



COVID-19

Ending Isolation and Precautions for People with COVID-19: Interim Guidance

Updated Jan. 14, 2022

This page is for healthcare professionals caring for people in the community setting under isolation with laboratory-confirmed COVID-19. See [Quarantine and Isolation](#) for more information for the general population in the community.

These recommendations do not apply to [healthcare personnel](#) and do not supersede state, local, tribal, or territorial laws, rules, and regulations. For healthcare settings, please see [Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2](#) and [Interim Infection Prevention and Control Recommendations for Healthcare Personnel](#). For more details, including details on certain non-healthcare settings, please review [Setting-Specific Guidance](#).

Summary of Recent Changes

Updates as of January 14, 2022

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- Updated guidance to reflect new recommendations for isolation for people with COVID-19.
- Added new recommendations for duration of isolation for people with COVID-19 who are moderately or severely immunocompromised.

[View Previous Updates](#)

Key Points for Healthcare Professionals

- **Children and adults with mild, symptomatic COVID-19:** Isolation can end at least 5 days after symptom onset and after fever ends for 24 hours (without the use of fever-reducing medication) and symptoms are improving, if these people can continue to properly wear a well-fitted mask around others for 5 more days after the 5-day isolation period. Day 0 is the first day of symptoms.
- **People who are infected but asymptomatic (never develop symptoms):** Isolation can end at least 5 days after the first positive test (with day 0 being the date their specimen was collected for the positive test), if these people can continue to wear a properly well-fitted mask around others for 5 more days after the 5-day isolation period. However, if symptoms develop after a positive test, their 5-day isolation period should start over (day 0 changes to the first day of symptoms).
- **People who have moderate COVID-19 illness:** Isolate for 10 days.
- **People who are severely ill (i.e., requiring hospitalization, intensive care, or ventilation support):** Extending the duration of isolation and precautions to at least 10 days and up to 20 days after symptom onset, and after fever ends (without the use of fever-reducing medication) and symptoms are improving, may be warranted.

- People who are **moderately or severely immunocompromised** might have a longer infectious period: Extend isolation to 20 or more days (day 0 is the first day of symptoms or a positive viral test). Use a test-based strategy and consult with an infectious disease specialist to determine the appropriate duration of isolation and precautions.
- **Recovered patients:** Patients who have recovered from COVID-19 can continue to have detectable SARS-CoV-2 RNA in upper respiratory specimens for up to 3 months after illness onset. However, replication-competent virus has not been reliably recovered from such patients, and they are not likely infectious.

To prevent SARS-CoV-2 transmission, see CDC's recommended [prevention strategies](#). For details on when to get tested for COVID-19, see [Test for Current Infection](#).

Recommendation for Ending Isolation

For people who are **mildly ill** with a **laboratory-confirmed SARS-CoV-2 infection** and not moderately or severely immunocompromised:

- Isolation can be discontinued at least 5 days after symptom onset (day 1 through day 5 after symptom onset, with day 0 being the first day of symptoms), **and** after resolution of fever for at least 24 hours (without the use of fever-reducing medications) **and** with improvement of other symptoms.
- Loss of taste and smell may persist for weeks or months after recovery and need not delay the end of isolation.
- These people should continue to properly wear a [well-fitted mask](#) around others at home and in public for 5 additional days (day 6 through day 10 after symptom onset) after the 5-day isolation period.
- People who [cannot properly wear a mask](#), including children < 2 years of age and people of any age with certain disabilities, should isolate for 10 days. In certain high-risk congregate settings that have high risk of secondary transmission and where it is not feasible to cohort people, CDC recommends a 10-day isolation period for residents.

