

EXPLAINER: Are we going to need COVID-19 booster shots?

July 14 2021, by Luran Neergaard



In this Sunday, July 11, 2021 file photo, a doctor fills a syringe with the Johnson & Johnson COVID-19 vaccine at a vaccination center in Kabul, Afghanistan. Top officials at the World Health Organization said Monday, July 12 there is not enough evidence to show that third doses of coronavirus vaccines are needed and appealed for the scarce shots to be shared with poor countries who have yet to immunize their populations instead of being used by rich countries as boosters. Credit: AP Photo/Rahmat Gul, file

Just because Pfizer wants to offer COVID-19 vaccine boosters doesn't mean people will be lining up anytime soon—U.S. and international health authorities say that for now, the fully vaccinated seem well protected.

Globally, experts are watching closely to determine if and when people might need another shot. At the same time, many suggest the priority for the time being should be vaccinations, noting that worrisome coronavirus mutants wouldn't be popping up so fast if more of the U.S. and the rest of the world had gotten the initial round of shots.

"If you want to stop hearing about the variant of the week," said Jennifer Nuzzo, a Johns Hopkins University public health specialist, "we need to do more work to make sure all countries have more access to vaccines."

Here are some questions and answers about [vaccine](#) immunity and boosters.

WHAT'S PROMPTING ALL THE BOOSTER DEBATE?

U.S. [health officials](#) have long said that people one day might need a booster—after all, they do for many other vaccines. That's why studies are underway to test different approaches: simple third doses, mix-and-match tests using a different brand for a third dose, or experimental boosters tweaked to better match different variants.

But last week, Pfizer and its German partner BioNTech announced that in August, they plan to seek Food and Drug Administration authorization of a third dose because it could boost levels of virus-fighting antibodies, possibly helping ward off worrisome mutants.

The companies haven't publicly released data, and U.S. health officials issued a sharp response that boosters aren't yet needed and that the government, not vaccine makers, will decide if and when that changes.

The World Health Organization said Monday there is not enough evidence to show that third doses are needed. It said the scarce shots should be shared with poor countries instead of being used by rich countries as boosters.

WHAT'S THE EVIDENCE THAT VACCINE PROTECTION REMAINS STRONG?

An Associated Press [analysis](#) last month found nearly all COVID-19 deaths in the U.S. are occurring among the unvaccinated.

In the last few weeks, infections and hospitalizations have begun rising as the highly contagious delta variant spreads. But the Centers for Disease Control and Prevention says the surges are driven by the least vaccinated parts of a country that has plenty of shots if people would only take them.

No vaccine is perfect, meaning fully vaccinated people occasionally will get infected, but those so-called breakthrough cases usually are mild. Officials monitoring the need for boosters are watching closely for any jumps in serious breakthrough infections.

So far the news is good: The people first in line for vaccines back in December and January don't seem to be at higher risk for breakthrough infections than those vaccinated more recently, the CDC's Dr. Jay Butler said Tuesday.

IS THE BOOSTER QUESTION ALL ABOUT NEW VARIANTS?

No, scientists also are watching to see how much vaccinated people's overall immunity to the coronavirus wanes. That, too, could require a booster shot.

Virus-fighting antibodies do gradually wane. That's normal since the body doesn't need to be on high alert forever.

But antibodies aren't its only defense. By the time those levels drop, the body has formed backups. They include memory B cells that, the next time you're exposed, "explode, and they start dividing like mad" to make new antibodies, said University of Pennsylvania immunologist Scott Hensley.

Another backup: T cells that kill virus-infected cells to help keep a breakthrough case from becoming severe.

Lab studies signal antibodies aren't as potent against the delta variant as they are against some earlier versions of the coronavirus but are still protective. Specialists worry more about the prospect of future mutants that might escape today's vaccines, something preventable only by cracking down on viral spread everywhere.

HOW ARE OTHER COUNTRIES DOING AGAINST THE DELTA VARIANT?

Real-world data from England, Scotland, Canada and Israel shows that the vaccines most widely used in Western countries continue to provide strong protection. Researchers in Britain found two doses of the Pfizer vaccine, for example, are 96% protective against hospitalization with the delta variant and 88% effective against symptomatic infection.

Israel recently reported preliminary data suggesting protection against mild delta infection has dipped lower, to 64%. But protection against

severe illness remained high.

There's less information about how well other vaccines hold up against the delta variant. Thailand announced this week that health workers who had received two doses of a Chinese vaccine would be given a [booster](#) shot made by AstraZeneca.

COULD SOME PEOPLE NEED A BOOSTER BEFORE THE ENTIRE POPULATION?

That's possible. Israel just began dispensing third doses of the Pfizer vaccine to transplant recipients and other patients with weak immune systems. The reason: People who take certain immune-suppressing medications don't react as strongly to any vaccinations—not just COVID-19 vaccines—as healthy people.

France already had a similar third-dose policy for the immunocompromised. And even though it's not authorized in the U.S., some transplant recipients seek out a third dose in hopes of more protection.

It's not yet proven if a third dose helps and, if so, who needs one and when. The first large study of the strategy is beginning in thousands of patients in Norway.

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