

HEALTH

## **Pfizer Vaccine's Protection Still Strong After 6 Months**

Efficacy dropped to 84% from four months through up to six months after the second shot. That compares with 96% between the first week and two months after the second dose.

*By Jared S. Hopkins*

Protection against symptomatic Covid-19 from Pfizer Inc. and partner BioNTech SE's vaccine diminished over time but remained strong after six months, according to data released by the companies Wednesday.

The efficacy of the vaccine protecting against symptomatic disease dropped every two months, to 84% after six months from a peak of 96% within two months of vaccination, a decline that may add urgency to Pfizer's push to administer an additional dose to maintain protection.

The companies reported that cumulatively the vaccine was 91% effective at preventing symptomatic Covid-19 during the first six months, in line with the analysis that was first reported earlier this year.

Pfizer plans to ask U.S. regulators next month to authorize booster shots of its vaccine, arguing that an additional shot may be needed to protect against the evolving virus. U.S. officials haven't authorized the use of booster shots, although they are studying the issue.

Some countries have authorized booster shots for immunocompromised patients, but physicians and immunologists in the U.S. say there isn't a clear answer yet on whether they are needed for the general population.

In the rush to introduce vaccines for a new virus, companies and other vaccine researchers were unable to determine how long shots would provide protection, or whether booster shots would be needed.

The data Pfizer released Wednesday came as a preprint and hasn't been peer-reviewed by independent experts.

The analysis looked at the vaccine's performance in some of the more than 44,000 healthy volunteers who enrolled in the vaccine's Phase 3 trial, starting about a year ago. Half the subjects received the two-dose shot, with the rest receiving a placebo.

Researchers followed the subjects for six months after vaccinations, through mid-March. That is before the dangerous and infectious Delta variant is believed to have begun sweeping across the U.S.

Pfizer has said that laboratory tests and real-world studies show the shot works against the variant.

Covid-19 vaccines, designed to target the earliest version of the coronavirus, are holding up well against the new infectious Delta variant because it isn't so different from the original strain that it can evade the shots, researchers have said.

Still, Pfizer's latest data adds to the growing body of research that suggests protection gleaned from Pfizer's vaccine wanes over time. Preliminary findings from last week out of Israel showed that the vaccine has become less effective in preventing Covid-19 infections as the new Delta variant spreads.

In an interview Wednesday, Mikael Dolsten, Pfizer's chief scientific officer, said a similar outcome is expected in the U.S., which has followed Israel in vaccination trends.

The two-shot vaccine was cleared by U.S. regulators for emergency use in December, after the vaccine was found to be 95% effective against symptomatic Covid-19.

The analysis showed that the protection declined by an average of 6% every two months after the second shot.

Researchers found that of 971 people who became sick with symptomatic Covid-19 during the six months after the second dose, 82 of them received the vaccine with the rest on a placebo, resulting in 91% vaccine efficacy. Researchers also found the vaccine was overall 97% effective against severe Covid-19.

Between the first week and two months after the second dose, efficacy was 96%. From two months to four months, efficacy dropped to 90%. The efficacy dropped to 84% from four months through up to six months after the second dose. During that interval, researchers found 152 cases of symptomatic Covid-19, 24 of them among the vaccinated and 128 among those who received a placebo.

Speaking on Pfizer's quarterly earnings call on Wednesday, Chief Executive Albert Bourla said that although the company's vaccine works against the various variants identified, its protection appears to wane after six months. He said people may need a third shot within six to 12 months after their second dose to maintain protection.

"What used to be 100% in the first month, now it is coming to the low 90s, and in some cases to the 80s," Mr. Bourla said.

In pointing to the potential need for a third dose, Pfizer on Wednesday cited new data showing that a third dose of the vaccine generated significantly higher antibody levels in adults, compared with two doses. Neutralizing antibodies, which prevent the virus from entering cells and replicating, play a key role in protection.

At eight months after the second dose, antibody levels start to decline from their earlier peaks, according to Pfizer.

## Covid-19 Vaccines

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