



# Reinfections and COVID-19

Updated Sept. 9, 2022

Reinfection with the virus that causes [COVID-19](#) means a person was infected, recovered, and then later became infected again. After recovering from COVID-19, most individuals will have [some protection from repeat infections](#). However, reinfections do occur after COVID-19. We are still learning more about these reinfections. Ongoing studies of COVID-19 are helping us understand:

- How often reinfections occur
- Who is at higher risk of reinfection
- How soon reinfections take place after a previous infection
- The severity (how serious the infection is) of reinfections compared with initial (the first) infections
- The risk of transmission to others after reinfection



## About Variants

Viruses are constantly changing, including the virus that causes COVID-19. These changes can lead to the [emergence of variants](#) (new strains of the virus) that can increase the risk of reinfection.

## What CDC is doing

CDC continues to work to better understand reinfections with COVID-19 to inform public health action. CDC is using a range of data sources to assess how often reinfections occur, who is most at risk for reinfection, and the risk of reinfection when there is community spread of Omicron or other virus [variants](#). CDC has worked closely with public health jurisdictions and the [Council of State and Territorial Epidemiologists](#) [↗](#) (CSTE) to help states to count repeat infections in the same individuals over time.

An updated national surveillance [case definition](#) of COVID-19 was introduced on September 1, 2021, and includes criteria for counting new infections (reinfections) after previous probable or confirmed infections. CDC is working with multiple public health jurisdictions that are identifying reinfections to collect and analyze the data. CDC is publishing several analyses that use datasets from various sources, including cohort studies (which follow the same people over time):

- [Effectiveness of COVID-19 mRNA Vaccination in Preventing COVID-19–Associated Hospitalization Among Adults with Previous SARS-CoV-2 Infection — United States, June 2021–February 2022](#)
- [COVID-19 Cases and Hospitalizations by COVID-19 Vaccination Status and Previous COVID-19 Diagnosis — California and New York, May–November 2021](#)
- [Laboratory-Confirmed COVID-19 Among Adults Hospitalized with COVID-19–Like Illness with Infection-Induced or mRNA Vaccine-Induced SARS-CoV-2 Immunity — Nine States, January–September 2021](#)
- [Reinfection with SARS-CoV-2 among previously infected healthcare personnel and first responders](#) [↗](#)
- [Suspected SARS-CoV-2 Reinfections: Incidence, Predictors, and Healthcare Use among Patients at 238 U.S. Healthcare Facilities, June 1, 2020– February 28, 2021.](#) [↗](#)
- [Duration of Viral Nucleic Acid Shedding and Early Reinfection With Severe Respiratory Syndrome Coronavirus 2 in Healthcare Workers and First Responders](#) [↗](#)
- [Reduced Risk of Reinfection with SARS-CoV-2 After COVID-19 Vaccination — Kentucky, May–June 2021](#)

- [Reduced Risk of Reinfection with SARS-CoV-2 After COVID-19 Vaccination — Kentucky, May–June 2021](#)
- [Science Brief: SARS-CoV-2 Infection-induced and Vaccine-induced Immunity](#)

## More Information



[Antibodies and COVID-19](#)

[COVID-19 Testing](#)

[Isolation](#)

[What to Do If Exposed](#)

## More Information for Health Professionals

[Update to the standardized surveillance case definition and national notification for 2019 novel coronavirus disease \(COVID-19\)](#)  

[Interim Guidelines for COVID-19 Antibody Testing](#)

[Science Brief: SARS-CoV-2 Infection-induced and Vaccine-induced Immunity](#)

[Interim Clinical Considerations for Use of COVID-19 Vaccines](#)

Last Updated Sept. 9, 2022