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New Covid Variants Are Circulating. Here's What to Know.

By

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The "nightmare variant" is not as bad as it sounds.

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As it gets colder and more people move their activities indoors, the recent decline in Covid-19 cases across the United States has started to level off. Coronavirus-related hospitalizations are ticking up in a number of states, including Arizona, Indiana, Illinois, Nevada, Nebraska, Oklahoma, South Dakota and Wisconsin. And there have been a variety of unnerving headlines about the immune evasion and increased transmissibility of the next round of coronavirus subvariants.

At least half a dozen versions of the virus are competing to become the next dominant strain in the United States, but they are part of the same family tree. "They are all offspring of Omicron," said Dr. Albert Ko, a

physician and epidemiologist at the Yale School of Public Health. Though each subvariant has slightly different mutations, none of them seem to be creating significant waves just yet, the way the Delta and Omicron variants did when they first appeared, Dr. Ko said.

Here's what experts know so far about the new subvariants and what their mutations may mean for repeat infections, symptoms, case spikes and treatment options.

Which subvariants are circulating right now? And what is the 'nightmare variant'?

According to the Centers for Disease Control and Prevention, the BA.5 subvariant, which powered the summertime Covid-19 surge, still causes just under half of infections

across the country. But two other subvariants are growing rapidly and are expected to outcompete BA.5 very soon: BQ.1 and BQ.1.1.

As of last Friday, BQ.1 accounted for 14 percent of Covid-19 infections in the United States, while BQ.1.1 accounted for 13.1 percent. Another variant, called BA.4.6, has also gained some ground since August. It now accounts for 9.6 percent of cases.

BF.7, BA.5.2.6, BA.2.75 and a number of other variants are also jockeying for position in the United States, while another variant called XBB has made headlines for its role in a Covid-19 case surge in Singapore. Some reports have gone so far as to call XBB the "nightmare variant," even though the number of cases and hospital admissions associated with it was already significantly down by Oct. 29.

The case counts and locations of each subvariant are important mainly for close observers of the pandemic, who are trying to track how well the subvariants evade immune protections, how much they will circulate in a community and how severe they can be for those infected.

How worried should I be about these new subvariants?

The evolution of new coronavirus variants is nothing new. "We've dealt with this before, with influenza, for example," Dr. Ko said. "Viruses and pathogens are constantly trying to adapt and escape the immune pressure that we pose to them."

With new, more immune-evasive subvariants, healthy adults are more likely to be infected even after vaccination or after a

previous infection with a different variant. Indeed, a few preprint studies indicate that prior infection or vaccination might not produce antibodies that protect strongly against the new subvariants in lab experiments.

But other parts of the immune system can come to our defense, said Dr. Otto Yang, an infectious disease physician and immunology researcher at the University of California, Los Angeles David Geffen School of Medicine.

"The mutations defining these new variants are clustered in and around a key area for antibody interactions, but the overall spike sequence is not really changed enough to affect T cells that recognize any part of the sequence, and they are what prevent severe illness," Dr. Yang said. "People who are up to date on their vaccines and who get treatment

early with Paxlovid or with remdesivir are going to do fine for the most part." (Paxlovid is an oral antiviral medication, and remdesivir is an injectable antiviral.)

Most experts are not concerned with the possibility of new subvariants causing mild illness. "If we see that deaths are reduced and if serious illness and hospitalizations are reduced, even if people do get infected, that's still a big success," said Michael Osterholm, an epidemiologist and the director of the Center for Infectious Disease Research and Policy at the University of Minnesota.

Immune evasion is a bigger concern for people who are immunocompromised or who don't mount a strong immune response to vaccines. That includes people who have had stem cell or solid organ transplants, people receiving cancer treatments, people

with autoimmune diseases and people who need immune-suppressive medication for various medical conditions, said Dr. Alpana Waghmare, an infectious disease expert at Fred Hutchinson Cancer Center.

Immunocompromised people often rely on preventive shots like Evusheld and intravenous Covid treatments like bebtelovimab, which are made from monoclonal antibodies and can fill in holes in the protection these patients may have from vaccines, Dr. Waghmare said. But the monoclonal antibody treatments are designed to act on one particular piece of the virus; if that piece is altered in the newer subvariants, these treatments may no longer be effective.

"That's the concern for most clinicians, that we will lose this set of tools in our toolbox to fight Covid," Dr. Waghmare said. As a result,

immunocompromised people may have to deal with more severe disease without the option for monoclonal antibody treatment, even if other antiviral treatments will still keep overall deaths from increasing in this group.

What are the symptoms of a Covid-19 infection with one of the new subvariants?

There is no evidence yet to suggest that people who are infected with BQ.1, BQ.1.1 or any of the other subvariants experience any new or unusual symptoms, or that their illness is more severe than what we've seen with previous Omicron variants, Dr. Waghmare said.

The most common symptoms still include a mild runny nose, headache and sore throat.

These could precede a positive Covid test, and symptoms could be mild or moderately bad for the duration of the illness. "It's hard to tell whether the reduced severity we're seeing is due to the actual variant or because people are more protected because they've either had the vaccine or seen an infection before," Dr. Waghmare said.

How can I protect myself against the virus?

The best thing most people can do to protect themselves in the winter is to be vaccinated and boosted. In particular, those who are at high risk, as well as those who have not had a booster or a Covid infection in the last four to six months, should make a plan to get a shot, Dr. Yang said. Some experts recommend getting a booster even sooner.

One study from Pfizer suggests that the updated bivalent booster, which became available in September, produces a better antibody response against BA.5 for people over age 55 than the previously available booster. Other independent data indicates the shot may not offer much additional benefit to relatively young and healthy people who have already received four doses of the vaccine. The bivalent booster can train your immune system to recognize the original virus from 2020 as well as the BA.5 Omicron variant. But it remains to be seen how well antibodies from the bivalent shot may work against newer subvariants like BQ.1 and BQ.1.1, which have already diverged from BA.5.

Antibodies aside, the T cell protection that arises from the booster should still be able to protect you against severe illness if you do

get infected, Dr. Yang said. According to some studies from Israel, T cell protection appears to start waning around six months, so you could consider getting another shot if it has been longer than that, even if you are young and healthy.

People who are at high risk of severe Covid-19 or have vulnerable family members should also consider masking, avoiding crowded indoor venues and asking others about Covid symptoms or exposures if they go to gatherings during the holiday season. They should also test frequently and get antiviral medication such as Paxlovid early on if a test comes back positive, Dr. Waghmare said.