

# What you need to know about the COVID-19 vaccine

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(HealthDay)—As America rolls out a nationwide coronavirus

vaccination campaign this week, experts help answer your questions about the new COVID-19 vaccines.

Both the Pfizer vaccine (already approved by the U.S. Food and Drug Administration) and the Moderna vaccine (up for approval) were developed using a technology called messenger RNA, or mRNA, explained Dr. Thomas Ma. He's chair of the department of medicine at Penn State Health's Milton S. Hershey Medical Center.

These mRNA vaccines introduce [genetic material](#) that prompts your cells to create a harmless piece of COVID-19's spike protein.

"This type of vaccine—mRNA—has been studied before," said Dr. Catharine Paules, an infectious diseases physician at the medical center. "But this will be the first time they've been authorized for use broadly in the United States."

These are different than traditional vaccines, such as the seasonal flu shot, that have included a weakened or inactivated virus to trigger an immune response.

The efficacy is 95% for Pfizer's vaccine and 94% for Moderna's, much higher than the 50% efficacy benchmark set by the U.S. Food and Drug Administration. A rate of 50% would mean that half the people who received the vaccine would be adequately protected, Ma noted.

"These results show that the vaccine can really help—especially [high-risk patients](#)," Ma said in a Penn State news release. "It will significantly protect individuals from getting the virus, and if they do still get it, it will protect them from becoming seriously ill."

Certain questions about the vaccines will require more time to answer, according to the Penn State doctors. One is whether they can keep up

with the virus if it mutates.

Another unknown is whether there are any long-term side effects after several months or a year. The vaccines have been through phase 3 [clinical trials](#), having been tested in 30,000 to 40,000 people.

But, Paules explained, "sometimes you don't see very rare side effects until those numbers reach the millions. It is important that safety data continue to be collected as the vaccine is distributed throughout the U.S."

Like flu shots, these vaccines will be administered in the upper arm, but they require two doses instead of one, taken three to four weeks apart.

"The [vaccine](#) is a scarce resource right now," Paules said. "So, people should be sure that when they request the first dose, they'll be able to follow through with the second."

Though two doses will likely provide very good protection against the virus for the people who have received them, it doesn't mean that they can't transmit the virus to others. Ma recommended continuing social distancing and mask wearing until public health officials provide more data and guidance.

"Right now, we just don't know," Paules said. "It's conceivable you can still get infected. You're protected against developing illness, but not necessarily against shedding the [virus](#) and spreading it onto others."

**More information:** The U.S. Centers for Disease Control and Prevention has more about [COVID-19 vaccines](#).

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