

How many variants of the coronavirus are there?

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How many variants are there of the COVID-19 virus? AP Illustration/Peter Hamlin

How many variants of the coronavirus are there?

There are many circulating around the world, but health experts are primarily concerned with the emergence of [three](#).

As a virus infects people, it can mutate as it makes copies of itself. Some mutations can be harmful to a virus, causing it to die out. Others can offer an advantage and help it spread.

"Not every mutation is created equal," said Mary Petrone, who studies infectious diseases at Yale University. "The virus is going to get lucky now and again."

Monitoring variants is important because of the possibility that they could make vaccines and treatments less effective, or change the way they infect people.

A mutation early in the pandemic fueled the spread of the virus around the world, but there had been no notable changes since—until recently, said Ohio State University biologist Daniel Jones.

One of the three main variants experts are watching was discovered in the United Kingdom late last year and has been detected in dozens of countries since. Health officials initially said it didn't seem to cause worse disease, but some newer information suggests it might—that remains unknown at the moment. It does appear to spread more easily, which could lead to more hospitalizations and deaths.

The variant might become dominant in the U.S. by March, [according](#) to the Centers for Disease Control and Prevention.

Other variants first detected in South Africa and in Brazil also appear more contagious, experts say.

[Data so far](#) suggests current vaccines should still protect against these variants, though there's some concern their effectiveness may be slightly diminished. There is some evidence that some antibody treatments may be less effective against certain variants.

There are ways to adjust vaccines and treatments to maintain their effectiveness, said Dr. Anthony Fauci, the top U.S. infectious disease expert.

The emergence of variants is linked to ongoing surges since infections give viruses the chance to mutate and spread. It's another reason experts stress the importance of mask wearing and social distancing.

"The fewer humans carrying the virus, the fewer opportunities it has to mutate," Jones said.

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