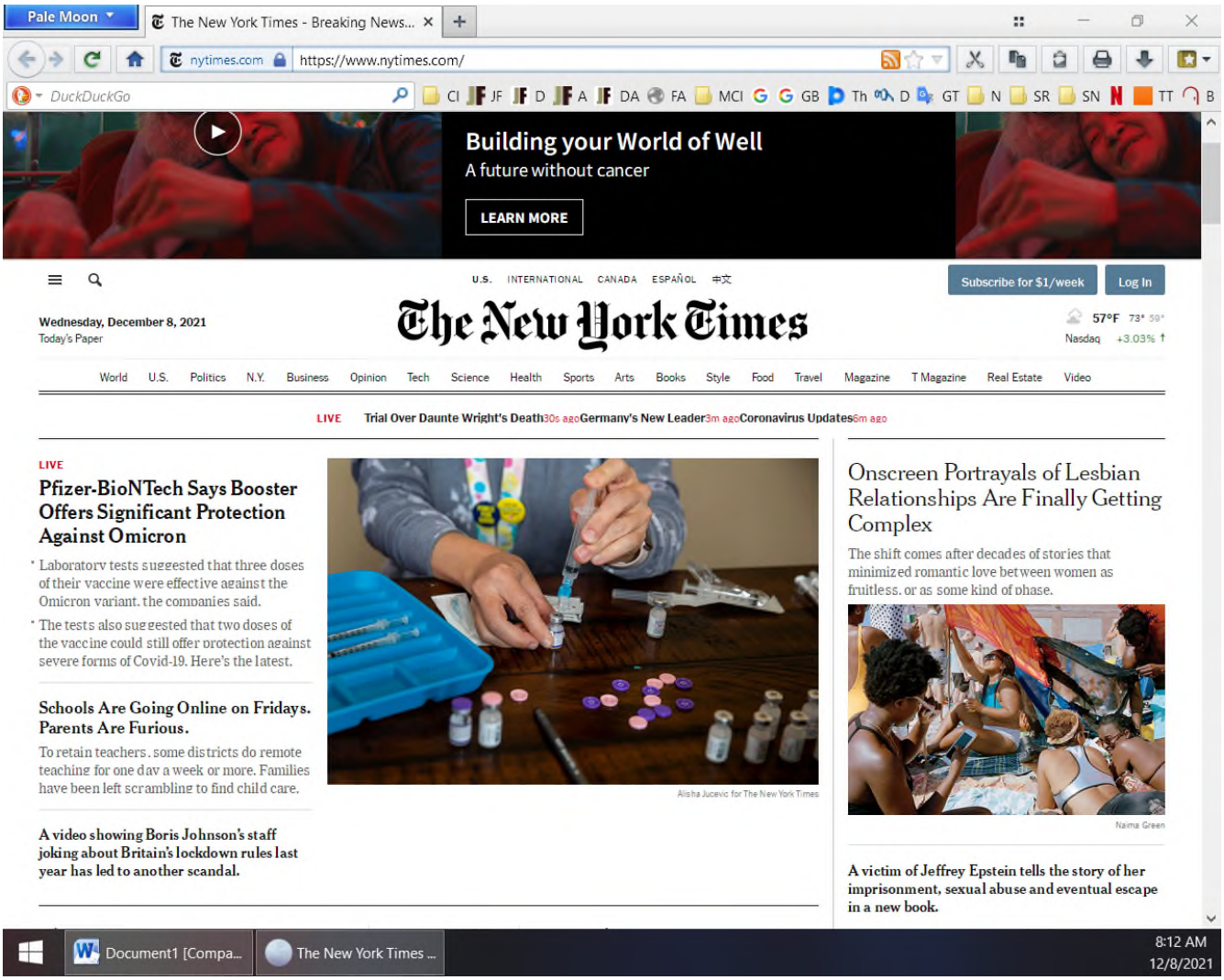

Live

Pfizer-BioNTech Says Booster Offers Significant Protection Against Omicron

- Laboratory tests suggested that three doses of their vaccine were effective against the Omicron variant, the companies said.
- The tests also suggested that two doses of the vaccine could still offer protection against severe forms of Covid-19. Here’s the latest.

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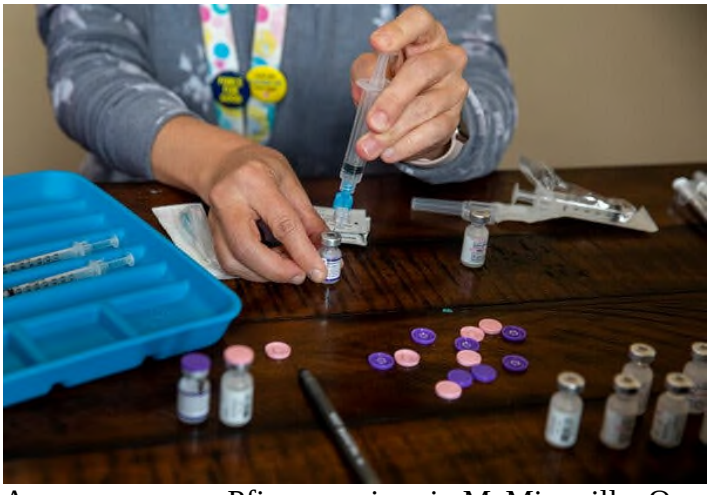
Covid Live Updates: Pfizer Says its Booster Offers Significant Protection Against Omicron

Pfizer-BioNTech said that two vaccine doses alone “may not be sufficient to protect against infection” by the Omicron variant, but could still protect against severe disease.

