



# Pertussis (Whooping Cough)

## Definition:

Pertussis, or whooping cough, is caused by bacteria called *Bordetella pertussis*.

## Signs and symptoms:

The first signs of pertussis are similar to a common cold (sneezing, runny nose, low-grade or no fever, and a cough). After one or two weeks, the cough gets worse, especially at night. The paroxysmal cough occurs in sudden, uncontrollable bursts where one cough follows the next without a break for breath and may lead to post-tussive vomiting. The person may look red or blue in the face and have a hard time breathing. Some people will make a high-pitched whooping sound when breathing in after a coughing episode. The illness can be milder and the characteristic “whoop” absent in children, adolescents, and adults who are vaccinated. Over time, coughing spells become less frequent, but may continue for several weeks or months.

Pertussis can cause serious and potentially life-threatening complications in infants and young children who have not received all the recommended vaccines. Adolescents and adults can also develop complications from pertussis, but they are usually less severe in this older age group, especially in those who received pertussis vaccines.

## Transmission:

Pertussis is spread from person to person through the air. A person has to breathe in droplets from an infected person to get sick. People are contagious for 21 days after cough onset.

## Diagnosis:

A specimen is collected for testing from a nasopharyngeal swab. Laboratory criteria for diagnosis are isolation of *Bordetella pertussis* from clinical specimen or polymerase chain reaction (PCR) for pertussis. Serology is not recommended for diagnosis infection.

## Role of the School Nurse:

### Prevention:

- Vaccination: Update and maintain vaccine records. There are two pertussis vaccines (DTaP and Tdap). They are both a combination of pertussis, tetanus, and diphtheria. Children in school are required by state statute to have 5 DTaP vaccines. One dose of Tdap is required for children entering 7<sup>th</sup> grade. Information on pertussis vaccine can be found at: <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/dtap.html>
- Teach students and staff to cover their noses and mouths when sneezing or coughing.
- Promote proper hand washing particularly after using facial tissues or having contact with respiratory secretions to prevent the spread of disease.
- Active screening for symptomatic patients with suspected pertussis can be considered during outbreaks to limit transmission.

**Treatment Recommendations:**

- Antibiotic treatment is recommended for anyone with pertussis who has been coughing for less than 21 days to prevent transmission to other people.
  - If a patient starts treatment for pertussis early in the course of illness, during the first 1 to 2 weeks before coughing paroxysms occur, symptoms may be lessened. If treatment is started later in the course of infection, it likely will not alter the length and severity of symptoms.
  - Pertussis cases who have been coughing for more than 21 days are no longer contagious and do not require antibiotic treatment.
- Post-exposure prophylaxis antibiotic treatment is recommended for close contacts of pertussis cases, especially those at risk for developing severe infection.
  - Mass prophylaxis and vaccination are not generally recommended as outbreak control measures.

**Exclusions:**

- Cases still within the infectious period (<21 days after cough onset) should be excluded from work, school, daycare and social activity for 5 days after starting antibiotics.
  - If the case is not treated, they should be excluded for 21 days after the onset of cough.
  - If it has been  $\geq 21$  days since symptom onset, the case is no longer infectious, and no exclusions are recommended.
- Symptomatic close contacts of cases with <21 days of cough should be excluded until completion of antibiotic therapy (or receiving a negative pertussis laboratory test).
- Asymptomatic close contacts are not excluded but should consider post-exposure prophylaxis. If no prophylaxis is started, close contacts should monitor themselves for symptoms of infection 21 days following last known exposure.
- Parents and employees should be notified of possible pertussis exposures.

**Reporting Requirements:**

Pertussis is a reportable condition and should be reported immediately to Maine CDC at 1-800-821-5821.

**Resources:**

- Maine DOE website: <https://www.maine.gov/education/sh>
- Maine CDC Pertussis website (including fact sheet): [www.maine.gov/dhhs/pertussis](http://www.maine.gov/dhhs/pertussis)
- Federal CDC Pertussis website: <http://www.cdc.gov/pertussis/>
- Maine Immunization Program website: <https://www.maine.gov/dhhs/mecdc/infectious-disease/immunization/index.shtml>