



Southeast District Health Department

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Pertussis (Whooping Cough) Fact Sheet

What is pertussis?

Pertussis (whooping cough) is a respiratory tract infection caused by the bacterium, *Bordetella pertussis*. Before the advent of the pertussis vaccine, pertussis was a leading cause of morbidity and mortality in children. Approximately 75 to 200 persons with pertussis are reported each year in Nebraska. It is undoubtedly under reported as many infections in older children and adults are not recognized.

How is pertussis spread?

Humans are believed to be the only host of the pertussis bacteria. Transmission occurs by direct contact with discharges from respiratory secretions of infected persons (i.e., created by coughing or sneezing).

What are the symptoms of pertussis infection?

Classic pertussis infections have three distinct phases of illness. The first stage, the *catarrhal* stage, is characterized by sinus congestion, runny nose, slight sore throat, and low grade or absent fever. This stage lasts one to two weeks. The cough progressively becomes more severe. The coughs may become paroxysmal: a series of coughs so close together that the person cannot take a breath between coughs. Following the coughing spell, the person gasps for air which may sound like a whoop. Vomiting may follow the coughing spell. The severe coughing marks the beginning of the second stage, the *paroxysmal* stage which may last two to four weeks. The third stage of pertussis infection is the *convalescent* stage. This stage can last two to four weeks during which time the vomiting and whooping gradually lessen. The illness in adults is often milder and without the whooping and vomiting.

When do the symptoms appear?

Symptoms may begin 6 to 20 days following exposure to the pertussis bacteria.

Are pertussis infections treatable?

Antibiotics appear to be useful in shortening the illness if given during the catarrhal stage. Azithromycin and clarithromycin are now considered to be the drug of choice and offer more convenient dosing and fewer side effects than erythromycin which had been the drug of choice for many years. Trimethoprim-sulfamethoxazole is an acceptable alternative.

How long is an infected person communicable?

A person is considered communicable until the 5 days of appropriate antibiotic therapy have been completed. If no antibiotic is taken, a person is considered communicable for 21 days after onset of severe coughing.

Should infected persons be excluded from work or school?

Yes. An infected person should be excluded from day care, school, and/or work for 5 days **after** beginning antibiotic treatment. If treatment is refused or the diagnosis is delayed, exclusion for three weeks after onset of severe cough.

What can be done to prevent the spread of pertussis?

The most cost-effective mode of pertussis prevention is timely vaccination of children. The vaccines for pertussis are given in combination with diphtheria and tetanus. The Advisory Committee on Immunization Practices (ACIP) recommends that five doses of DTaP (diphtheria, tetanus, and acellular pertussis) vaccine be given at two, four, six, 12-19 months of age, and between four and seven years of age or by school entry. In 2005, the Food and Drug Administration (FDA) licensed two new Tdap (tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis) vaccines for adolescents and adults. Previously no pertussis vaccine was available for anyone age 7 or older. If given routinely, Tdap will reduce pertussis-related morbidity in adolescents and decrease the spread of pertussis to infants.

The current pertussis vaccines are licensed for use in persons aged 10 years and older. The ACIP recommends that adolescents 11-18 years of age receive one dose of Tdap in place of a single Td (Tetanus and Diphtheria) booster dose. Adolescents 11 through 18 years of age (preferably at age 11-12 years) should receive a single dose of Tdap. One dose of Tdap is also recommended for adults 19 years of age and older who did not get Tdap as an adolescent. Expectant mothers should receive Tdap during each pregnancy, preferably at 27 through 36 weeks. Tdap should also be given to 7-10 year olds who are not fully immunized against pertussis. Tdap can be given no matter when Td was last received. The vaccine is also recommended for adults who have close contact with an infant who is less than one year old.

Timely recognition and appropriate antibiotic therapy of infected persons and close contacts can also prevent the spread of pertussis. The same antibiotics are given to prevent infection as to treat a pertussis infection. Antibiotics can be given if the last exposure occurred within the three previous weeks. All household members are recommended to receive antibiotic prophylaxis.

If an infected person attends or works in a daycare, all persons in close or direct contact should be given antibiotics. For in-home daycares, this means that all persons in the daycare are put on antibiotics. Children who have not completed the vaccination series should complete the series at minimum intervals.

If an infected person attends or teaches at school, classroom or schoolwide prophylaxis is rarely recommended. Close contacts (close friends, teammates) would be recommended to receive prophylaxis.

Coworkers are rarely recommended to receive prophylaxis, unless they are identified as close contacts. Exceptions could be made if the coworkers share office space for a long duration of time.

Nebraska Health and Human Services System Office of Epidemiology

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