



COVID-19 (coronavirus) in babies and children

By Mayo Clinic Staff

Children of all ages can become ill with coronavirus disease 2019 (COVID-19). But most kids who are infected typically don't become as sick as adults and some might not show any symptoms at all. Know the symptoms of COVID-19 in babies and children, why children might be affected differently by COVID-19 and what you can do to prevent the spread of the virus.

While all children are capable of getting the virus that causes COVID-19, they don't become sick as often as adults. Children also rarely experience severe illness with COVID-19. Despite many large outbreaks around the world, very few children have died.

According to the U.S. Centers for Disease Control and Prevention (CDC), among nearly 150,000 cases of COVID-19 in the U.S. between Feb. 12 and April 2, only about 2,500, or 1.7%, were in children. This is similar to what has been reported in other countries, such as China and Italy, that have had large outbreaks. Hospitalization rates for children have been much lower than for adults.

However, people of any age with certain underlying conditions, such as type 2 diabetes, are at higher risk of serious illness with COVID-19. Additionally, children who have congenital heart disease, genetic conditions or conditions affecting the nervous system or metabolism are also at higher risk of serious illness with COVID-19.

The answer isn't clear yet. Some experts suggest that children might not be as severely affected by COVID-19 because there are other coronaviruses that spread in the community and cause diseases such as the common cold. Since children often get colds, they might have antibodies that provide them with some protection against COVID-19. It's also possible that children's immune systems interact with the virus differently than do adults' immune systems. Some adults are getting sick because their immune systems seem to overreact to the virus, causing more damage to their bodies. This may be less likely to happen in children.

Although rare, children under age 1 (infants) are at higher risk of severe illness with COVID-19. This is likely due to their immature immune systems and smaller airways, which make

them more likely to develop breathing issues with respiratory virus infections.

A study of more than 2,100 children with suspected or confirmed COVID-19 in China between late December and early February showed that just under 11% of infants had severe or critical illness. In comparison, rates of severe or critical illness were about 7% for children ages 1 to 5, 4% for those 6 to 10, 4% for those 11 to 15 and 3% for those 16 and older.

Newborns can become infected with the virus that causes COVID-19 during childbirth or by exposure to sick caregivers after delivery. The American Academy of Pediatrics recommends special care for newborns born to women who have confirmed or suspected COVID-19. This might include temporarily separating the mother and the newborn to decrease the risk of infecting the baby, monitoring the baby for signs of infection, and, if supplies are available, testing the newborn for COVID-19.

Infants who have COVID-19 or who can't be tested due to a lack of availability and have no symptoms might be discharged from the hospital, depending on the circumstances. It's recommended that the baby's caregivers wear face masks and wash their hands to protect themselves. Frequent follow-up with the baby's health care provider is needed — by phone, virtual visits or in-office visits — for 14 days.

Infants who test negative for COVID-19 can be sent home from the hospital. Until the mother recovers, it's recommended that she minimize close contact with the baby and use a face mask and wash her hands when she is near the baby.

While children and adults experience similar symptoms of COVID-19, children's symptoms tend to be mild and cold-like. Most children recover within one to two weeks. Their symptoms can include:

- Fever
- Runny nose
- Cough
- Fatigue
- Muscle aches
- Vomiting
- Diarrhea

If your child has symptoms of COVID-19 and you think he or she might have COVID-19, call your child's health care provider. Keep your child at home and away from others as much as possible, except to get medical care. If possible, have your child use a separate bedroom and bathroom from family members. Follow recommendations from the CDC, the World Health Organization (WHO), and your government regarding quarantine and isolation measures as appropriate.

Factors used to decide whether to test your child for COVID-19 may differ depending on where you live. In the U.S., the doctor will determine whether to conduct tests for COVID-19

based on your child's signs and symptoms, as well as whether your child has had close contact with someone diagnosed with COVID-19 or traveled to or lived in any areas with ongoing community spread of COVID-19 in the past 14 days. The doctor may also consider testing if your child is at higher risk of serious illness.

To test for COVID-19, a health care provider uses a long swab to take a sample from the back of the nose. The sample is then sent to a lab for testing. If your child is coughing up phlegm (sputum), that may be sent for testing.

But children also might have COVID-19 and not show symptoms. A study of 171 children with COVID-19 in China between late January and February showed that 27 children, or nearly 16%, had no symptoms of infection. In addition, a small study of 36 children with COVID-19 in China between January and March found that nearly half of the children showed no symptoms. Some recent studies have suggested that the virus that causes COVID-19 might be spread by children and adults who aren't showing symptoms. This is why it's crucial to follow recommendations for preventing the spread of COVID-19.

