FDA authorizes one-dose COVID-19 vaccine

The Food and Drug Administration has authorized the Johnson & Johnson COVID-19 vaccine, which only needs one dose and can be stored in regular refrigerators. It's the third COVID-19 vaccine to get sign-off from the agency.

The vaccine can be administered to people 18 years and older. It protects against serious disease, and clinical trials did not flag any dangerous safety problems. In the United States, it was 72 percent effective against severe and milder COVID-19. It was slightly less effective in South Africa, where a variant form of the coronavirus is widespread. Early data also suggested that the shot might prevent asymptomatic infections, but researchers need more data before they can say that for sure.

The Johnson & Johnson vaccine is logistically easier to distribute than the Moderna and Pfizer / BioNTech vaccines, which take two doses and have to be stored in specialized freezers. Because it only takes one shot and doesn't need to be frozen, the Johnson & Johnson vaccine would be easier to distribute to areas without that type of equipment. People also don't have to come back for a second appointment. New York City officials hope to use this vaccine for homebound seniors because it can more be easily brought door to door.

The Johnson & Johnson vaccine was built using a different technology than the Moderna and Pfizer / BioNTech vaccines. Those two are gene-based vaccines, a strategy that directly delivers the genetic material for a bit of the coronavirus into the body. The Johnson & Johnson vaccine, on the other hand, inserts a section of the coronavirus' gene into another

harmless virus. That virus, called an adenovirus, delivers the coronavirus gene to cells so that the body can learn to recognize it.

It's hard to directly compare COVID-19 vaccines because no clinical trials have studied them head-to-head. The Moderna and Pfizer / BioNTech vaccines have higher efficacy on paper. Clinical trials found that they were around 95 percent protective against symptomatic COVID-19. But those vaccines were tested at different times and in different countries. The Moderna and Pfizer / BioNTech trials were tested in the US and other countries before variants appeared. The trials also use different definitions for what counts as mild, moderate, or severe disease.

By one important measure, the vaccines are all pretty comparable: the Johnson & Johnson vaccine was just as good as the other two at protecting people from being hospitalized or dying from COVID-19.

"What you care about is hospitalizations and deaths," said Ashish Jha, dean of the Brown University School of Public Health, in an interview with *NPR*. "And Johnson & Johnson appears to be just as good as Moderna and Pfizer at preventing those."

Johnson & Johnson has around 4 million doses, enough for 4 million people, ready to ship in the US. That's fewer than expected; the company originally said it could have 12 million ready by the end of February. Manufacturing delays undercut that plan. The company says it will still be able to provide 20 million doses to the US by the end of March and 100 million by the end of June.

Over 48 million people in the United States have already received at least one dose of a COVID-19 vaccine.

https://www.theverge.com/2021/2/27/22301558/covid-vaccine-one-dose-johnson-fda-approval