

# Health Advisory: Increase in Human Parvovirus B19

Minnesota Department of Health, Friday, Aug 16 10:00 CDT 2024

## Action Steps

### ***Local and tribal health department:***

- Forward to hospitals, clinics, urgent care centers, convenience clinics and emergency departments in your jurisdiction.
- Promote measures to prevent illness in the community, such as staying home when ill and hand hygiene, share information about complications of parvovirus B19 with people at high risk of severe disease, and consider additional measures for these patients to avoid exposure such as wearing a mask in public.
- Raise awareness of parvovirus B19 activity among daycare and school providers, including information about who may be at higher risk of severe parvovirus B19 disease and when children and staff can return to school following an infection.

### ***Hospitals, clinics and other facilities:***

- Forward to infection preventionists, obstetric providers and maternal fetal medicine specialists, primary care providers, hospitalists, infectious disease providers, hematology/oncology providers, transplant providers, and emergency medicine providers.
- Use standard and droplet infection precautions for infectious patients with parvovirus B-19 (e.g., hospitalized immunocompromised patients with chronic infection and anemia, hospitalized patients with aplastic or erythrocytic crisis). Please see [CDC Infection Control Appendix A \(https://www.cdc.gov/infection-control/hcp/isolation-precautions/appendix-a-type-duration.html\)](https://www.cdc.gov/infection-control/hcp/isolation-precautions/appendix-a-type-duration.html) for specific clinical situations and consult with infection prevention protocols. Most immunocompetent patients who have uncomplicated parvovirus infection are no longer infectious once they experience onset of rash or joint symptoms.
- Report cases with severe outcomes from Parvovirus B19 such as severe fetal anemia requiring transfusion, fetal hydrops, stillbirth/fetal death, aplastic anemia, and other severe outcomes in pregnant people, or those who are immunosuppressed or have hemoglobinopathies, or death to MDH by calling (651) 201-5414.

### ***Health care providers:***

- Increase suspicion for parvovirus B19 among people presenting with compatible symptoms (i.e., fever, rash, arthropathy, or unexplained anemia with low reticulocyte count).
- Provide preventive counseling and have a low threshold to test people who present with compatible signs and symptoms if they are at higher risk of severe parvovirus B19 disease, including:
  - Pregnant people
  - People with severely immunocompromising conditions, including leukemia or other cancers, organ transplant, HIV infection, or who are receiving chemotherapy.

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- People with chronic hemolytic blood disorders, including sickle cell disease, thalassemia, and hereditary spherocytosis.
- When treating people with suspected or confirmed parvovirus B19, inform them or their caregivers about high-risk groups and advise any exposed contacts in those groups (e.g., who may be pregnant) to consult with their healthcare providers.
- Test pregnant people reporting exposure to parvovirus B19 infection or who present with compatible signs and symptoms of maternal or fetal parvovirus B19 disease according to standard of care (e.g., professional society guidelines) including serology (IgM and IgG) and polymerase chain reaction (PCR), depending on host factors (e.g., pregnancy or immunocompromised status).
- Report cases with severe outcomes from parvovirus B19 such as severe fetal anemia requiring transfusion, fetal hydrops, stillbirth/fetal death, aplastic anemia, and other severe outcomes in pregnant people, or those who are immunosuppressed or have hemoglobinopathies, or death to MDH by calling (651) 201-5414.

### Background

Parvovirus B19 infection is usually mild for healthy children and adults and can have no symptoms or mild illness, such as flu-like symptoms, rashes, and joint pains. Rarely, there may be complications of infection. Typically, in children, a mild non-specific illness precedes the appearance of rash by about a week. The rash classically appears as a “slapped cheek” on the face followed by a symmetric lacy, macular body rash. Arthralgia and arthritis, which can occur at the time of the rash, are more frequent in adults, especially females. Patients who are immunocompetent, with an uncomplicated illness are generally no longer infectious after the onset of rash or joint symptoms (except for patients with the rare petechial, papular-purpuric gloves and socks syndrome). Parvovirus may lead to serious complications in pregnant people and their fetuses including severe fetal anemia, fetal hydrops, fetal pleural and pericardial effusions, intrauterine growth restriction, and fetal death. Complications can also occur in those who are immunosuppressed or have hemoglobinopathies or chronic hemolytic disorders and can include severe anemia, hemolytic anemia, and aplastic crisis. These patients can continue to be infectious for a prolonged period. See [CDC: Transmission-Based Precautions Appendix A \(https://www.cdc.gov/infection-control/hcp/isolation-precautions/appendix-a-type-duration.html\)](https://www.cdc.gov/infection-control/hcp/isolation-precautions/appendix-a-type-duration.html).

Recently, MDH and CDC have received reports indicating increased parvovirus B19 activity including severe cases in Minnesota and the United States. The MDH has received anecdotal reports from clinicians who have observed more than the expected number of cases of parvovirus B19 infections among pregnant people, including cases resulting in severe fetal anemia requiring fetal transfusions. Nationally, CDC has received reports including data from commercial laboratories of increasing parvovirus B19 test positivity by nucleic acid amplification tests and serology in the general population and increased serological evidence of infection in plasma donors MDH is interested in hearing about cases of severe parvovirus B-19 infection, including cases in pregnant people, immunocompromised people, people with blood disorders, and other patients who have severe outcomes. These patients can be reported to MDH at (651) 201-5414. Although parvovirus B19 infection is not routinely reportable, unusual case incidence is reportable under MN Rule 4605.7050.