More details: [What We Know About Quarantine and Isolation](#)

For people who test positive, are asymptomatic (never develop [symptoms](#)) and not moderately or severely immunocompromised:

- Isolation can be discontinued at least 5 days **after the first positive viral test** (day 0 through day 5, with day 0 being the date their specimen was collected for the positive test).
- These people should continue to properly wear a [well-fitted mask](#) around others at home and in public for 5 additional days (day 6 through day 10) after the 5-day isolation period. Day 0 is the date their specimen was collected for the positive test and day 1 is the first full day after the specimen was collected for the positive test.
- If a person develops [symptoms](#) after testing positive, their 5-day isolation period should start over (day 0 changes to the first day of symptoms).
- People who [cannot properly wear a mask](#), including children < 2 years of age and people of any age with certain disabilities, should isolate for 10 days. In certain high-risk congregate settings that have high risk of secondary transmission and where it is not feasible to cohort people, CDC recommends a 10-day isolation period for residents.

More details: [What We Know About Quarantine and Isolation](#)

For people who are **moderately ill** and not moderately or severely immunocompromised:

- Isolation and precautions can be discontinued 10 days after symptom onset (day 1 through day 10, with day 0 being the first day of symptoms).

For people who are **severely ill** and not moderately or severely immunocompromised:

- A test-based strategy can be considered in consultation with infectious disease experts.

- Some people with severe illness (e.g., requiring hospitalization, intensive care, or ventilation support) may produce replication-competent virus beyond 10 days that may warrant extending the duration of isolation and precautions for up to 20 days after symptom onset (with day 0 being the first day of symptoms) **and** after resolution of fever for at least 24 hours (without the use of fever-reducing medications) **and** improvement of other symptoms.

For people who are [moderately or severely immunocompromised](#) (regardless of COVID-19 symptoms or severity):

- Moderately or severely immunocompromised patients may produce replication-competent virus beyond 20 days. For these people, CDC recommends an isolation period of at least 20 days, and ending isolation in conjunction with a test-based strategy and consultation with an infectious disease specialist to determine the appropriate duration of isolation and precautions.
- The criteria for the test-based strategy are:
 - Results are negative from at least two consecutive respiratory specimens collected ≥ 24 hours apart (total of two negative specimens) tested using an antigen test or nucleic acid amplification test.
 - Also, if a moderately or severely immunocompromised patient with COVID-19 was symptomatic, there should be resolution of fever for at least 24 hours (without the use of fever-reducing medication) and improvement of other symptoms. Loss of taste and smell may persist for weeks or months after recovery and need not delay the end of isolation.
- Re-testing for SARS-CoV-2 infection is suggested if symptoms worsen or return after ending isolation and precautions based on this test-based strategy for moderately or severely immunocompromised people.⁽¹⁾
- If a patient has persistently positive nucleic acid amplification tests beyond 30 days, additional testing could include molecular studies (e.g., [genomic sequencing](#)) or viral culture, in consultation with an infectious disease specialist.
- For the purposes of this guidance, moderate to severely immunocompromising conditions include, but might not be limited to, those defined in the interim clinical considerations for people with [moderate to severe immunocompromise due to a medical condition or receipt of immunosuppressive medications or treatments](#).
 - Other factors, such as end-stage renal disease, likely pose a lower degree of immunocompromise, and there might not be a need to follow the recommendations for those with moderate to severe immunocompromise.
 - Ultimately, the degree of immunocompromise for the patient is determined by the treating provider, and preventive actions should be tailored to each patient and situation.

More details: [COVID-19 Quarantine and Isolation](#) and [What We Know About Quarantine and Isolation](#)

Assessment for Duration of Isolation

Available data suggest that **patients with mild-to-moderate COVID-19** remain infectious no longer than 10 days after symptom onset. More information is available at [What We Know About Quarantine and Isolation](#).

Most **patients with more severe-to-critical illness** likely remain infectious no longer than 20 days after symptom onset.

