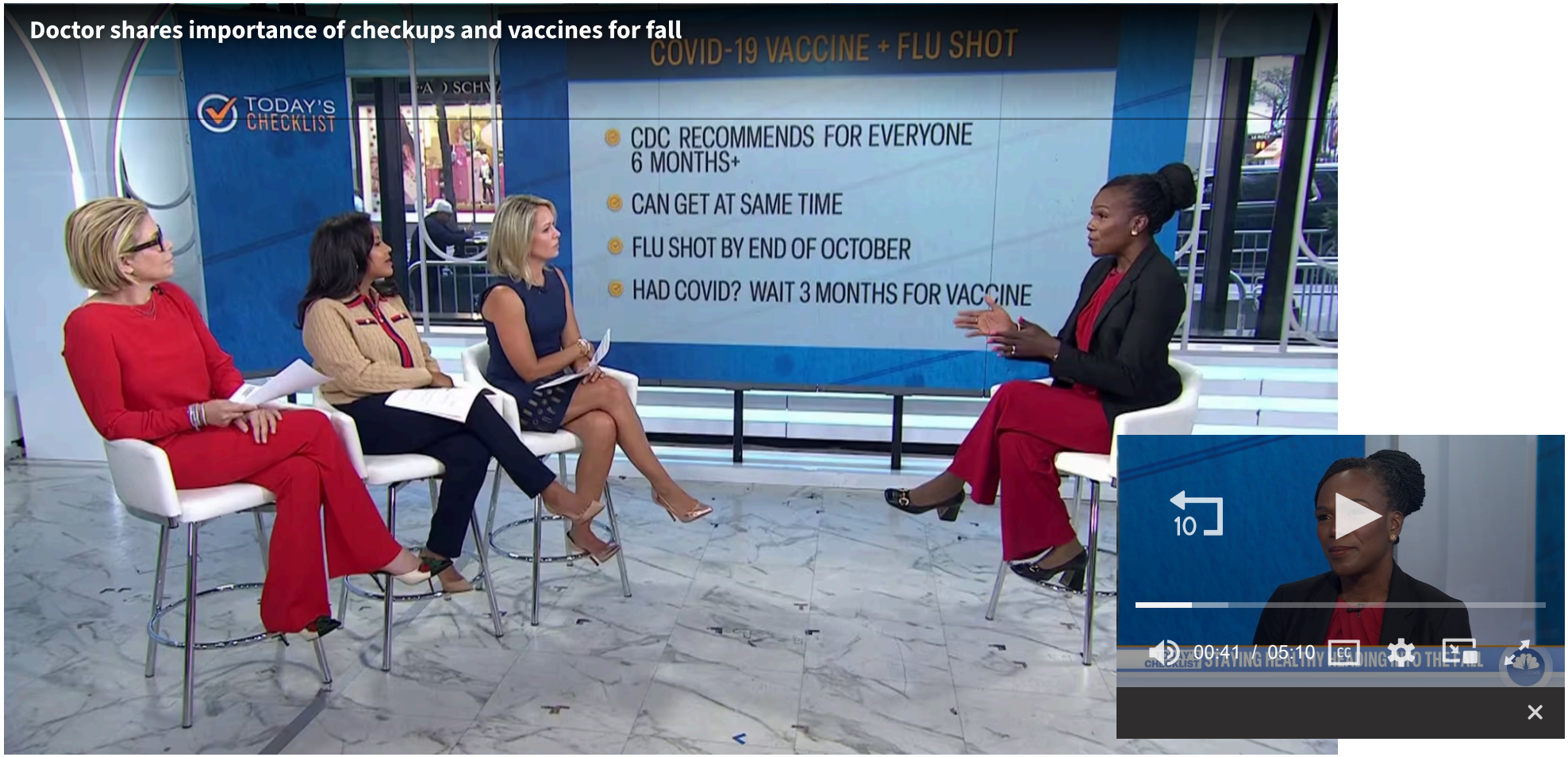
CORONAVIRUS

New XEC COVID variant is on the rise. What are its symptoms, and will it cause a surge?