Multisystem inflammatory syndrome in children (MIS-C) is a serious condition in which some parts of the body — such as the heart, blood vessels, kidneys, digestive system, brain, skin or eyes — become inflamed. Inflammation typically includes swelling, often with redness and pain. Evidence indicates that many of these children were infected with the COVID-19 virus in the past, as shown by positive antibody test results.

Possible signs and symptoms of MIS-C include:

- Fever that lasts 24 hours or longer
- Vomiting
- Diarrhea
- Pain in the stomach
- Skin rash
- Red eyes
- Redness or swelling of the lips and tongue
- Feeling unusually tired
- Redness or swelling of the hands or feet

Emergency warning signs of MIS-C include:

- Inability to wake up or stay awake
- Difficulty breathing
- Chest pain or pressure that doesn't go away
- New confusion
- Bluish lips or face
- Severe stomach pain

If your child shows any emergency warning signs or is severely sick with other signs and symptoms, take your child to the nearest emergency department or call 911 or your local emergency number. If your child isn't severely ill but shows other signs or symptoms of MIS-C, contact your child's doctor right away for advice.

There are many steps you can take to prevent your child from getting the virus that causes COVID-19 and, if he or she does become sick, to avoid spreading it to others. The CDC and WHO recommend that you and your family:

- **Keep your hands clean.** Wash your hands often with soap and water for at least 20 seconds. If soap and water aren't available, use a hand sanitizer that contains at least 60% alcohol. Cover your mouth and nose with your elbow or a tissue when you cough or sneeze. Throw away the used tissue and wash your hands. Avoid touching your eyes, nose and mouth. Have your kids wash their hands immediately after returning home, as well as after going to the bathroom and before eating or preparing food. Show young children how to create tiny soap bubbles by rubbing their hands together and how to get the soap between fingers and all the way to the ends of their fingers, including their thumbs and the backs of their hands. Encourage your kids to sing the entire "Happy Birthday" song twice (about 20 seconds) so they spend the time they need to get their hands clean.
- **Practice social distancing.** Avoid close contact (within about 6 feet, or 2 meters) with anyone who is sick or has symptoms. Minimize trips outside your house. When you do go out, leave your children at home — if possible. Since people without symptoms can spread the virus, don't allow your child to have in-person playdates with children from other households — even if they are all feeling well. If your child plays outside, make sure he or she stays 6 feet away from people outside of your household. You can describe this distance to your child as about the length of a door or an adult's bicycle. Don't allow your child to play games or sports that involve shared equipment, such as a basketball, or that can't accommodate physical distancing. Postpone your child's in-person visits with older adults. Encourage your child to keep in touch with friends and loved ones through phone calls or video chats. Consider organizing virtual family meals, game nights or playdates to keep your child engaged.
- **Clean and disinfect your home.** Focus on cleaning surfaces every day in common areas that are frequently touched, such as tables, doorknobs, hard-backed chairs, light switches, remotes, electronics, handles, desks, toilets and sinks. Also, clean areas that easily get dirty, such as a baby's changing table, and surfaces that your child often touches, such as his or her bed frame, craft table, toy chest and toys. Use soap and water to clean toys that your child puts in his or her mouth. Be sure to rinse off the soap and dry the toys. Wash your child's bedding and washable plush toys, as needed, in the warmest possible setting. Dry items completely. Wash your hands after handling your child's belongings. If you're caring for a baby with COVID-19, wash your hands after diaper changes or handling the baby's bedding, toys or bottles.
- **Wear cloth face masks.** The CDC recommends wearing cloth face coverings in public places, such as the grocery store, where it's difficult to avoid close contact with others. It's

especially suggested in areas with ongoing community spread. This advice is based on data showing that people with COVID-19 can transmit the virus before realizing that they have it. If your child is age 2 or older, have him or her wear a cloth face mask when out in the community to prevent the spread of COVID-19 to others. Don't place a face mask on a child younger than age 2, a child who has any breathing problems, or a child who has a condition that would prevent him or her from being able to remove the mask without help.

In addition, keep up with your child's well visits and vaccines. This is especially important for infants and young children under age 2. Many health care providers in communities affected by COVID-19 are using strategies to separate well visits from sick visits by seeing sick children in separate areas of their offices or at different locations. If your child is due for a well visit, talk to your child's doctor about safety steps being taken. Don't let fear of getting the virus that causes COVID-19 prevent your child from getting his or her vaccines.

Following guidelines to prevent the spread of the COVID-19 virus can be particularly difficult for kids. Stay patient. Be a good role model and your child will be more likely to follow your lead.

