



Respiratory Viruses

Update on SARS-CoV-2 Variant JN.1 Being Tracked by CDC

December 8, 2023, 11:45 AM EDT

CDC is posting updates on respiratory viruses every week; for the latest information, please visit [CDC Respiratory Virus Updates](#).

What to know about JN.1

- **How variants spread:** The virus that causes COVID-19 is [constantly changing over time](#). Sometimes these changes allow new variants to spread more quickly or effectively. If that occurs, the new variant may become more common relative to other variants that are circulating.
- **How common:** CDC projects that the variant JN.1 comprises an estimated 15–29% of in the United States as of December 8, 2023. More information about these projections, including why JN.1 is appearing on the Nowcast separately for the first time, is available in the section below.
 - CDC projects that JN.1 will continue to increase as a proportion of SARS-CoV-2 genomic sequences. It is currently the fastest-growing variant in the United States.
- **History:** JN.1 is closely related to the variant BA.2.86 that CDC [has been tracking](#) since August.
 - Even though BA.2.86 and JN.1 sound very different because of [the way variants are named](#) [↗](#), there is only a single change between JN.1 and BA.2.86 in the spike protein.
 - JN.1 was [first detected](#) in the United States in September 2023. By the end of October, it made up less than 0.1% of SARS-CoV-2 viruses.
 - Previously, JN.1 was grouped with BA.2.86 on COVID Data Tracker.
- **Impact:** The continued growth of JN.1 suggests that it is either more transmissible or better at evading our immune systems. At this time, **there is no evidence that JN.1 presents an increased risk to public health relative to other currently circulating variants**.
 - There is no indication of increased severity from JN.1 at this time.
 - Updated COVID-19 vaccines are expected to increase protection against JN.1, as they do for other variants.
 - As noted in [previous updates](#), COVID-19 tests and treatments are expected to be effective against JN.1.
 - The rapid growth of JN.1 compared with other variants raises the question of whether this variant might drive an incremental increase in infections.
 - [COVID-19 activity is currently increasing](#) in the United States. We expected this increase because COVID-19 has had a pattern of increasing and peaking in late summer, and then again peaking around the new year.
 - Right now, we do not know to what extent JN.1 may be contributing to these increases or possible increases through the rest of December like those seen in previous years. CDC will closely monitor COVID-19 activity and the spread of JN.1.
- **Symptoms:** It is not currently known whether JN.1 infection produces different symptoms from other variants.
 - In general, symptoms of COVID-19 tend to be similar across variants.
 - The types of symptoms and how severe they are usually depend more on a person's immunity and overall health rather than which variant causes the infection.
- **What's next:**

- COVID-19 activity is likely to increase over the next month. An updated COVID-19 vaccine can help keep you protected against JN.1 and other variants. It's a great time to get that vaccine if you haven't received one this fall.
- Regardless of what [variants happen](#), CDC will continue to track them, working closely with partners around the world to understand how they are spreading and how they respond to vaccines and treatments.

More information for data mavens

- On Dec. 8, 2023, JN.1 is being shown separately for the first time on CDC's [SARS-CoV-2 Nowcast](#).
- In the most recent **weighted estimates**, which are directly based on observed genomic sequencing data weighted by geography, **JN.1 comprised an estimated 3.5% of U.S. sequences**, with a 95% confidence interval (a measure of uncertainty) ranging from 2.4% to 5.0%.
 - These data are from the two-week period ending Nov. 11, 2023. See this page for a more detailed explanation of [weighted estimates](#).
 - Before this period, JN.1 comprised less than 1% of U.S. sequences.
 - **CDC makes Nowcast projections for variants that have been at or above this 1% threshold, which is why JN.1 was not shown separately before.**
 - There are SARS-CoV-2 sequences available for more recent weeks, but using those data can lead to less reliable projections because of differences between which sequences are submitted earlier compared with later. There is an inherent lag in the time it takes to receive specimens for sequencing, do the sequencing, and analyze and report the results.
 - CDC analyses have shown that using more complete sequencing data, even if older, provides a more accurate Nowcast than more recent, partial data.
- Early laboratory data suggests that serum from people who received this year's COVID-19 vaccine block JN.1 viruses from entering cells.
- In CDC's Nowcast, which forecasts the current situation (i.e., "now") based on the older, weighted estimates, **JN.1 is projected to comprise between 15-29% of currently circulating variants** in the United States as of December 8, 2023.
 - Currently, our best estimate indicates about 21% of circulating viruses may be JN.1.
 - However, early projections tend to be less reliable, since they depend on examining growth trends of a smaller number of sequences. Laboratory-based testing volume for SARS-CoV-2 has decreased substantially over time, and certain geographic regions may be overrepresented. For this reason, this projection may be revised as more data become available in future weeks.

Last Reviewed: December 8, 2023