

Pertussis (whooping cough)

Pertussis, or “whooping cough,” is a very contagious respiratory disease caused by the bacteria *Bordetella pertussis*. It is a **vaccine-preventable disease** that is usually mild in vaccinated children and adults but can be serious and even fatal in infants. All children attending child care facilities and entering schools are required to submit documentation of vaccination against pertussis.

Note: *Bordetella parapertussis* is a different disease than pertussis. Parapertussis is often confused for pertussis, by people who receive the diagnosis. Parapertussis is a far milder disease and does not typically require post-exposure prophylaxis of contacts as pertussis does. Parapertussis is not reportable in North Dakota. Parapertussis is not vaccine-preventable. Clinical recommendations for parapertussis patients and contacts should come from the diagnosing health care provider.

Transmission

Pertussis is spread from **person to person** via respiratory droplets. Infants often get pertussis from older children or adults.

Symptoms

There are three stages of pertussis.

- The first stage begins like a cold with a runny nose, sneezing, mild fever and cough that slowly gets worse. These symptoms last for one to two weeks.
- The second stage consists of uncontrolled coughing spells (paroxysms) and when people breathe in, can make a whooping sound (especially babies). During severe coughing spells, a person may gag, vomit, or become blue in the face from lack of air. Between coughing spells, the person often appears to be well. The coughing spells may be so severe that it is hard to eat, drink, or breathe. During this stage, infants may stop breathing or turn blue. This coughing stage may last for six or more weeks.
- The final stage is when symptoms gradually improve over weeks to months.

Diagnosis

A health care provider can diagnose pertussis with a swab of the throat and nasal passage. They will also consider clinical symptoms and exposure, in their diagnosis. Pertussis is difficult to diagnose in adolescents and adults without laboratory testing because the disease can mimic bronchitis in those age groups.

Treatment

Infants with pertussis may need hospitalization and/or supportive care. Antibiotics will help to prevent transmission of the illness to others and may possibly reduce the severity of disease if given early in the course of the illness. Those treated with antibiotics are contagious until five days of treatment are completed. Anyone who is considered high risk and has been exposed to pertussis should also be given antibiotics, even if they were vaccinated.

Prevention

There are two vaccines that protect against pertussis. All pertussis vaccines also protect against diphtheria and tetanus. The childhood vaccine is called DTaP and the vaccine for older children, adolescents, and adults is called Tdap. Generally, a child will receive five doses of DTaP, given in a series starting at 2 months of age with a final dose prior to starting elementary school. It is recommended that adolescents receive one dose of Tdap at age 11 or 12 to protect themselves against pertussis. One dose of Tdap is required for entry into seventh through twelfth grade.

Pregnant people should receive a dose of Tdap during each pregnancy. All adults should also receive a dose of Tdap if they have not previously received one. This is especially important for those who have significant contact with infants, such as child care providers and new or expecting parents. Routine hand washing may prevent the spread of pertussis.

Exclusion Guidance

People who have pertussis should be excluded from activities until five days of recommended antibiotic treatment have been completed. People with pertussis who do not take antibiotics should be excluded until 21 days after cough onset. Symptomatic contacts (contacts with a cough) of pertussis cases also should be excluded from activities until five days of antibiotic treatment are completed.

For additional information about pertussis, contact the North Dakota Department of Health and Human Services' Public Health Division at 800.472.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease in humans shall be reported to the North Dakota Department of Health and Human Services.

Resources:

1. Centers for Disease Control and Prevention. (2022, August 8). *CDC Pertussis (Whooping Cough)*. Centers for Disease Control and Prevention. Retrieved June 27, 2023, from <https://www.cdc.gov/pertussis/>.
2. Kimberlin, D. W., Barnett, E. D., Lynfield, R., Sawyer, M. H. (2021) Red Book: 2021-2024 Report of the Committee on Infectious Diseases. 32nd ed. American Academy of Pediatrics. [Management and Prevention of Infectious Diseases; Pertussis (Whooping Cough)] [pages 578-589].

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