The new and contagious XEC COVID-19 variant is spreading rapidly in several countries. Will it cause a surge in the U.S.? What to know about symptoms, vaccines and more



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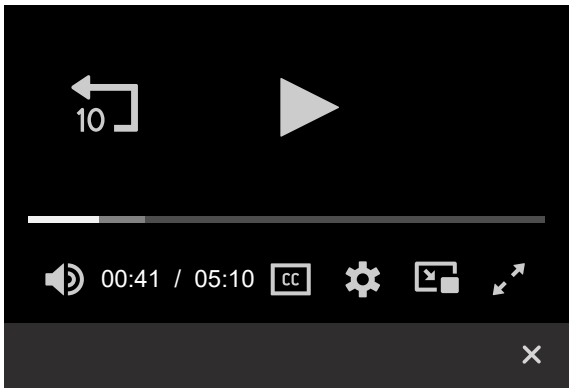
By Caroline Kee

As COVID-19 activity remains elevated across the United States, a new hybrid variant called XEC is spreading rapidly in Europe and other parts of the world. The XEC variant has been detected in more than half of U.S. states so far, and some experts are projecting that XEC could be on track to become the dominant strain this fall.

The SARS-CoV-2 virus, which causes COVID, is continuing to mutate, giving rise to new, highly contagious variants. The latest one to gain interest and make headlines is the recombinant COVID variant, XEC.

Dr. Eric Topol, director of the Scripps Research Translational Institute, posted on X on Sept. 14 that the "XEC variant appears to be the most likely one to get legs next."



Recombinant variant XEC is continuing to spread, and looks a likely next challenger against the now-dominant DeFLuQE variants (KP.3.1.1.*).

Here are the leading countries reporting XEC. Strong growth in Denmark and Germany (16-17%), also the UK and Netherlands (11-13%).
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71 See the latest COVID-19 information on X

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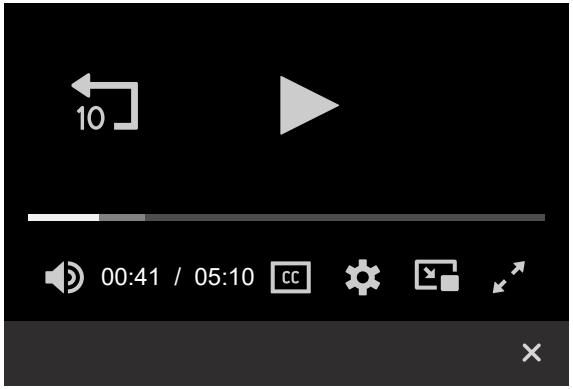


The emergence of XEC comes as the U.S. sees a slight decline in COVID-19 activity following a summer wave. However, wastewater data from the U.S. Centers for Disease Control and Prevention show that COVID activity is still "high" or "very high" in 40 states.

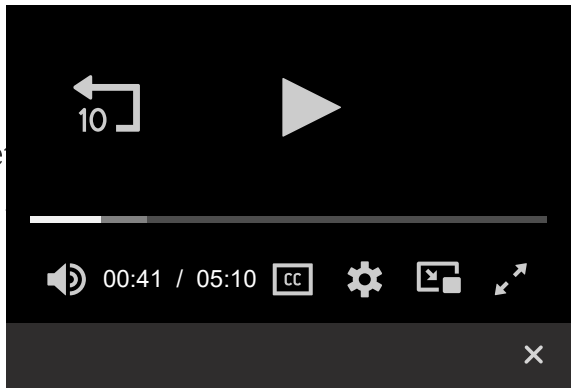
As fall begins and respiratory virus season approaches in the U.S., some are concerned about whether XEC could cause a surge, and if the new COVID-19 vaccines being rolled out will protect against it.

What do we know about the XEC variant so far, what symptoms does it cause, and what can we expect in the coming months?

What is the XEC COVID variant?