There have been numerous reports of moderately or severely immunocompromised people shedding replication-competent virus beyond 20 days.^(examples: 1-33) A higher SARS-CoV-2 viral load and longer duration of infection among moderately or severely immunocompromised people may favor emergence of SARS-CoV-2 variants.^(5,14,19,30,34,35) [Strategies that reduce SARS-CoV-2 transmission](#) to and from people at increased risk of long-term infections could slow the emergence and spread of new variants.^(34,35)

Patients who have recovered from COVID-19 can continue to have detectable SARS-CoV-2 RNA in upper respiratory specimens for up to 3 months after illness onset in concentrations considerably lower than during illness; however, replication-competent virus has not been reliably recovered from such patients, and they are not likely infectious. The circumstances that result in persistently detectable SARS-CoV-2 RNA have yet to be determined. Studies have not found evidence that clinically recovered adults with persistence of viral RNA have transmitted SARS-CoV-2 to others. These findings strengthen the justification for relying on a symptom-based rather than test-based strategy for ending isolation of most patients.

Key Findings from Transmission Literature

1. **Concentrations of SARS-CoV-2 RNA** in upper respiratory specimens decline after onset of symptoms.^(36-39, 40-43) Infectiousness peaks around one day before symptom onset and declines within a week of symptom onset, with an average period of infectiousness and risk of transmission between 2-3 days before and 8 days after symptom onset.^(42,44)
2. Several studies have found **similar concentrations of SARS-CoV-2 RNA** in upper respiratory specimens from **children and adults**.⁽⁴⁵⁻⁵²⁾
 - To date, most studies of SARS-CoV-2 transmission have found that children and adults have a similar risk of transmitting SARS-CoV-2 to others.
 - One study reported that children were more likely to transmit SARS-CoV-2 than adults >60 years old.⁽⁵³⁾
3. Certain **SARS-CoV-2 variants of concern** are more transmissible than the wild type virus or other variants, resulting in higher rates of infection. For example, people infected with the **Delta variant**, including **people who are up to date with their vaccines** with symptomatic breakthrough infections, can transmit infection to others. However, like other variants, the amount of virus produced by Delta breakthrough infections in **people who are up to date with their vaccines** decreases faster than in people who are not up to date with their vaccines.
4. The likelihood of **recovering replication-competent (infectious) virus** is very low after 10 days from onset of symptoms, except in people who have severe COVID-19 or who are moderately or severely immunocompromised.
 - **For patients with mild COVID-19 who are not moderately or severely immunocompromised**, replication-competent virus has not been recovered after 10 days following symptom onset for most patients.^(38,39,54-58) With the recommended shorter isolation period for asymptomatic and mildly ill people with COVID-19, it is critical that people continue to properly wear **well-fitted masks** and take **additional precautions** for 5 days after leaving isolation.^(59,60) Modeling data suggest that close to one-third of people remain infectious after day 5 and can potentially transmit the virus.⁽⁶¹⁾ Outliers exist; in one case report, an adult with mild illness provided specimens that yielded replication-competent virus for up to 18 days after symptom onset.⁽⁶²⁾
 - Recovery of replication-competent virus between 10 and 20 days after symptom onset has been reported in some **adults with severe COVID-19**; some of these people were **immunocompromised**.⁽³⁷⁾ However, in this series of patients, it was estimated that 88% and 95% of their specimens no longer yielded replication-competent virus after 10 and 15 days, respectively, following symptom onset.
 - Detection of sub-genomic SARS-CoV-2 RNA or recovery of replication-competent virus has been reported in **moderately or severely immunocompromised patients** beyond 20 days, and as long as >140 days after a positive SARS-CoV-2 test result.^(examples: 1-33) Immunocompromising conditions that have been associated with shedding of replication-competent virus beyond 20 days include active treatment for solid tumor and hematologic malignancies, solid organ transplant and taking immunosuppressive therapy, receipt of CAR-T-cell therapy or hematopoietic cell transplant (HCT) (within 2 years of transplantation or taking immunosuppression therapy), moderate or severe primary immunodeficiency, and active treatment with high-dose corticosteroids (i.e., ≥ 20 mg prednisone or equivalent per day when administered for ≥ 2 weeks), alkylating agents, antimetabolites, transplant-related immunosuppressive drugs, cancer chemotherapeutic agents classified as severely immunosuppressive, and other biologic agents that are immunosuppressive or immunomodulatory.^(examples: 1-33)
 - **Prolonged detection** of replication-competent virus may be associated with other factors. For example, a 13-year-old immunocompetent male was hospitalized for injuries received in a motor vehicle crash. He required intubation, developed pulmonary infiltrates, and tested positive for SARS-CoV-2. Viral cultures of upper and lower respiratory tract specimens were positive for SARS-CoV-2 on days 47 and 54 of his hospitalization.⁽⁶³⁾
5. The **risk of SARS-CoV-2 transmission** to others varies based upon several factors including time after symptom onset, **virus variant**, virus levels in the upper respiratory tract, and disease status (asymptomatic, pre-symptomatic, or symptomatic).
 - In a large contact tracing study, no contacts developed SARS-CoV-2 infection if their exposure to a COVID-19 case patient occurred 6 days or more after the case patient's symptom onset.⁽⁶⁴⁾
 - One study reported that 59% of SARS-CoV-2 transmission originated from index cases that were asymptomatic or pre-symptomatic.⁽⁶⁵⁾
 - A meta-analysis found that the secondary attack rate for asymptomatic (never develop symptoms) index cases was 1.9%, but was 9.3% for pre-symptomatic and 13.6% for symptomatic index cases.⁽⁶⁶⁾ Therefore, people with SARS-CoV-2 infection without symptoms pose a transmission risk and should isolate based upon CDC's **quarantine and isolation recommendations**.

