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Deltacron: What We Know About This Hybrid Variant

Rachel Nania

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While Americans brace for a potential bump in COVID-19 cases caused by the spreading BA.2 subvariant of omicron, experts are monitoring another version of the virus — one that's a hybrid of both the delta and omicron variants.

What's being called deltacron informally, and AY.4/BA.1 by scientists, has been detected in a handful of countries, including France, Denmark, Belgium, Germany and the Netherlands. A few cases have also been

reported in the U.S., a preprint study shows.

But despite its infamous parents and splashy name, deltacron — which is really a catchall term for a strain that carries genetic characteristics from both delta and omicron — doesn't appear to be a big threat at the moment, experts say. It's currently circulating "at very low levels," the World Health Organization's (WHO) Maria Van Kerkhove said at a recent briefing.

About 75 cases of AY.4/BA.1 have been reported globally, according to GISAID, an international database of viral sequences, so any uptick in infections that's being registered in Europe and elsewhere is "very, very unlikely to be coming from any deltacron variant," says Ross Kedl, a professor of immunology and microbiology at

the University of Colorado Anschutz School of Medicine.

Still, “people are keeping a very close eye on it,” says Richard Kennedy, a professor of medicine and codirector of the Vaccine Research Group at Mayo Clinic.

How a hybrid happens

The emergence of a hybrid variant, also called a recombinant, was not wholly unexpected given the “intense amount of circulation that we saw with both omicron and delta” during winter, Van Kerkhove said at a recent press briefing. That’s because recombinants occur when two virus strains (in this case, delta and omicron) infect an individual at the same time. As the viruses replicate they swap information and “the genetic material recombines to create a new strain,” Kedl explains.

Some viruses go through this recombination process more than others, but it's especially common among coronaviruses, points out Gary Whittaker, a professor of virology, microbiology and immunology at Cornell University College of Veterinary Medicine. "They're like the masters of recombination," he says.

When it comes to deltacron, the worry, Kennedy says, is if a version emerges with the worst traits of each variant — omicron's transmissibility and delta's ability to cause more severe disease. "It's also possible that the reverse is true," Kennedy says. "We don't know because there haven't been that many cases … which suggests that for right now it's not a big problem."

So far, WHO officials say they have not yet seen a change in disease frequency and severity with deltacron, but because

dangerous strains of influenza have been generated through recombination, “we have to watch these recombinant events very, very closely.” Several studies are underway to learn more.

“I think it’s more of academic interest right now; it’s not really making a difference to the average person,” Whittaker says. “But we just have to wait and see.”

Experts warn of additional variants

In order for deltacron to get to a point where it becomes problematic, it’s going to have to outcompete BA.2, which is “much more transmissible than the original omicron,” Kennedy says. “So there’s an uphill battle for deltacron to try and take over and start causing a lot of cases.”

While overall cases of COVID-19 are

declining in the U.S., BA.2's presence is growing. The latest data from the Centers for Disease Control and Prevention (CDC) show that BA.2 is to blame for about 35 percent of COVID-19 cases in the country, up from about 1.5 percent in early February. The subvariant is also behind a recent surge in Europe.

Regardless of deltacron's fate, experts expect more variants to crop up as the virus continues to circulate, "and some of them will be more concerning than others," Kedl says. Limiting the spread of the virus, however, can help to cut down on the number of variants that emerge. That's because with each infection "we give the virus an opportunity to hatch a new variant," Kennedy explains. "So anything that we can do to limit infections is a good thing."

Increasing the percentage of the population

that's vaccinated is one way to do this. While the vaccines are most effective at preventing severe disease, they also lower the risk of infection, the CDC says. And when there's a surge in cases, putting masks back on and putting a little more distance between yourself and others are additional ways to curb transmission, Kennedy says. WHO officials also highlight the importance of treating people who have COVID-19 so that they don't end up with a prolonged infection.

"We cannot allow this virus to spread at such an intense level. It doesn't mean locking people down, locking people in their homes; it means using simple tools in a layered approach," Van Kerkhove said, stressing that testing and sequencing are also key to staying on top of variants. "We need to keep a good handle on this virus. We need to have a good system in place to be able to

check the changes and to understand what those changes in the virus mean."

Rachel Nania writes about health care and health policy for AARP. Previously, she was a reporter and editor for WTOP Radio in Washington, D.C. A recipient of a Gracie Award and a regional Edward R. Murrow Award, she also participated in a dementia fellowship with the National Press Foundation.