

Vaccines: What You Need to Know

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Over the course of the year, the COVID-19 pandemic has quickly spread across the country, accounting for nearly 15 million cases and nearly 300,000 deaths in the U.S. since March. Now, the U.S. is nearing a significant milestone: a COVID-19 vaccine. However, what exactly is a vaccine, and how do they work?

First, a vaccine needs to be developed. This is done by studying the virus, which can mutate and change over time – so creating an effective vaccine is an intensive process. This also is why each year, for example, a different flu vaccine is created in order to best protect the community from the current strain of the virus.

“Viruses – just their nature – are a very rapidly growing and changing type of a germ or germ protein. And what happens is they change over time,” says Cindy Deuser, MSHA, BSN, RN, director of quality and safety, OSF HealthCare.

According to the World Health Organization (WHO), vaccines contain weakened or inactive parts of a particular organism (antigen) that then triggers an immune response within the body, and newer vaccines contain the blueprint for producing antigens rather than the antigen itself.

“What happens is your body begins to build up antibodies. And these antibodies are proteins and they’re going to begin to identify – should you become contagious – it will identify those germs and begin breaking the germ down so that you will not become ill. Or if you do become ill, it would be less intense,” explains Deuser.

Contrary to the belief of some individuals, a vaccine does not infect its recipient with the actual virus. Instead, vaccines help develop immunity by imitating an infection.

However, according to the Centers for Disease Control and Prevention (CDC), this type of infection almost never causes illness, but it does cause the immune system to produce T-lymphocytes and antibodies.

“What happens when your immune system starts to react to the vaccine? You may be feeling a sore arm, you may feel just a little bit of a mild fever coming on – but that is really not the disease itself or the virus that is giving that to you. It’s really your body’s immune system reacting to that little piece of germ that was entered into you for the purpose of developing immunity,” Deuser continues.

Not only do vaccines protect you from developing severe illness from a virus, they also protect the community as a whole.

“So if you were to be in contact with somebody who was contagious, you can now fight that disease off. And just by the virtue of doing that, you will be protecting anybody around you, explains Deuser.

Getting vaccinated is the number one way to protect yourself from a virus and to build up your immunity to certain diseases.

While we await a COVID-19 vaccine, we do know that a vaccine coupled with continued safety precautions will be needed to stop this pandemic and help our country recover over time. Those precautions include: wearing a mask, maintaining a physical distance of 6 feet when around others, and washing your hands.