XEC is a recombinant of two previous variants, KP.3.3 (a descendent of the FLiRT variants) and KS.1.1, Dr. Albert Ko, an infectious disease physician and professor at Yale School of Public Health, tells TODAY.com.

"When a person's infected with two different SARS-CoV-2 variants, you can ge
recombination, where pieces of the genetic material from one recombine with
that can create a new strain," says Ko.



XEC is similar to its parental strains but has additional mutations which may give it an advantage over other variants, experts note.

The XEC variant is a sublineage of omicron, just like the previous variants that have been circulating in recent months, Dr. William Schaffner, professor of infectious diseases at Vanderbilt University Medical Center, tells TODAY.com.

These include the FLiRT strains and the currently-dominant variant in the U.S., KP.3.1.1, which some scientists have dubbed “DeFLuQE.”

According to Mike Honey, an Australian data scientist who has been tracking XEC’s spread, the variant first emerged in Berlin in late June and has since rapidly spread in Europe, North America and Asia, Honey wrote in a post on X on Sept. 14.

Currently, XEC is showing the "strongest growth" in Germany, France, Italy, the Netherlands, and Denmark, Honey wrote on Sept. 20, predicting that XEC will "cross over" the dominating KP.3.1.1 variant in Europe sometime in October.

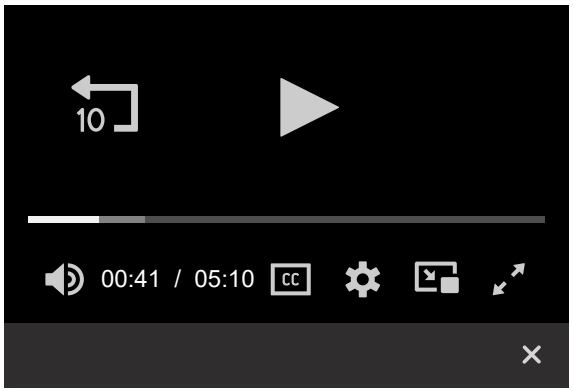
The World Health Organization has not yet classified XEC as a variant, a spoke
global virus database GISAID told TODAY.com. Instead, scientists estimate its
tracking genetic sequences with XEC’s mutations, which are shared to GISAID
Research’s COVID-19 database, Outbreak.info.

So far, at least 1,180 sequences of XEC have been detected in 29 countries: Aust
Belgium, Brazil, Canada, China, Croatia, Czechia, Denmark, Finland, France, Germany, Hong

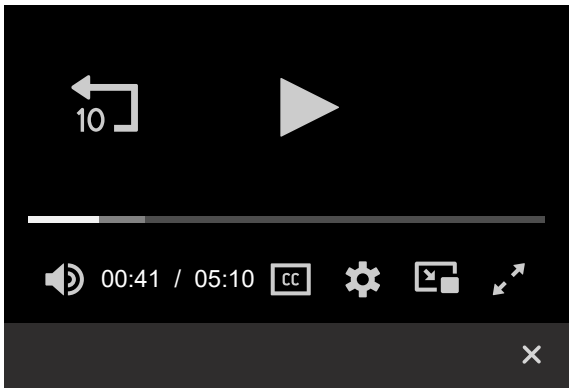
Kong, Ireland, Israel, Italy, Japan, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovenia, South Korea, Spain, Sweden, Taiwan, the United Kingdom, and the U.S.

At this time, around 200 sequences of XEC have been detected in the U.S. in at least 26 states so far, including the District of Columbia, per GISAID data. These include:

- Arizona
- California
- Colorado
- Delaware
- District of Columbia
- Florida
- Hawaii
- Illinois
- Iowa
- Maryland



- Massachusetts
- Michigan
- Nebraska
- Nevada
- New Jersey
- New York
- North Carolina
- Ohio
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Texas



- Utah
- Virginia
- Washington

"It's definitely, here but it hasn't made it to the CDC tracker because not enough cases have been detected," says Ko. XEC is not yet listed on the CDC's "Nowcast" estimates, which project COVID variant proportions in the U.S. for the most recent two-week period.

