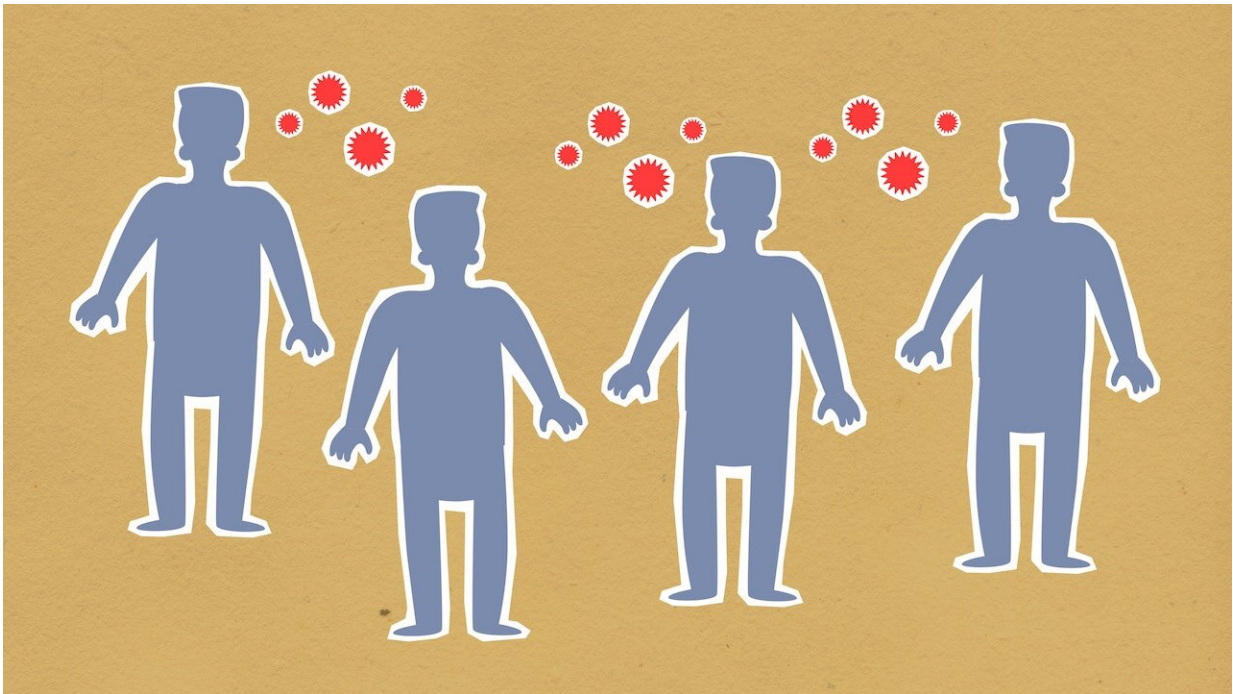


What you need to know about XBB.1.5, COVID's latest variant

January 31 2023, by Caitlin Clark



Credit: Monstera, Pexels (CC0, creativecommons.org/publicdomain/zero/1.0/)

A new variant of the novel coronavirus now makes up more than half of U.S. COVID-19 cases, according to the latest [data from the Centers for Disease Control and Prevention](#). A subvariant of Omicron, XBB.1.5 spreading fast and on track to be the country's most dominant version of the virus.

Texas A&M Today spoke with Rebecca Fischer, assistant professor of epidemiology and biostatistics, and Ben Neuman, professor of biology and chief virologist of the Global Health Research Complex, about XBB.1.5 and how the virus is evolving.

When did this variant emerge, and what about XBB.1.5 is catching virologists' attention?

Neuman: XBB.1.5 was first noticed in India early last September, but by the end of the week it had been detected in six other countries around the world, so it was probably present a few weeks earlier. Looking at a small part of the spike where the immune system can block [infection](#), XBB.1.5 has about as many differences from the current Omicron [vaccine strain](#) (six) as Omicron had compared to the original vaccine strain (seven). So many differences in such a small space is what makes a virus a vaccine-breaker, and XBB.1.5 appears to be doing that.

Does XBB.1.5 appear to have the potential to cause a wave of infections similar to Omicron last winter?

Fischer: In short, yes, another wave of infections is possible. XBB.1.5 is already dominant in parts of the U.S., and many of those places have also seen a rise in infections and hospitalizations. There is no reason to believe it will fall short in making its way across the country, causing a surge in infections, illness, hospitalization and death.

