

# Delta-Omicron variant tag team makes booster doses essential

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**Jennifer Lubell**

Contributing News Writer

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Omicron is a new household word in the COVID-19 saga. The fast-spreading variant, B.1.1.529, and dubbed Omicron by the World Health Organization has taken hold in countries around the globe, including the United States. That has prompted calls to physician offices about boosters, and renewed efforts by scientists and vaccine makers to find out more about its transmissibility.

As the situation unfolds, physician and vaccine scientist Peter Hotez, MD, PhD, offers some perspective.

“Omicron right now is not my No. 1 worry,” said Dr. Hotez, dean of the National School of Tropical Medicine at Baylor College of Medicine and co-director of the Texas Children’s Hospital Center for Vaccine Development in Houston. It’s the next wave of Delta that’s going to engulf the country among the unvaccinated and undervaccinated, he argued.

In a recent episode of the “AMA COVID-19 Update,” Dr. Hotez discussed which patients Omicron may target and why vaccination and boosters remain the best line of defense against any variant.

## “The way this virus operates”

The variant’s quick appearance around the globe and heavy mutation has prompted concerns. But according to Dr. Hotez, Omicron isn’t acting much differently than previous variants.

By the time scientists identify a variant, it’s already gone global. “This is the way this virus operates,” he said. The fact that Omicron is now in multiple countries isn’t that meaningful.

Some claim Omicron is producing mild illness; others are saying they’re seeing patients in the hospital with it. All other variants have presented with a similar spectrum of clinical illness, said Dr. Hotez.

That's not to say that Omicron couldn't have a different trajectory, he added.

## **Delta will remain dominant variant**

If Omicron can surpass the highly dangerous Delta variant in transmissibility, that's a very high bar to reach, said Dr. Hotez.

Looking at the sequences of areas possibly responsible for transmissibility of Alpha and Delta, "to me it looks more like the Alpha mutations. So on that basis alone, I would not expect it to outcompete Delta," he said.

One possible scenario is the Delta variant will continue to accelerate in the unvaccinated. Omicron in parallel will infect those who are partially immune due to infection recovery or only have a single dose of vaccine. The idea of two coexisting variants disproportionately affecting two types of populations is still a hypothetical.

"We'll see how it unfolds," said Dr. Hotez.

## **Will Omicron escape immunity?**

A prevailing concern is the variant will have immune-escape properties due to all its mutations in the spike protein. "I'm hoping there will be enough virus-neutralizing antibodies to cross-neutralize the Omicron variant in people who got triply immunized. All of us are looking at that now," said Dr. Hotez.

Early research from Israel suggests that vaccines are 90% protective, based on data from fully and triple-immunized individuals. The numbers from South Africa aren't as encouraging.

"Is that because they only got two doses and waning immunity or is it because they got a different vaccine?" It's too early to tell, Dr. Hotez said.

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## **Vaccination is still the best defense**



One key message for physicians is to urge their eligible patients to get booster doses if they haven't already done so.

"That'll give you the 30- to 40-fold bump in virus-neutralizing antibodies and prolong your immune response," said Dr. Hotez. And urge parents to vaccinate their children, he added.

For patients who have already had COVID, data on Delta show they are less susceptible to reinfection if they get vaccinated. That's most certainly true of Omicron, said Dr. Hotez.

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