UNITE HERE HEALTH

COVID-19 Vaccine

Angela Riley, MD

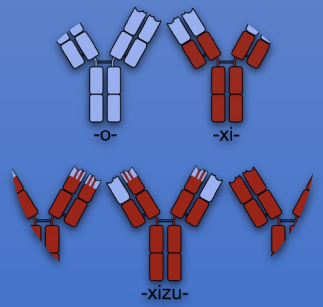
What is a Vaccine?

- Vaccines provide a set of instructions to our cells to tell our immune systems how to fight off disease without making us sick
- Vaccines save millions of lives every year around the world by protecting people from diseases that would otherwise cause them to die
- Without vaccines, the only way to stop certain infections and diseases from spreading is for almost everyone to become infected first
- Vaccines have been around for more than 150 years and have eliminated some diseases almost completely from the world, such as smallpox

How was the COVID-19 vaccine created so quickly? The normal FDA process was followed

Research Phase

Scientists used existing vaccine technology and focused all their time and resources on making the vaccine



Phase 1 Trial

Tests the safety of the vaccine in volunteers who had not yet had COVID-19

Phase 2 Trial

Randomized trials with thousands of volunteers at various doses to determine which dose works best

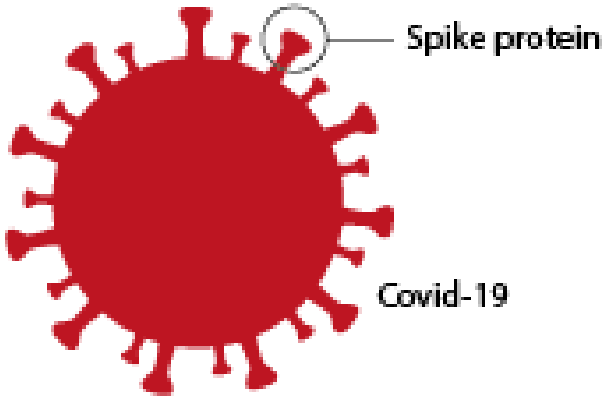
Phase 3 Trial

Vaccine administered to 70,000 volunteers to test its effectiveness and any other safety data

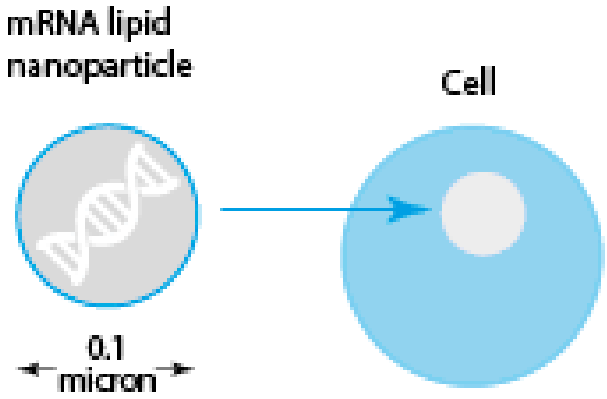
License Application to the FDA and Emergency Authorization Use

Pfizer and Moderna

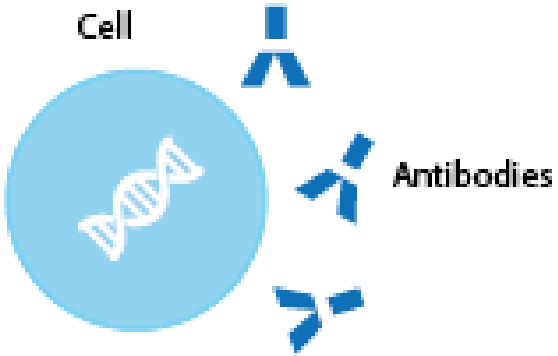
How mRNA vaccines work



Messenger RNA (mRNA) is a copycat genetic code that contains instructions for our cells to use to make a harmless "Spike" protein **without actually causing the disease.**