Here’s what you need to know:

- Blood samples of people who received two Pfizer doses showed a 25-fold reduction in antibody levels against Omicron.
- Cities around the world are canceling Dec. 31 parties amid Omicron fears.
- South Koreans protest vaccine passes as cases hit record levels.
- As U.K. imposes new restrictions, the government is accused of flouting rules last Christmas.
- Here’s the latest on what courts have said about Biden’s vaccine mandates.
- This health expert has over 700,000 Twitter followers. His next task: Freeing Germany from Covid.

Blood samples of people who received two Pfizer doses showed a 25-fold reduction in antibody levels against Omicron.



A nurse prepares Pfizer vaccines in McMinnville, Ore., in October. Credit...Alisha Jucevic for The New York Times

Pfizer and BioNTech said Wednesday that laboratory tests suggest that three doses of their coronavirus vaccine offer significant protection against the fast-spreading Omicron variant of the virus.

The companies said that tests of blood from individuals who received only two doses found more than a 25-fold reduction in antibody levels against the Omicron variant compared to an earlier version of the virus. That finding indicates that two doses alone "may not be sufficient to protect against infection" by the new variant, the companies said.

But the blood samples obtained from people one month after they had received a booster shot showed neutralizing antibodies against the Omicron variant comparable to the levels of antibodies against a previous version of the virus after two doses, the companies said in a statement.

At the same time, the tests suggested that the mutations in Omicron do not appear to significantly affect T cells — another critical part of the immune system's response. That suggests "vaccinated individuals may still be protected against severe forms of the disease" after only two doses, the companies said.

The results seem to underscore the importance of booster shots in combating the new variant.

"Our preliminary, first data set indicate that a third dose could still offer a sufficient level of protection from disease of any severity caused by the Omicron variant," said Dr. Ugur Sahin, the chief executive officer of BioNTech, Pfizer's German partner.

The results come one day after a preliminary report on laboratory experiments in South Africa found Omicron seemed to dull the power of Pfizer's vaccine. Those experiments also hinted that people who have received a booster shot might be better protected.

The Omicron variant has now spread to dozens of countries, and while the Delta variant is still overwhelmingly dominant in the United States, the Biden administration is bracing for Omicron's impact.

In an interview last week, Dr. Albert Bourla, Pfizer's chairman and chief executive officer, said the company began developing a version of its vaccine specifically targeting Omicron on the day after Thanksgiving. Moderna is on the same path.

If a different version of the vaccine turns out to be needed, Dr. Bourla said, Pfizer could produce it within 95 days.

"We will be able to switch overnight production," he said. "There's not going to be a need to start producing new machinery, new equipment, new formulations." He added: "We will be able to produce nearly the same number of doses as our current vaccine."

He said that since the Pfizer-BioNTech vaccine first emerged, Pfizer has developed two other prototypes in response to new variants. Neither proved necessary, he said, because the original vaccine worked against the virus's mutations.

At a White House briefing Tuesday, Dr. Anthony S. Fauci, the government's top infectious disease expert, said it would still be weeks before scientists understand how virulent the Omicron variant is.

"We shouldn't be making any definitive conclusions, certainly not before the next couple of weeks," he said.

He said early reports from South African medical officials presented a somewhat hopeful picture of Omicron's impact. Researchers at a major hospital complex in Pretoria reported this week that patients with the coronavirus are significantly less ill than those they have treated before, and that other hospitals are seeing the same trends.

"We are not seeing a very severe profile of disease," Dr. Fauci said, adding that hospital stays were shorter and patients required less oxygen. "It might be, and I underscore might, be less severe, as shown by the ratio of hospitalizations per number of new cases."

He cautioned that data were preliminary and could be influenced by a higher proportion of younger people infected. He also noted that South Africa has a less vaccinated population than the United States, and a greater percentage infected with H.I.V., which can damage the immune system.

The South African study published Tuesday found that antibodies produced by vaccinated people were much less successful at keeping the Omicron variant from infecting cells than other forms of the coronavirus.

Scientists said the results were somewhat worrisome, but no cause for panic. The data suggests that vaccinated people might be vulnerable to breakthrough infections with Omicron, which is spreading rapidly in South Africa and has appeared in dozens of countries around the world.

But vaccines stimulate a wide-ranging immune response that involves more than just antibodies. So these experiments offer an incomplete picture of how well the vaccine protects against hospitalization or death from Omicron.

— Sharon LaFraniere and Noah Weiland