

## WEALTH OF GEEKS

### Do I Really Need a 4th COVID-19 Shot? Doctors Weigh In

Heidi Borst | March 28, 2022



Whether you were vaxxed once against COVID-19 (77% of Americans), double-vaxxed (65%), or double-vaxxed and boosted (29%), chances are you're fed up with being poked and prodded. With the recent news of a potential 4th vaccine on the horizon, you may be wondering if you need yet another shot.

On March 15th, Pfizer requested emergency use authorization (EUA) to the FDA to make a second booster shot mRNA vaccine against COVID available to adults over the age of 65. Two days later, Moderna submitted a more expansive request for their mRNA vaccine, including all adults over the age of 18.

To date, neither Pfizer's nor Moderna's request for a second booster EUA has been approved. But if and when it becomes available, is a 4th vaccine really necessary? Will COVID vaccines become an annual immunization like the flu shot? We asked doctors to weigh in.

#### Do I Need a Second Booster?

At this time, a second booster is not available in the United States. However, The New York Times recently reported that the Biden administration is planning to make one available to adults over 50 who want one. The most important thing you can do is complete the initial 2-shot vaccine series followed by your first booster, says Robert Glatter, MD, an emergency medicine physician at Lenox Hill Hospital in New York.

“Based on all studies thus far, receiving a booster has consistently provided the best protection against developing severe disease, hospitalization, and death. People who are boosted have

remained at the lowest risk for adverse outcomes overall,” says Dr. Glatter. On the flip side, those eligible for a booster who hasn't received one are at elevated risk for a breakthrough or reinfection, he says.

If the FDA approves a second booster, people over the age of 65 and those who are immunocompromised, such as cancer patients, those undergoing chemotherapy or immunotherapy, people with autoimmune disorders, and organ transplant recipients, should be first in line to receive one, Dr. Glatter says.

“Others with recent breakthrough infections who have underlying cardiac disease, kidney disease, or chronic lung disease should also receive an additional booster shot for added protection,” says Dr. Glatter.

A second booster may be warranted in the general population as well. That's because the mRNA vaccines' protection against infection from COVID typically wanes or diminishes within several months across all age groups.

“Two or three vaccinations will protect the majority of people from serious disease. But the reality is that they are not very effective at preventing infection—which is generally mild or asymptomatic—after three or four months,” says Dr. Glatter.

### **I've Been Boosted *and* Had Omicron. Do I Really Need to be Boosted Again?**

Does infection with a recent variant after being double-vaxxed and boosted enhance immunity against COVID? The jury's still out on that one, says Dr. Glatter.

“It's unclear if healthy persons who are fully vaccinated and received a booster shot but developed a breakthrough infection (most likely with omicron) without developing severe disease or requiring hospitalization will ultimately require a second booster,” Dr. Glatter says. Further research is needed.

What's more, your level of immunity against COVID depends on *when* you came down with the virus or received the vaccine, says **Serhat Gumrukcu, MD**, an epidemiologist, and Executive Director and Director of Translational Research at Seraph Research Institute in Los Angeles, California.

The more the virus moves from one person to another, the more it mutates and changes, making it less responsive to the vaccine, Dr. Gumrukcu explains. All of the vaccines we have today were based on the original COVID variant, which has changed quite a bit over the last two years, he says.

“With the Delta and Omicron variants, the vaccine's efficacy dropped significantly. It prevented severe disease, but it didn't prevent infections. It didn't prevent transmission,” says Dr. Gumrukcu.

If you had Omicron, you likely developed a degree of immunity that will provide some protection against a new variant, like BA.2. But over time, that immunity will decrease, says Dr. Gumrukcu.

### **Will the COVID Vaccine Become a Yearly Immunization Like the Flu Shot?**

The flu virus changes every year, so we have an annual vaccination to try to stay ahead of it, says Dr. Gumrukcu. If you've had a particular strain of the flu, or been vaccinated against that strain, your immune system will recognize it if it's exposed to the same strain in the future, he explains – but COVID is different.

“We don't know how yet, but COVID does something to our immune system that causes it to forget the virus eventually. Our immune system somehow gets reset. So you can actually get infected by the exact same variant one or two years after you were infected the first time,” Dr. Gumrukcu says.

He anticipates an ongoing need for boosters. “We will probably need a shot possible once a year, maybe even twice a year – that is my prediction,” Dr. Gumrukcu says.

Dr. Glatter agrees. “The reality is that we are almost certainly going to need another booster. This issue is ultimately the timing and for which specific variant. That's really the holy grail at this point in time.”

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