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In This

COVID-19
variants



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COVID-19 Variants

Viruses are always changing, and that can cause a new variant. A variant usually doesn't affect how the virus works. But sometimes they make it act in different ways. Coronaviruses didn't just pop up recently. They're a large family of viruses that have been around for a long time. Many of them can cause a variety of illnesses, from a mild cough to severe respiratory illnesses. The COVID-19 is one of several known to infect humans. It's probably been around for some time in animals. Sometimes, a virus in animals crosses over into people. So this virus isn't new to the world, but it is new to humans. Experts call these strains SARS-CoV-2 have all their genetic material RNA (ribonucleic acid). RNA has some similarities to DNA. When viruses infect the human, they attach to his cells, get inside them, and make copies of their RNA, which helps them spread. If there's a copying mistake, the RNA gets changed formed mutations. These changes happen randomly and by accident. It's a normal part of what happens to viruses as they multiply and spread. Because the changes are random, they may make little to no difference in a person's health. Other times, they may cause disease.



COVID-19 Variants

Alpha (B.1.1.7)	Beta (B.1.351)	Mu (B.1.621)	Gamma (P.1)	Delta (B.1.617.2)
In late 2020		Colombia in January 2021	In January 2021,	This variant was spotted in India in December 2020. It caused a huge surge in cases in mid-April 2021.
Experts noted gene mutations in COVID-19 cases seen in people in southeastern England. This variant has since been reported in other countries, including the	Other variants of the virus have been found in other countries, including South Africa and Nigeria.	Countries in South America and Europe have reported outbreaks of Mu. In the U.S., the CDC says Mu reached a peak in June 2021, when it made up less than 5% of variants going around the country. As of early	Experts spotted this COVID-19 variant in people from Brazil who'd traveled to Japan. By the end of that month, it was showing up in	This highly contagious variant is now found in 43 countries including the U.S., the U.K., Australia, and Singapore. It's the dominant strain in the U.S. and the U.K.

U.S.		September, it had been steadily declining.	the U.S.	
These mutations could make the virus up to 70% more transmissible meaning it could spread more easily. This variant to a higher risk of death, but the evidence isn't strong	The Beta variant appears to spread more easily than the original virus but doesn't seem to cause worse illness	Early data suggests it has certain similarities to the Beta variant, but we need more research to know for sure.	The Gamma variant appears to be more contagious than earlier strains of the virus	its increased transmissibility and increased ability to cause a severe form of the disease. Where the Delta variant is identified, it quickly and efficiently spreads between people The Delta variant is highly contagious, about twice as contagious as previous variant
The mutation on the Alpha variant is on the spike protein, which helps the virus infect its host.		In August 2021, the WHO labeled Mu a “variant of interest.” In general, variants of interest might pose an emerging risk to the world’s public health, with the potential to do things like spread more easily, cause worse disease, or evade vaccines or tests	Some early research suggests that the variant’s changes might help it evade antibodies (made by your immune system after an infection or a vaccine)	Research suggests that changes to the spike protein may make the Delta variant up to 50% more transmissible than other COVID-19 variants.

<p>The vaccines make antibodies against many parts of the spike protein, so it's unlikely that a single new mutation in the Alpha variant will make the vaccine less effective.</p>		<p>As of September 2021, the CDC hadn't escalated Mu to be a variant of interest in the U.S.</p>	<p>A lab study shows that the Pfizer-BioNTech vaccine can neutralize the fast-spreading Brazil strain. But more research is needed.</p>	<p>A study of the COVID-19 vaccine's effectiveness against this variant found that:</p> <ol style="list-style-type: none"> 1-Two doses of the Pfizer-BioNTech vaccine were 88% effective 2 weeks after the second dose. 2-Two doses of the AstraZeneca vaccine available in the U.K. were 60% effective. 3-Both vaccines are only 33% effective 3 weeks after the first dose.
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(the Centre for Disease Control and Prevention (CDC).

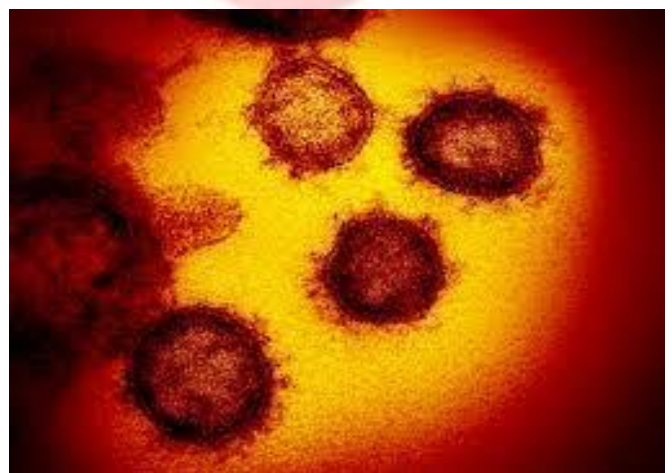
R1 variant

Scientists first detected R.1 in a number of countries, including Japan. There was an outbreak at a Kentucky nursing home in March 2021, when an unvaccinated health care worker passed it to about 45 other staff and residents. The WHO labeled it a “variant under monitoring” in April 2021, meaning some of its characteristics may pose a future risk to humans. As of September 2021, the CDC hadn't labeled R.1 as a variant of concern or interest.