One of the most concerning features of this [variant](#) is that [it seems to be more infectious](#). This iteration of the SARS-CoV-2 variant enters our cells more easily, meaning the process by which the virus infects and replicates is more efficient. Omicron has already been pretty good at this, which is why there is heightened concern over this new version of the variant. While more data is needed on this, it also stands to reason

that virus transmission to others could happen earlier in the infection process (before symptoms occur) or that fewer virus particles could effectively seed infection.

The increased transmission efficiency of this variant, on the tail end of a winter holiday, has experts concerned about a new surge in cases, even after weathering the Thanksgiving season fairly well. Yet, just as with previous waves, scientists aren't able to predict exactly what a next surge would look like, such as specifically how many infections will occur, how rapidly the virus will spread through communities, or how abruptly we might interrupt that spread and bring the wave to a close.

How does it compare to other variants in terms of likelihood to lead to hospitalizations and deaths?

Neuman: The special power of XBB.1.5 is that it can infect people who would have enough antibodies to be able to block other strains; it grows where other strains can't.

Fischer: The good news is that the symptoms and severity of COVID for individuals infected with the XBB.1.5 do not seem to be different than what we are already seeing. While it is a relief that the variant is not bringing more severe disease, it does (as its predecessors) cause severe disease and lead to hospitalization and death in some individuals. And while there are specific characteristics we associate with these more devastating outcomes (the elderly and individuals with certain underlying health conditions, for example), these generalizations are imperfect in predicting who will suffer the most. This is one of the most important reasons to block the spread of this virus.

How effective are the vaccines and bivalent boosters at defending against XBB.1.5? Are people who've

already had COVID likely to be reinfected?

Neuman: A fresh booster seems to give reasonable protection against XBB.1.5 infection for a few months, but certainly the vaccine needs to be updated. This is the next big step in virus evolution, and it's up to regulatory bodies like the FDA to determine how nimble the response can be. Previous infection is no better than a booster, and if the infection was with a different strain, it would be much less effective than a booster at preventing reinfection.

Fischer: The bivalent booster, designed to be effective against Omicron variants, is already proving to be effective against this newest variant. Data published in the past month shows that in the highest risk age group the booster provides up to four-to-five-times better protection against XBB.1.5, compared to how the original vaccine formulation is performing.

Vaccine effectiveness wanes over time after each shot, and maximal protection is only achieved by having the full set of recommended vaccine doses (including boosters) available at any given time. Anyone who received an initial vaccine series prior to 2022 should not consider themselves protected. Previous infection is also not a reason to forego vaccination, since immunity from infection, whether symptomatic or not, also wanes and does not necessarily protect against emerging variants. Reinfections are common, and there is always a risk of developing [severe disease](#), even if a prior infection was mild. Repeat bouts of COVID carry higher risk of long-term disease and disability.

What does this newest variant tell us about how the virus is evolving?

Neuman: Evolution is always going to be unpredictable, but with the

general level of immunity that everyone has now, it's really only viruses that are substantially different from the vaccine that have any chance to grow. That's a good thing. With better vaccine coverage, we can paint the virus into a corner, in terms of limiting how it can change in the future.

What advice do you have for people with pandemic fatigue, especially as mitigation measures like public masking have been increasingly less common over time?

Fischer: The fatigue, burn-out and boredom with this virus and the pandemic are real. Yet the greatest control we have over this virus is through our own actions. We can pay attention to what the virus is doing in our communities, families and social circles. This is good news because when the transmission rate is low, we can breathe a little easier. Yet when viral activity starts to increase—or the headlines are filled with news of a new and worrisome variant on the way—we can step up our game and stop the [virus](#) in its tracks, do our part to limit spread, keep ourselves and others safe, and curtail the emergence of the next variant.

A lot of people want to know what safeguards will help them keep safe while getting together with friends and family, even when the infections are occurring in the community. There are a few good practices I recommend, which, if followed by everyone in the group, can help keep these events as COVID-free as possible: Do your best to avoid potential exposures for three to five days before gathering; monitor for any symptoms of cold, flu or allergies for 48 hours before (if symptoms occur, avoid the event and consider testing and isolating away from others until symptoms clear); and take a rapid home test within one to two hours before the event starts (testing as close to the start time as possible will give the most timely information about your infection

status).

Of course, there is no 100 percent guarantee an infection won't occur, but if everyone in the group follows this simple routine, the risk will be low, and you will also be safeguarding against spread of the flu, common cold or any of a number of other bugs going around.

Provided by Texas A&M University

Citation: What you need to know about XBB.1.5, COVID's latest variant (2023, January 31) retrieved 26 June 2024 from <https://medicalxpress.com/news/2023-01-xbb15-covid-latest-variant.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.