6. People who have recovered from COVID-19 may have **prolonged detection of SARS-CoV-2 RNA**.⁽⁶⁷⁾ However, prolonged detection of viral RNA does not necessarily mean that such people are a transmission risk.⁽⁶⁸⁾ Studies of patients who were hospitalized and recovered indicate that SARS-CoV-2 RNA can be detected in upper respiratory tract specimens for up to 3 months (12 weeks) after symptom onset.^(58,62,69)
 - Investigation of 285 “persistently SARS-CoV-2 RNA positive” adults, which included 126 adults who had developed recurrent symptoms, found no secondary infections among 790 contacts. Efforts to isolate replication-competent virus were attempted for 108 of these 285 case patients, and SARS-CoV-2 was not recovered in viral culture from any of the 108 specimens.⁽⁵⁸⁾
7. The **probability of SARS-CoV-2 reinfection** may increase with time after recovery, consistent with other human coronaviruses, because of waning immunity and the possibility of exposure to viral variants.⁽⁷⁰⁻⁷⁸⁾ The risk of reinfection also depends on host susceptibility, vaccination status, and the likelihood of re-exposure to infectious cases of COVID-19. Continued widespread transmission makes it more likely that reinfections will occur.
8. **Loss of taste and smell** may continue for weeks or months after recovery.⁽⁷⁹⁾ The presence of these symptoms does not mean that the isolation period must be extended.

Limitations of Current Evidence

- Studies referenced in this document may have differences compared to the current epidemiology of COVID-19 in the United States. Specifically, many of these references involve non-US populations, homogenous populations, virus transmission prior to the availability of vaccination for COVID-19, and infection prior to the known circulation of SARS-CoV-2 current **variants of concern**, such as the Delta or Omicron variant. More studies are needed to fully understand virus transmission related to the Delta variant, Omicron variant, and other SARS-CoV-2 variants among people who are up to date with their vaccines.
- Studies have used viral culture to attempt to grow SARS-CoV-2 from clinical samples from patients who tested positive for SARS-CoV-2 to determine infectiousness. Because viral culture must be done in very specialized laboratories, these studies are more limited in number compared to studies using other test methods to detect SARS-CoV-2 infection.
- Many studies that assessed the duration of SARS-CoV-2 infectiousness have been conducted in adults. More studies are needed, especially in children with SARS-CoV-2 infection.
- More data are needed to understand the frequency and duration of infectious SARS-CoV-2 shedding among the spectrum of mild to severely immunocompromised people, including both asymptomatic and symptomatic people.
- More data are needed to fully understand the risk of recovery of replication-competent virus in people with severe COVID-19. There was variation in how studies defined severe illness with COVID-19. Some studies defined severe disease as cases requiring hospitalization or mechanical ventilation while other researchers used the **definition of severity** [↗](#) from the COVID-19 Treatment Guidelines published by National Institutes of Health (NIH).