Parvovirus B19 is readily transmitted through respiratory droplets. Infection can also be transmitted during pregnancy (i.e., from mother to the fetus) or through transfusion of blood components and certain plasma derivatives. The Food and Drug Administration (FDA) recommends testing all plasma-derived products and plasma units for parvovirus B19 using nucleic acid tests. Whole blood is not

screened for parvovirus B19 in the United States. Transfusion-associated parvovirus B19 infection is extremely rare.

## Prevention and Control Measures

There is no vaccine that can prevent parvovirus B19 infection. To prevent spread of parvovirus B19, follow general recommendations for respiratory viruses:

- Practice good respiratory and hand hygiene.
- Regularly clean frequently touched surfaces, such as countertops, handrails, and doorknobs.
- Take steps for cleaner air.
- Stay home when ill. When parvovirus B-19 is circulating, people at higher risk of severe outcomes or complications should avoid sharing food or drinks, and consider wearing a mask when in public.
- Follow recommended infection control precautions (standard plus droplet) for infectious persons with parvovirus B19 in healthcare settings: [CDC: Transmission-Based Precautions Appendix A \(https://www.cdc.gov/infection-control/hcp/isolation-precautions/appendix-a-type-duration.html\)](https://www.cdc.gov/infection-control/hcp/isolation-precautions/appendix-a-type-duration.html)
- For schools and child care settings, see the [Hennepin County Health Department Infectious diseases in childcare settings and schools manual chapter on Parvovirus B19 Infection and Pregnancy \(https://mc-379cbd4e-be3f-43d7-8383-5433-cdn-endpoint.azureedge.net/-/media/hennepinus/residents/health-medical/infectious-diseases/fifth-disease-pregnancy.pdf\)](https://mc-379cbd4e-be3f-43d7-8383-5433-cdn-endpoint.azureedge.net/-/media/hennepinus/residents/health-medical/infectious-diseases/fifth-disease-pregnancy.pdf)

## Resources

- [CDC HAN: Increase in Human Parvovirus B19 Activity in the United States \(https://emergency.cdc.gov/han/2024/han00514.asp\)](https://emergency.cdc.gov/han/2024/han00514.asp)
- [Hennepin County Health Department Infectious diseases in childcare settings and schools manual chapter on Parvovirus B19 Infection and Pregnancy \(https://mc-379cbd4e-be3f-43d7-8383-5433-cdn-endpoint.azureedge.net/-/media/hennepinus/residents/health-medical/infectious-diseases/fifth-disease-pregnancy.pdf\)](https://mc-379cbd4e-be3f-43d7-8383-5433-cdn-endpoint.azureedge.net/-/media/hennepinus/residents/health-medical/infectious-diseases/fifth-disease-pregnancy.pdf)
- [CDC: About Parvovirus B19\(https://www.cdc.gov/parvovirus-b19/about/index.html\)](https://www.cdc.gov/parvovirus-b19/about/index.html)
- [CDC: Parvovirus B19 in Pregnancy \(https://www.cdc.gov/parvovirus-b19/about/parvovirus-b19-in-pregnancy.html\)](https://www.cdc.gov/parvovirus-b19/about/parvovirus-b19-in-pregnancy.html)
- [CDC: Preventing Spread of Infections in K-12 schools \(https://www.cdc.gov/orr/school-preparedness/infection-prevention/index.html\)](https://www.cdc.gov/orr/school-preparedness/infection-prevention/index.html)
- [AAP Red Book: 2024–2027 Report of the Committee on Infectious Diseases \(https://publications.aap.org/redbook/book/755/Red-Book-2024-2027-Report-of-the-Committee-on\)](https://publications.aap.org/redbook/book/755/Red-Book-2024-2027-Report-of-the-Committee-on)
- [ACOG: Practice Bulletin on Cytomegalovirus, Parvovirus B19, Varicella Zoster, and Toxoplasmosis in Pregnancy \(https://journals.lww.com/greenjournal/citation/2015/06000/practice\\_bulletin\\_no\\_151\\_cytomegalovirus,.54.aspx\)](https://journals.lww.com/greenjournal/citation/2015/06000/practice_bulletin_no_151_cytomegalovirus,.54.aspx)

## References

- [European Centre for Disease Prevention and Control: Risks posed by reported increased circulation of human parvovirus B19 in the EU/EEA \(https://www.ecdc.europa.eu/en/publications-data/risks-posed-reported-increased-circulation-human-parvovirus-b19-eueea\)](https://www.ecdc.europa.eu/en/publications-data/risks-posed-reported-increased-circulation-human-parvovirus-b19-eueea).  
June 5, 2024.
- [Epidemic of parvovirus B19 and disease severity in pregnant people, Denmark, January to March 2024. \(https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2024.29.24.2400299\)](https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2024.29.24.2400299)  
Nordholm AC, Trier Møller F, Fischer Ravn S, et al. *Euro Surveill.* 2024; 29(24):2400299. DOI:

A copy of this HAN is available at: [MDH Health Alert Network \(http://www.health.state.mn.us/han\)](http://www.health.state.mn.us/han)  
The content of this message is intended for public health and health care personnel and response partners who have a need to know the information to perform their duties.