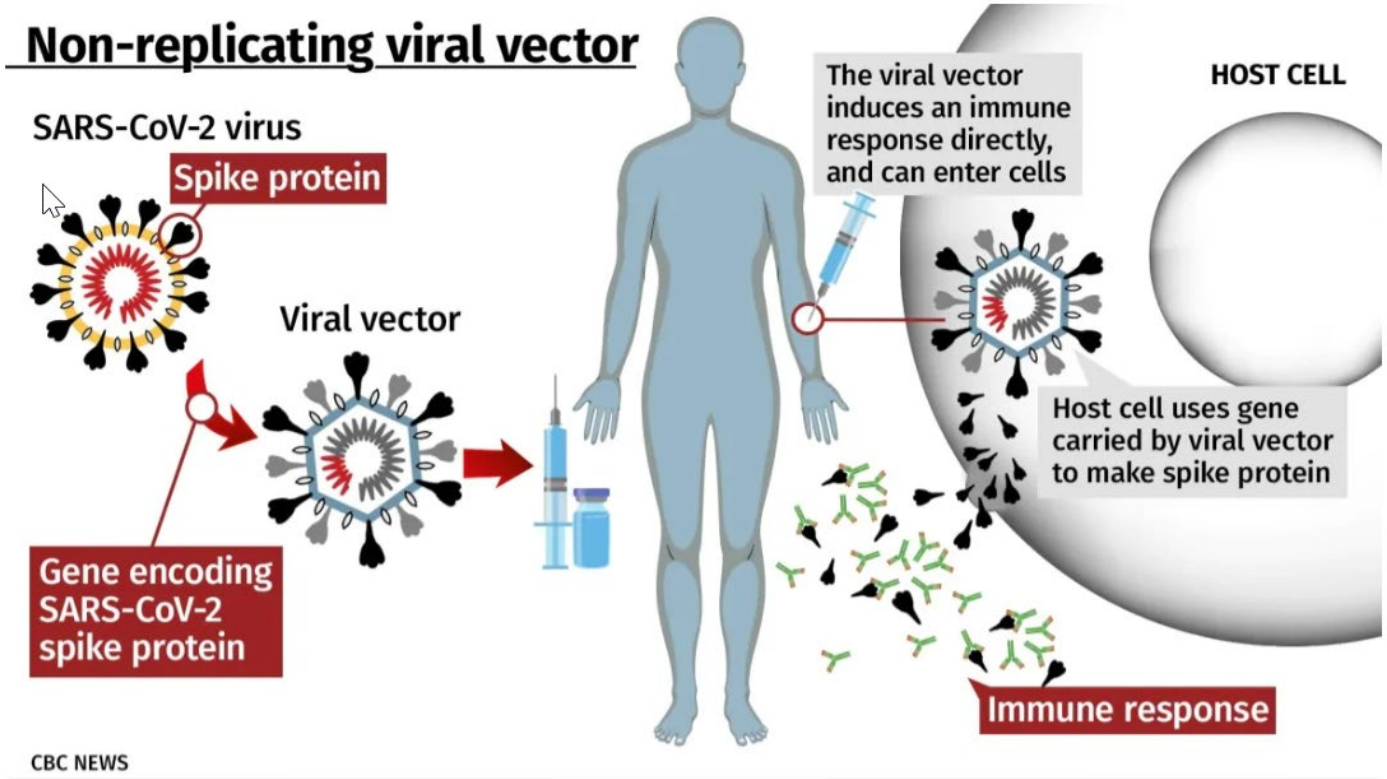


The vaccine is given in your upper arm muscle. Once the instructions (mRNA) are inside our immune cells, the cells use them to make the protein piece. After the protein piece is made, the cell breaks down the instructions and gets rid of them.



Next, the cell displays the protein piece on its surface. Our immune systems recognize that the protein doesn't belong there and begin building an immune response and making antibodies, like what happens in natural infection against COVID-19.