The virus that causes COVID-19 will probably keep changing. It's impossible to predict how those virus changes might affect what happens. But change is just what viruses do.

Delta variant

Delta is believed to be more than twice as contagious as previous variants, and studies have shown that it may be more likely than the original virus to put infected people in the hospital. People who are not vaccinated are most at risk, and the highest spread of cases and severe outcomes is happening in places with low vaccination rates. The CDC has labeled Delta “a variant of concern,”. Delta's quick growth rate has been especially dramatic. Delta was spreading 50% faster than Alpha, which was 50% more contagious than the original strain of SARS-CoV-2, In a completely unmitigated environment—where no one is vaccinated or wearing masks—it's estimated that the average person infected with the original coronavirus strain will infect 2.5 other people, In the same environment, Delta would spread from one person to maybe 3.5 or 4 other people.



Symptoms of Delta variant

There have been reports of symptoms that are different than those associated with the original coronavirus strain, like cough and loss of smell are less common, and headache, sore throat, runny nose, and fever are present based on surveys in the U.K. The classic symptoms remain to be the same in Delta variant patients, according to the data collected on the symptoms app, it was found that symptoms like runny nose, headache, sneezing have become more common, which were not so prevalent during the initial onset of the infection.

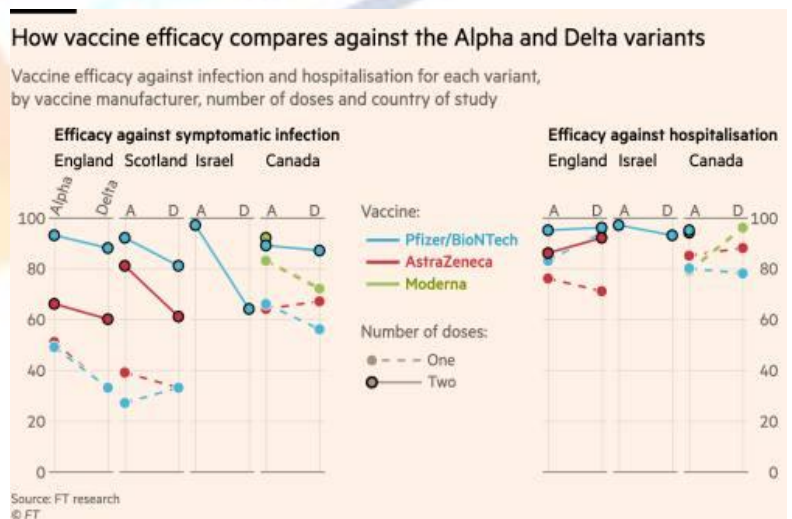
Delta Plus

There are additional questions and concerns about Delta, including Delta Plus—a sub variant of Delta, that has been found in the U.S., the U.K., and other countries. “Delta Plus has one additional mutation to what the Delta variant has. This mutation, called K417N, affects the spike protein that the virus needs to infect cells, and that is the main target for the mRNA and other vaccines. Delta Plus has been reported first in India, but the type of mutation was reported in variants such as Beta that emerged earlier. More data is needed to determine the actual rate of spread and impact of this new variant on disease burden and outcome.

Vaccination

The most important thing you can do to protect yourself from Delta is to get fully vaccinated, At this point, that means if you get a two-dose vaccine like Pfizer or Moderna, for example, you must get both shots and then wait the recommended two-week period for those shots to take full effect. Data so far has shown the vaccines that are authorized or approved in the U.S. still provide strong protection, especially against severe illness, hospitalization, and death, according to the CDC. The CDC also recommends a booster dose of the Pfizer-BioNTech vaccine for people 65 and up, residents of long-term care settings, and people 18 to 64 with underlying medical conditions or whose work may put them at higher risk of exposure to COVID-19. That latter group may include health care workers, teachers, and others. This booster dose is recommended at least six months after receiving the second dose of the primary series. People with certain immunocompromising conditions can get a third dose of the Pfizer-BioNTech or Moderna vaccines so they can reach a level of immunity they were not able to reach after two doses.

Experts believe that the changes in the symptoms could be a result of vaccination drives. There has been a lot of buzz around whether the COVID vaccines will be effective against the Delta or the new emerging variants. Although there are still a lot of uncertainties regarding the same, studies have claimed that certain COVID vaccines can prove effective against the Delta Variant. Bharat Biotech's Covaxin and Serum Institute of India's Covishield and Russia-made vaccine Sputnik V are all said to be effective against the Delta variant. On a global note, Pfizer BioNTech vaccine is also said to reduce the risk of hospitalization, according to a UK study.



Ways to protect yourself and your loved ones

- ✓ Avoid crowded spaces and keep your distance from others.
- ✓ Keep all indoor spaces well ventilated (this can be as simple as opening a window).
- ✓ Wear a mask when in public places where there is community transmission and where physical distancing is not possible.
- ✓ Wash your hands regularly with soap and water or an alcohol-based hand rub.
- ✓ When it's your turn, get vaccinated. WHO-approved COVID-19 vaccines are safe and effective.



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