However, this is expected to change as the variant spreads. The actual case count (which cannot be determined by the sequence count alone) is likely higher, experts say.

According to Honey, XEC "looks a likely next challenger against the now-dominant DeFLuQE variants," he posted on X on Sept. 14.

Is XEC more transmissible?

"(XEC) appears to be, like many of the other omicron variants we have seen rec
contagious (and) very easily spread, which is why it's picking up steam," says S

XEC, like other COVID variants, is spread from person to person through respir
produced when an infected person breathes, talks, coughs, or sneezes.

"It is rising at a fast rate right now (and) it's the fastest rising variant in a couple different countries in Europe," says Andrew Pekosz, Ph.D., professor and vice chair of the department of molecular microbiology and immunology at the Johns Hopkins Bloomberg School of Public Health, tells TODAY.com.

“Any time a new variant emerges and starts to increase rapidly, we always turn our eyes toward it. ... That is really is the first signal that something might be happening,” says Pekosz.

The XEC variant has at least one mutation in its spike protein, says Pekosz. While these mutations may potentially make XEC more transmissible or better able to evade immunity, it's unclear whether XEC will outcompete other variants.

"It looks to be behaving the way many of these other omicron subvariants have behaved. So far, no alarm bells have gone off regarding XEC," says Schaffner.

Will XEC cause a fall surge in the U.S.?

"The 2024 summer wave was more prominent and has been more prolonged t
anticipated. It’s only now starting to wane," says Schaffner.

There is no COVID "season" in the U.S. and activity can continue throughout t
tends to peak in the winter months during respiratory virus season, the experts
also surge in the spring and summer, per the CDC.

The timing and severity of COVID-19 surges is difficult to predict, says Pekosz, but he speculates that there's a chance this winter wave may come later or not be as big as last year's due to the size of the summer wave, which provided some people immunity. However, it's unclear how the next few months will pan out.

It's also too early to tell whether XEC or another variant will drive a fall or winter surge. "New variants with new mutations come up and some of them take off (and) some of them don't take off," says Ko.

"XEC may be the next one that's going to take off and cause a wave, but we're not sure how big that wave may be," Ko adds.

One thing we do know is respiratory virus season is approaching, and viruses like SARS-CoV-2 and influenza are spread more readily in the winter when people spend time together indoors.

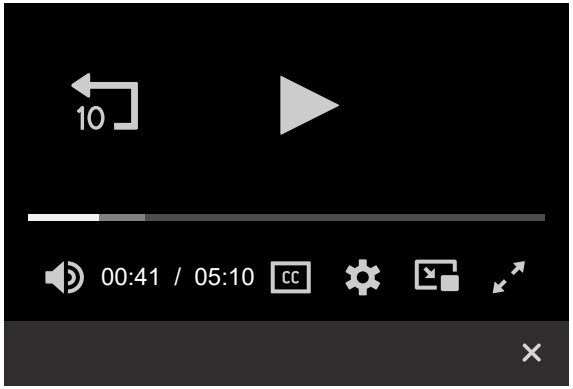
“I can firmly predict that there will be a winter increase. When and how robust that increase will be, I don’t know, but it should have nothing to do with your decision to get vaccinated," Schaffner adds.

What are the symptoms of XEC?

It's still early in XEC's emergence, which means there isn't much information y
symptoms or other clinical features, says Pekosz. However, so far, XEC does no
causing any distinctive symptoms or more severe disease.

"It's the same old, same old," Schaffner adds. The symptoms caused by XEC are similar to those caused by previous omicron variants. These include:

- Sore throat
- Cough
- Fatigue
- Headache and body aches
- Congestion
- Runny nose
- Fever or chills
- Shortness of breath
- Nausea or loss of appetite
- Diarrhea
- Loss of sense of taste or smell



"It can make you feel miserable for several days, but it can vary from person to person and some people get a totally asymptomatic infection," says Schaffner.