Show References

1. Coronavirus disease 2019 (COVID-19): Caring for children. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/children.html>. Accessed April 8, 2020.
2. Puopolo K, et al. Initial guidance: Management of infants born to mothers with COVID-19. American Academy of Pediatrics. <https://www.aappublications.org/news/2020/04/02/infantcovidguidance040220?cct=2287>. Accessed April 4, 2020.
3. Hong H, et al. Clinical characteristics of novel coronavirus disease 2019 (COVID-19) in newborns, infants and children. *Pediatrics & Neonatology*. 2020; doi: 10.1016/j.pedneo.2020.03.001.
4. Lee P, et al. Are children less susceptible to COVID-19? *Journal of Microbiology, Immunology and Infection*. 2020; doi:10.1016/j.jmii.2020.02.011.
5. Dong Y, et al. Epidemiological characteristics of 2143 pediatric patients with 2019 coronavirus disease in China. *Pediatrics*. 2020; doi:10.1542/peds.2020-0702.
6. Coronavirus disease 2019 (COVID-19): How to protect yourself & others. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>. Accessed April 9, 2020.
7. Qiu H, et al. Clinical and epidemiological features of 36 children with coronavirus disease 2019 (COVID-19) in Zhejiang, China: An observational cohort study. *The Lancet*. 2020; doi: 10.1016/S1473-3099(20)30198-5.
8. Coronavirus disease 2019 in children — United States, February 12–April 2, 2020. *Morbidity and Mortality Weekly Report*. 2020; doi.org/10.15585/mmwr.mm6914e4.
9. Coronavirus disease 2019 (COVID-19): Groups at higher risk for severe illness. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/groups-at-higher-risk.html>. Accessed April 8, 2020.
10. Coronavirus disease 2019 (COVID-19): What to do if you are sick. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html>. Accessed April 13, 2020.

2020.

11. Coronavirus disease 2019 (COVID-19): Talking with children about coronavirus disease 2019. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/talking-with-children.html>. Accessed April 13, 2020.
12. Coronavirus disease 2019 (COVID-19): How COVID-19 spreads. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html>. Accessed April 13, 2020.
13. Lu X, et al. SARS-CoV-2 infection in children. *New England Journal of Medicine*. 2020; doi: 10.1056/NEJMc2005073.
14. Yung CF, et al. Environment and personal protective equipment tests for SARS-CoV-2 in the isolation room of an infant with infection. *Annals of Internal Medicine*. 2020; doi:10.7326/M20-0942.
15. Coronavirus disease 2019 (COVID-19): Evaluating and testing persons for coronavirus disease 2019 (COVID-19). U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html>. Accessed April 13, 2020.
16. Rajapakse NS (expert opinion). Mayo Clinic. April 14, 2020.
17. Guidance on providing pediatric ambulatory services via telehealth during COVID-19. American Academy of Pediatrics. <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/guidance-on-providing-pediatric-ambulatory-services-via-telehealth-during-covid-19/>. Accessed April 24, 2020.
18. Information for pediatrics healthcare providers. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/pediatric-hcp.html>. Accessed April 24, 2020.
19. For parents: Multisystem inflammatory syndrome in children (MIS-C) associated with COVID-19. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/children/mis-c.html>. Accessed June 5, 2020.
20. Coronavirus disease 2019 (COVID-19): People of any age with underlying medical conditions. U.S. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>. Accessed June 30, 2020.
21. Posfay-Barbe KM, et al. COVID-19 in children and the dynamics of infection in families. *Pediatrics*. 2020; doi: 10.1542/peds.2020-1576.

July 21, 2020

Original article: <https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/coronavirus-in-babies-and-children/art-20484405>

Any use of this site constitutes your agreement to the Terms and Conditions and Privacy Policy linked below.

[Terms and Conditions](#)

[Privacy Policy](#)

[Notice of Privacy Practices](#)

[Notice of Nondiscrimination](#)

[Manage Cookies](#)

Mayo Clinic is a nonprofit organization and proceeds from Web advertising help support our mission. Mayo Clinic does not endorse any of the third party products and services advertised.

[Advertising and sponsorship policy](#)

[Advertising and sponsorship opportunities](#)

A single copy of these materials may be reprinted for noncommercial personal use only. "Mayo," "Mayo Clinic," "MayoClinic.org," "Mayo Clinic Healthy Living," and the triple-shield Mayo Clinic logo are trademarks of Mayo Foundation for Medical Education and Research.

© 1998-2020 Mayo Foundation for Medical Education and Research (MFMER). All rights reserved.