNA in the shot teaches your body how to make only the spike proteins—not the whole virus. If the real virus enters your body later, your body will remember these spikes and know how to deal with them.

Antibody
After you get the shot and your body trains to fight the real virus, you might feel tired or sore or even run a fever. These are normal signs that the vaccine is working.

Which COVID-19 vaccines are mRNA vaccines?
The Pfizer and Moderna vaccines are the only mRNA vaccines authorized for use against COVID-19 in the U.S.

Disclaimer: This project was funded in part by a cooperative agreement with the Centers for Disease Control and Prevention grant number 1 NU50CK000588-01-00. The Centers for Disease Control and Prevention is an agency within the Department of Health and Human Services (HHS). The contents of this resource center do not necessarily represent the policy of CDC or HHS and should not be considered an endorsement by the Federal Government.