People in high-risk populations are more likely to develop severe disease. These include people over the age of 65, people with underlying medical conditions (such as diabetes or heart disease), and people who are immunocompromised.

“There’s nothing striking (about XEC) both in terms of the symptoms it causes, and also the virulence, or its ability to cause hospitalizations and deaths,” says Ko. So far, XEC seems similar to KP.2 and KP.3, he adds.

Will the COVID vaccine protect against XEC?

The updated COVID-19 vaccine for 2024–2025 is available and recommended by the CDC for everyone ages six months and older.

The new mRNA vaccines are monovalent, which means they target one variant — in this case, it's the previously dominant KP.2 variant, says Pekosz. "It looks like (XEC) is go related to the vaccine strains, so there should be good coverage," he adds.

“Although it’s new, there have been some early laboratory studies that would i updated vaccine will protect against severe disease caused by this variant,” Sch

COVID-19 vaccines are safe and effective at protecting people from developing being hospitalized, and dying, according to the CDC. This means they can still offer protection

even if a person becomes sick with COVID-19 after being vaccinated.

The strains targeted by the COVID vaccines are chosen over the summer, about three or four months before the shots become available, Pekosz notes. "While the vaccine strain doesn't change, the virus just keeps infecting people and mutating, so we never have 100% match," he adds.

However, it looks like the current vaccines will provide protection against should the XEC variant spread widely in the U.S. this fall.

"Now (through October) is a good time to get vaccinated," says Ko. If you've recently recovered from a COVID-19 infection, the CDC recommends waiting three months to get the vaccine, but always talk to your doctor.

It's especially important for people at higher risk of developing severe disease to get the updated COVID-19 vaccine, says Schaffner. These groups should get vaccinated as soon as possible because the virus is still circulating at relatively high levels around the country, TODAY.com previously reported.

A concern among experts is that poor vaccine uptake will create a more vulnera
this winter. "We had a rather lackluster acceptance rate last year, only 24% of t
(who was eligible) actually received the vaccine, so I hope we do much better t
Schaffner.

Testing and isolation guidelines

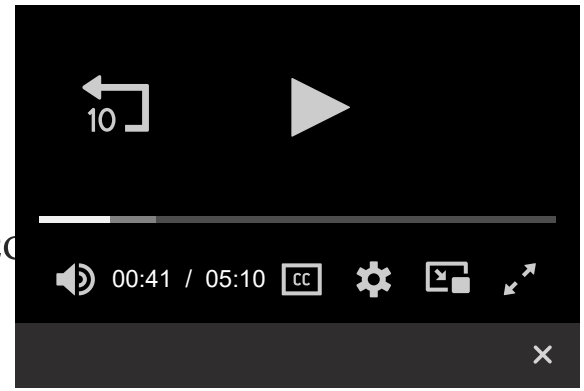
Current COVID-19 tests are expected to detect the XEC variant and other strains in circulation, the experts say.

People should test if they have COVID-19 symptoms or an exposure. It's also a good idea to test ahead of big events or gatherings where you'll be around high-risk individuals, says Schaffner.

Starting in late September, Americans will be able to order another round of free COVID test kits, which will be mailed to their homes. All U.S. households will be eligible to order four free rapid COVID-19 tests from COVIDTests.gov by the end of September.

The CDC recommends staying home if you're sick and returning to normal activities only if you have been fever-free *and* symptoms have been improving for at least 24 hours.

Antivirals such as Paxlovid are still effective and recommended, particularly for people at high risk for severe disease, Schaffner notes. These are most effective when taken within the first few days of developing symptoms.



How to protect yourself against XEC

As fall approaches, you can take the following steps to protect yourself from CO other respiratory viruses:

- Stay up to date with vaccines.

- Stay home when sick.
- Avoid contact with sick people.
- Wear a mask in crowded indoor spaces.
- Improve ventilation.
- Maintain good hand hygiene.
- Practice social distancing.

Caroline Kee

Caroline Kee is a health reporter at TODAY based in New York City.