



What's in Your Vaccine — mRNA Explained

By Communicate Health

The first 2 COVID-19 vaccines authorized in the U.S. are a new type – called mRNA, which have raised lots of questions about how they work. If you're still not sure what exactly that means, here's the gist: mRNA stands for messenger RNA – and the messages these vaccines carry are like instructions for your immune system.

All vaccines work by training your immune system to recognize and fight off a specific germ before it has a chance to make you sick. Traditional vaccines use the germ itself for this “training” – either a weakened or dead form of the germ, or a small part of the germ.

But mRNA vaccines don't have any of the germ in them at all! Instead, they deliver a small strip of genetic code (the mRNA) that teaches your immune cells to make and recognize a key protein – in this case, the spike protein on the surface of the COVID-19 virus.

Once your immune system recognizes the spike protein, it reacts just like it would to the actual COVID-19 virus – by creating antibodies to fight it off. Then, if the COVID-19 virus shows up, the antibodies will be ready to stop it in its tracks.

Here are a few vaccine facts:

- mRNA vaccines can't give you COVID-19. Remember, there's no virus in them – and the spike protein can't give you COVID-19 either.
- The 2 mRNA COVID-19 vaccines are safe and effective. Researchers worked as fast as possible to get the vaccines ready – but they didn't skip any steps or cut any corners. The researchers completed all the usual phases of clinical trials and gave the vaccines to tens of thousands of people, so we can be confident that they're safe and that they work to prevent COVID-19.
- mRNA vaccines don't change your genes. You may have heard concerns that the mRNA in vaccines could stay in your cells and affect your DNA, but that's not true. In fact, your body destroys the mRNA from the vaccine within a few hours after you get vaccinated. The mRNA shows up, does its job, and then it's out of there!
- Serious side effects are rare, and getting vaccinated is much less risky than getting COVID-19. It's common for people who get the vaccine to get a headache or fever or feel tired and achy for a day or 2 – and that's actually a good thing! These are signs that the vaccine is working.

As we wait our turn to get the vaccine, keep taking all the other steps to prevent the spread of COVID-19.

- Remember to wear a mask
- Stay 6 feet away from others
- Avoid crowds
- Avoid poorly ventilated spaces
- Wash your hands often
- Cover your mouth when you cough or sneeze, (throw tissues away immediately and wash your hands)
- Clean and disinfect frequently touched surfaces
- Be alert for symptoms
- Take your temperature if symptoms develop
- Get tested if you suspect you've been exposed or have symptoms

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