Centers for Disease Control and Prevention

Variants of the Virus

Updated Aug. 11, 2021

What You Need to Know

- New variants of SARS-CoV-2, the virus that causes COVID-19, are expected to occur.
- CDC is working with state and local public health officials to monitor the spread of all variants.
- The Omicron variant continues to spread throughout communities and can infect people who have been vaccinated or have previously had COVID-19.
- Staying up to date with your COVID-19 vaccines reduces your risk of severe illness, hospitalization, and death from COVID-19.

Variants in the United States

Numerous variants of the virus that causes COVID-19 are being tracked in the United States and globally during this pandemic. CDC is working with public health officials to monitor the spread of all variants and provide an estimate of how common they are in the nation and at the regional level. This data can change over time as more information is available.

VARIANT OF CONCERN

Omicron

Original Lineage: B.1.1.529

Currently Circulating Lineages: BA.2, BA.4 and BA.5

The Omicron variant, like other variants, is made up of a number of lineages and sublineages.

These lineages are often very similar to each other; however, there may be differences between lineages that affect the behavior of the virus. Visit CDC's COVID Data Tracker for the most current data on circulating variants.

Omicron spreads more easily than earlier variants, including the Delta variant.

Anyone with Omicron infection, regardless of vaccination status or whether or not they have symptoms, can spread the virus to others. Data suggest that Omicron can cause reinfection, even in people who have recovered from COVID-19.

Symptoms are similar to previous variants

COVID-19 vaccination status, other health conditions, age, and history of prior infection can affect the presence and severity of symptoms.

Omicron causes less severe illness and death in general, according to data

However, a surge in cases may lead to increases in hospitalizations and deaths.

Vaccines help prevent severe illness, hospitalizations, and death

Breakthrough infections in people who are vaccinated are expected. The emergence of the Omicron variant further emphasizes the importance of vaccination and boosters.

Antiviral treatments are effective

Some, but not all, monoclonal antibody treatments remain effective against Omicron. Public health agencies work with healthcare providers to ensure that effective treatments are used appropriately to treat patients.

Variants Are Expected

Viruses constantly change through mutation and sometimes these mutations result in a new variant of the virus. Some variations allow the virus to spread more easily or make it resistant to treatments or vaccines. As the virus spreads, it may change and may become harder to stop.

Regardless of the variant, a surge in cases can impact healthcare resources
Even if a variant causes less severe disease in general, an increase in the total number of cases could cause an increase in hospitalizations, put more strain on healthcare resources, and potentially lead to more deaths.

We Have the Tools to Fight Variants

The following pages cover more detailed information about specific key prevention actions which can help fight variants.

Vaccines | Masks | Testing | Ventilation

Monitoring Variants

CDC uses viral genomic surveillance to quickly identify and track COVID-19 variants, and acts upon these findings to best protect the public's health. Some variants spread more easily and quickly than others, which may lead to more cases of COVID-19.

Scientists monitor all variants but may classify certain ones as:

- **Variants Being Monitored** – No risk to public health; Circulating at very low levels in the United States
- **Variants of Interest** – Potential impact on spread, severity, testing, treatment, and vaccinations; Evidence it has caused an increase proportion of cases or unique outbreak clusters
- **Variants of Concern** – Evidence of impact on spread, severity, testing, treatment, and vaccination
- **Variants of High Consequence** – Clear evidence of significant impact on spread and severity, and reduction of effectiveness of testing, treatment, and vaccination

In the United States, CDC uses viral genomic surveillance to track COVID-19 variants, to more quickly identify and act upon these findings to best protect the public's health. CDC established multiple ways to connect and share viral genomic sequence data being produced by CDC, public health laboratories, and commercial diagnostic laboratories within publicly accessible databases.

Learn More About Tracking Variants

- Definitions & Classifications
- Tracking & Surveillance
- US & Global Variant Data

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