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Previous Updates

Updates from Previous Content: Ending Isolation and Precautions Webpage [↗](#)

As of September 14, 2021

- Combined guidance on ending isolation and precautions for adults with COVID-19 and ending home isolation webpages.
- Included evidence for expanding recommendations to include children.
- Edited to improve readability

As of February 18, 2021

- Some severely immunocompromised persons with COVID-19 may remain infectious beyond 20 days after their symptoms began and require additional SARS-CoV-2 testing and consultation with infectious diseases specialists and infection control experts.

As of February 13, 2021

- Added new evidence and recommendations for duration of isolation and precautions for severely immunocompromised adults.
- Added information on recent reports in adults of reinfection with SARS-CoV-2 variant viruses.

Updates from Previous Ending Home Isolation Webpage Content

As of February 18, 2021

- Some severely immunocompromised persons with COVID-19 may remain infectious beyond 20 days after their symptoms began and require additional SARS-CoV-2 testing and consultation with infectious diseases specialists and infection control experts.

Updates as of July 20, 2020

- A test-based strategy is no longer recommended to determine when to discontinue home isolation, except in certain circumstances.
- Symptom-based criteria were modified as follows:
 - Changed from “at least 72 hours” to “at least 24 hours” have passed *since last* fever without the use of fever-reducing medications.
 - Changed from “improvement in respiratory symptoms” to “improvement in symptoms” to address expanding list of symptoms associated with COVID-19.
- For patients with severe illness, duration of isolation for up to 20 days after symptom onset may be warranted. Consider consultation with infection control experts.
- For persons who never develop symptoms, isolation and other precautions can be discontinued 10 days after the date of their first positive RT-PCR test for SARS-CoV-2 RNA.

Updates as of July 17, 2020

- Symptom-based criteria were modified as follows:
 - Changed from “at least 72 hours” to “at least 24 hours” have passed *since last* fever without the use of fever-reducing medications
 - Changed from “improvement in respiratory symptoms” to “improvement in symptoms” to address expanding list of symptoms associated with COVID-19

Updates as of May 29, 2020

Added information around the management of persons who may have prolonged viral shedding after recovery.

Updates as of May 3, 2020

- Changed the name of the ‘non-test-based strategy’ to the ‘symptom-based strategy’ for those with symptoms. Added a ‘time-based strategy’ and named the ‘test-based strategy’ for asymptomatic persons with laboratory-confirmed COVID-19. Extended the home isolation period from 7 to 10 days *since symptoms first appeared* for the symptom-based strategy in persons with COVID-19 who have symptoms and from 7 to 10 days after the date of their first positive test for the time-based strategy in asymptomatic persons with laboratory-confirmed COVID-19. This update was made based on evidence suggesting a longer duration of viral shedding and will be revised as additional evidence becomes available. This time period will capture a greater proportion of contagious patients; however, it will not capture everyone.
- Removed specifying use of nasopharyngeal swab collection for the test-based strategy and linked to the [Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for Coronavirus Disease 2019 \(COVID-19\)](#), so that the most current specimen collection strategies are recommended.

Updates as of April 4, 2020

- Revised title to include isolation in all settings other than health settings, not just home.

Last Updated Jan. 14, 2022