

## FACT SHEET

### **Pertussis**

Pertussis (whooping cough) can be a serious illness, especially in young, unimmunized or underimmunized children.

**Cause:** Bordetella pertussis bacteria. The disease is commonly called whooping cough. Bacteria attach to the respiratory cilia, produce toxins that paralyze the cilia and cause inflammation of the respiratory tract, interfering with the clearing of pulmonary tract secretions.

**Symptoms:** Symptoms of pertussis are similar to a common cold: runny nose, sneezing, low-grade fever, and mild cough. Within a week or two, the coughing becomes persistent and sometimes ends up with a high-pitched whoop and vomiting. Child may appear well between episodes of the coughing. Attacks may continue for up to 10 weeks and are more common at night

**Spread:** By droplets expelled during sneezing and coughing or direct contact with discharges from respiratory mucous membranes of infected persons.

**Incubation:** 6-21 days; usually 7 to 10 days from the time a person is exposed until symptoms develop.

**Contagious Period:** Until 5 days after the antibiotic treatment begins or for 4 weeks after intense coughing begins and is person is well enough to participate in normal daily activities.

**Reportable:** Immediate by the provider or laboratory to the local or public health department.

**Diagnosis:**

1. Cough illness lasting more than 14 days with more than 1 of the following:
  - A. paroxysms of cough (coughing spasms)
  - B. inspiratory "whoop"
  - C. post-tussive vomiting (coughing until one vomits)
2. Laboratory confirmed by culture or PCR, **OR** epidemiologically linked to a laboratory-confirmed case.
3. During outbreaks (more than two cases), a case may be defined as:
  - A. Cough illness (no additional symptoms) lasting more than 14 days, with or without the above symptoms.

## B. Stages Description:

**-Catarrhal Stage:** Upper respiratory infection with a cough which becomes increasingly persistent (fever is usually absent), and generally lasts for two weeks.

**-Paroxysmal Stage:** Paroxysmal, spasmodic cough with or without posttussive vomiting. Vomiting is often absent in infants, teenagers and adults. Sometimes, at the termination of the paroxysm, a long drawn inspiratory effort will be accompanied by a whoop. The whoop is often absent in infants under six months of age (especially under three months of age), teenagers, and adults. This stage generally lasts from one to six weeks.

**-Convalescent Stage:** Symptoms gradually resolve in weeks to months.

## Treatment:

Antibiotics or vaccines are used to treat the disease, depending on contact status. Household and other close contacts (including child care or school contacts) also should receive antibiotics, regardless of age and vaccination status because pertussis immunity from vaccination is not absolute and may not prevent infection. Prompt use of antibiotics in household contacts is effective in limiting secondary transmission (passing pertussis to others). Persons with mild illness that may not be recognized as pertussis can transmit the infection. A five day course of azithromycin, now available as a generic drug, is the preferred antibiotic for both treatment of cases and prophylaxis of contacts. Trimethoprim-sulfamethoxazole is an acceptable alternative if the patient has contraindications for use of macrolides.

## Prevention and Control:

1. Nebraska state law requires that all children in child care settings or schools be protected by age-appropriate immunization against pertussis. The pertussis vaccine is given in combination with diphtheria and tetanus (DTap). To enroll in child care or school, a child must show proof of having received the age-appropriate vaccine.
2. It is recommended that children receive 5 doses of pertussis vaccine, with the first 3 doses given at approximately 2 month intervals. The fourth dose should be given between 15 and 18 months of age. A fifth dose (booster) is given between 4 and 6 years of age. Vaccination should be completed by age 6. Vaccination boosters are indicated at present in persons 11 years to age 64.
3. If your child is not protected against pertussis, please contact your physician or public health clinic as soon as possible to have your child immunized. Children who have not received pertussis vaccine may be excluded from any child care or school setting in which a case of pertussis occurs. Please notify your child care provider or school if your child has been immunized so his/her records can be updated.
4. Exposed children, especially those incompletely immunized, should be observed for respiratory symptoms for 20 days after last contact. Symptomatic children with cough should be excluded from child care and school, pending physician evaluation. **A**

***person with pertussis should not return to work or school until after at least five days of the recommended treatment.***

Treatment with antibiotics is recommended for close contacts in child care or school, regardless of immunization status. Children under age 7 who have not been immunized or who are not completely immunized should receive an additional dose of vaccine at this time.

5. If the individual develops any of the described symptoms over the next 20 days, the individual needs to stay at home and contact physician.