Johnson and Johnson



Vaccines Induce Herd Immunity

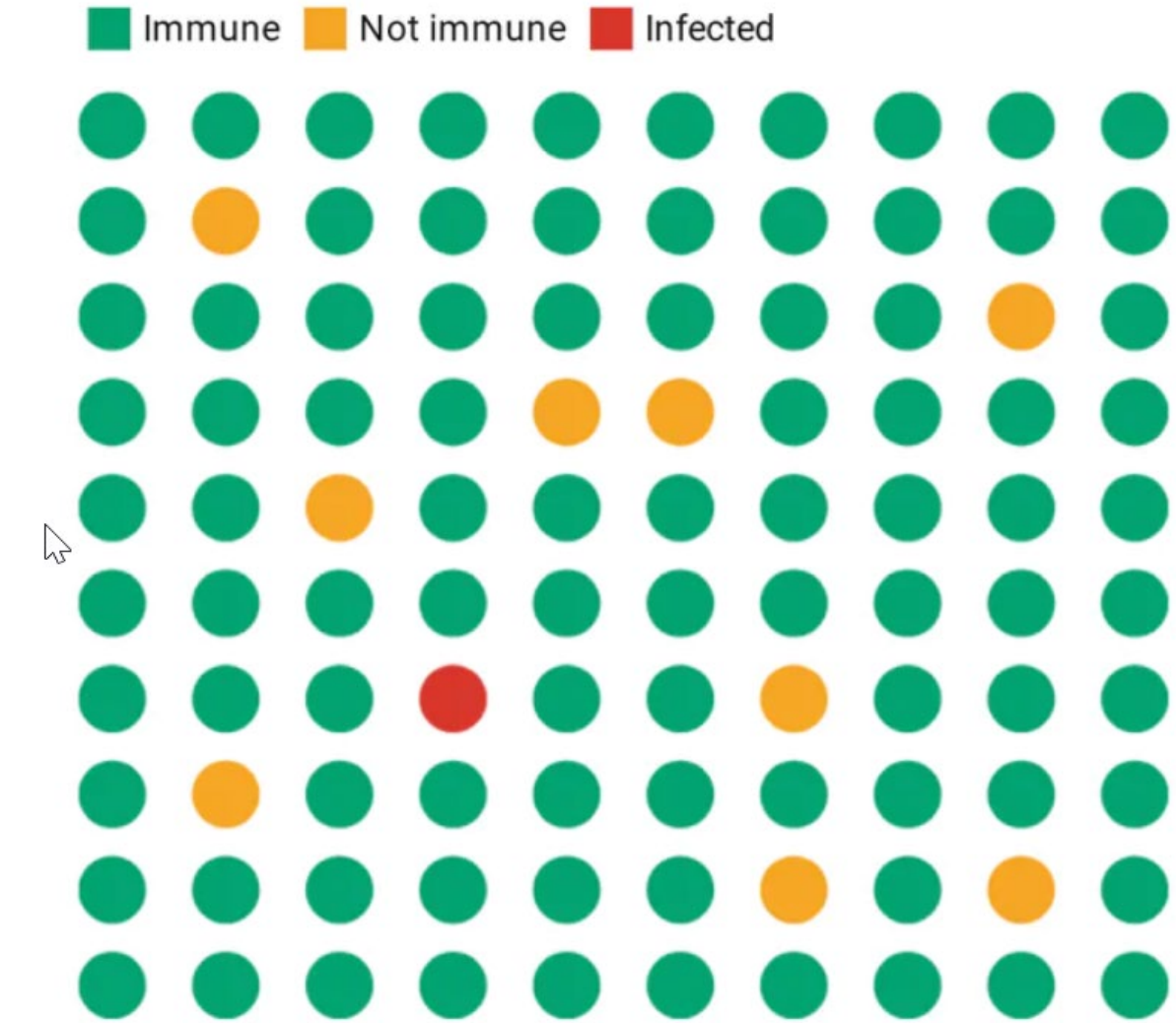


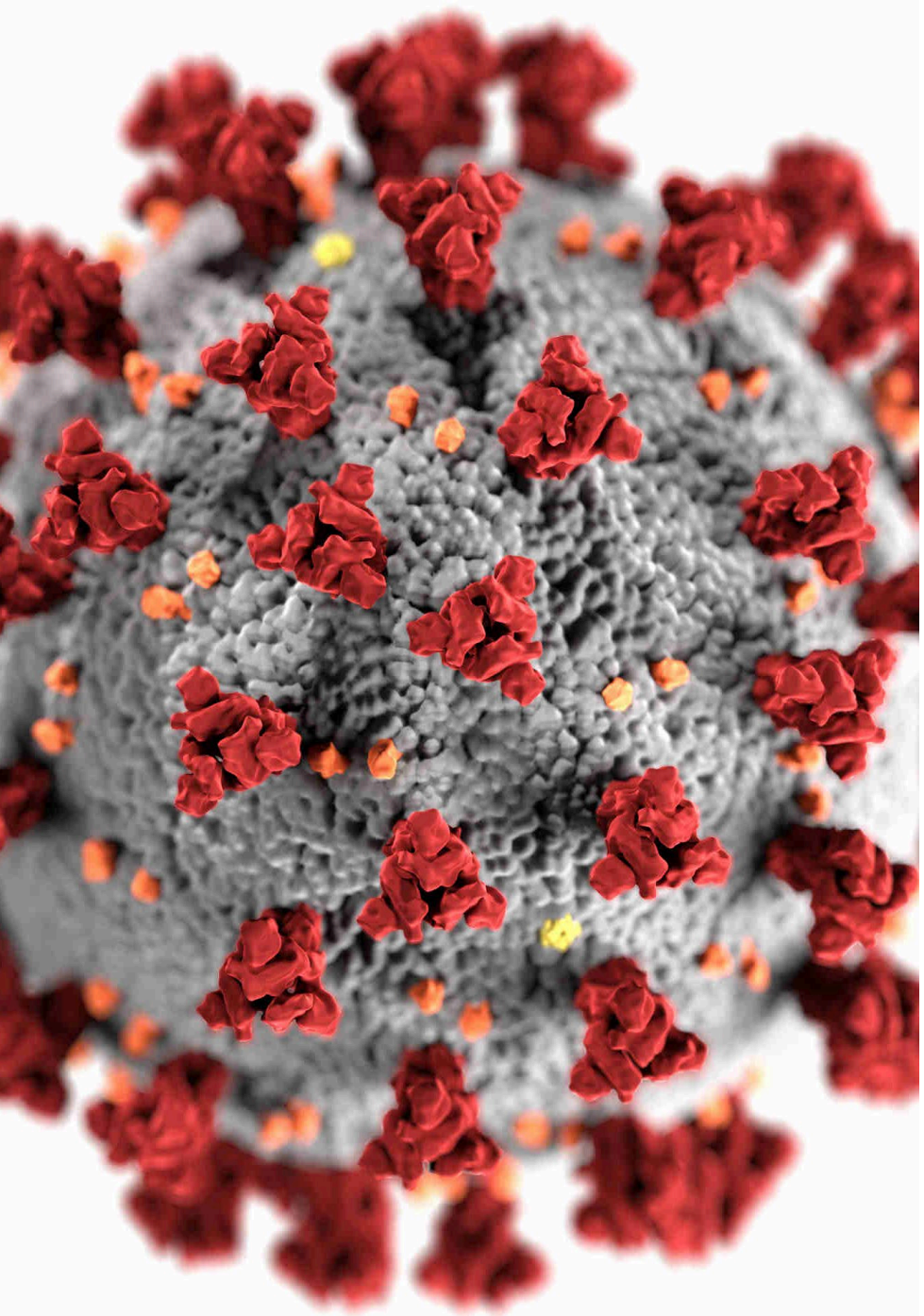
Chart: The Conversation, CC-BY-ND • Source: Sara Krehbiel

COVID-19 Vaccine Facts

- COVID-19 vaccines cannot make you get COVID-19. Symptoms such as a fever are your body's immune system reacting to the vaccine and building protection.
- Getting the COVID-19 vaccine will not make you test positive for COVID-19
- You still need to get the COVID-19 vaccine even if you have already had COVID-19 to be fully protected. It is unknown how long immunity from being infected lasts.
- The COVID-19 vaccine will not alter your DNA. The vaccine does not enter the nucleus of your cells, which is where your DNA is stored, so cannot alter or affect the DNA in your own cells.
- One single dose of Pfizer or Moderna vaccines will not fully protect you against COVID-19. Both doses need to be from the same vaccine maker

Covid-19 Vaccine Facts

- The Covid-19 vaccine does not cause infertility
- There is not a microchip inserted into the COVID-19 vaccine
- The COVID-19 vaccine is believed to be safe for pregnant women, but it is recommended to discuss with your doctor
- The vaccine was tested and safe for ages 16 and over but has not yet been fully tested in children under the age of 16. It is currently being tested in ages 5-16
- Any of the three available vaccines – Pfizer, Moderna, or J&J – are effective. You do not need to pick which vaccine to get.



COVID-19 Vaccine Distribution

- COVID-19 vaccines have been purchased by the Federal Government and are distributed by the States.
- Currently 2 vaccines (Pfizer and Moderna) are in distribution. Both vaccines are equally effective.
- The Johnson and Johnson vaccine will be available soon and only requires one dose.
- An administration fee may be charged to your insurance. If you don't have insurance, you can still receive the vaccine at no charge to you.
- Each state health department has set their own distribution schedule and priorities.
- Within each state, local county and city health departments are distributing the vaccine and may also have their own distribution schedule and priorities.