

# Scientists urge concern, not alarm over new virus strains

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In this Nov. 24, 2020, file photo, registered nurse Chrissie Burkhiser works in the emergency room at Scotland County Hospital in Memphis, Mo. Scientists say there is reason for concern but not alarm about new strains of the coronavirus, especially the one currently spreading in England. (AP Photo/Jeff Roberson, File)

Does it spread more easily? Make people sicker? Mean that treatments and vaccines won't work? Questions are multiplying as fast as new strains of the coronavirus, especially the one now moving through England. Scientists say there is reason for concern but that the new strains should not cause alarm.

"There's zero evidence that there's any increase in severity" of COVID-19 from the latest strain, the World Health Organization's emergencies chief, Dr. Michael Ryan said Monday.

"We don't want to overreact," the U.S. government's top infectious disease expert, Dr. Anthony Fauci, told CNN.

Worry has been growing since Saturday, when Britain's prime minister said a new strain, or variant, of the [coronavirus](#) seemed to spread more easily than earlier ones and was moving rapidly through England. Dozens of countries barred flights from the U.K., and southern England was placed under strict lockdown measures.

Here are some questions and answers on what's known about the [virus](#) so far.

**Q: WHERE DID THIS NEW STRAIN COME FROM?**

A: New variants have been seen almost since the virus was first detected in China nearly a year ago. Viruses often mutate, or develop small changes, as they reproduce and move through a population—something "that's natural and expected," WHO said in a statement Monday.

"Most of the mutations are trivial. It's the change of one or two letters in the genetic alphabet that doesn't make much difference in the ability to cause disease," said Dr. Philip Landrigan, a former Centers for Disease Control and Prevention scientist who directs a global health program at

Boston College.

A more concerning situation is when a virus mutates by changing the proteins on its surface to help it escape from drugs or the immune system, or if it acquires a lot of changes that make it very different from previous versions.

**Q: HOW DOES ONE STRAIN BECOME DOMINANT?**

**A:** That can happen if one strain is a "founder" strain—the first one to take hold and start spreading in an area, or because "super spreader" events helped it become established.

It also can happen if a mutation gives a new variant an advantage, such as helping it spread more easily than other strains that are circulating, as may be the case in Britain.

"It's more contagious than the original strain," Landrigan said. "The reason it's becoming the dominant strain in England is because it out-competes the other strains and moves faster and infects more people, so it wins the race."



In this Dec. 1, 2020, file photo, people wait their turn to be called for a PCR test for the COVID-19 outside a hospital in Barcelona, Spain. Scientists say there is reason for concern but not alarm about new strains of the coronavirus, especially the one currently spreading in England. (AP Photo/Emilio Morenatti, File)

Moncef Slaoui, the chief science adviser for the U.S. government's COVID-19 vaccine campaign, said scientists are still working to confirm whether the strain in England spreads more easily. He said it's also possible that "seeding" of hidden cases "happened in the shadows" before scientists started looking for it.

The strain was first detected in September, WHO officials said.

**Q: WHAT'S WORRISOME ABOUT IT?**



A: It has many mutations—nearly two dozen—and eight are on the spike protein that the virus uses to attach to and infect cells. The spike is what vaccines and antibody drugs target.

Dr. Ravi Gupta, a virus expert at the University of Cambridge in England, said modeling studies suggest it may be up to two times more infectious than the strain that's been most common in England so far. He and other researchers [posted a report](#) of it on a website scientists use to quickly share developments but it has not been formally reviewed or published in a journal.

**Q: DOES IT MAKE PEOPLE SICKER OR MORE LIKELY TO DIE?**

A: "There's no indication that either of those is true, but clearly those are two issues we've got to watch," Landrigan said. As more patients get infected with the new strain, "they'll know fairly soon if the new strain makes people sicker."

A WHO outbreak expert, Maria Van Kerkhove, said Monday that "the information that we have so far is that there isn't a change" in the kind of illness or its severity from the new strain.

**Q: WHAT DO THE MUTATIONS MEAN FOR TREATMENTS?**

A: A couple of cases in England raise concern that the mutations in some of the emerging new strains could hurt the potency of drugs that supply antibodies to block the virus from infecting cells.

"The studies on antibody response are currently under way. We expect results in coming days and weeks," Van Kerkhove said.

One drugmaker, Eli Lilly, said that tests in its lab using strains that contain the most concerning mutation suggest that its drug remains fully

active.

## Q: WHAT ABOUT VACCINES?



Security guard the entrance to the ferry terminal after the Port of Dover, England, Monday, Dec. 21, 2020, was closed and access to the Eurotunnel terminal suspended following the French government's announcement. France banned all travel from the UK for 48 hours from midnight Sunday, including trucks carrying freight through the tunnel under the English Channel or from the port of Dover on England's south coast. (AP Photo/Kirsty Wigglesworth)

A: Slaoui said the presumption is that current vaccines would still be effective against the variant, but that scientists are working to confirm

that.

"My expectation is, this will not be a problem," he said.

United Kingdom officials have said "they don't believe there is impact on the vaccines," Van Kerkhove said.

Vaccines induce broad immune system responses besides just prompting the [immune system](#) to make antibodies to the virus, so they are expected to still work, several scientists said.

**Q: CAN TRAVEL RESTRICTIONS DO ANY GOOD?**

**A:** Landrigan thinks they can.

"If the new strain is indeed more contagious than the original strain, then it's very, very sensible to restrict travel," he said. "It will slow things down. Any time you can break the chain of transmission you can slow the virus down."

CNN quoted Fauci as saying that he was not criticizing other countries for suspending travel to England but that he would not advise the United States to take such a step.

The presence or extent of the new strain in the United States is unknown at this time.

**Q: WHAT CAN I DO TO REDUCE MY RISK?**

**A:** Follow the advice to wear a mask, wash your hands often, maintain social distance and avoid crowds, public health experts say.

"The bottom line is we need to suppress transmission" of all virus [strains](#)

that can cause COVID-19, said the WHO's director-general, Dr. Tedros Adhanom Ghebreyesus.

"The more we allow it to spread, the more mutations will happen."

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