

# DISPATCH



## PERTUSSIS

### What Is It?

Pertussis, also known as whooping cough, is caused by the bacteria *Bordetella pertussis*. In 2008, more than 13,000 cases of pertussis were reported and many other cases were never reported.

### How can you get it?

Pertussis is highly contagious. It spreads from person-to-person through respiratory droplets from coughing, sneezing, or talking and procedures such as bronchoscopy or suctioning. Droplets can travel through the air approximately 3 feet. Patients with pertussis are most likely to spread the infection during the early symptoms (runny nose, mild fever and cough) and in the first 2 weeks after coughing starts.

### What are the symptoms?

Pertussis symptoms usually begin 7-10 days after exposure to the bacteria. Early symptoms can last for 1 to 2 weeks and usually include:

- Runny nose
- Low-grade fever
- Mild, occasional cough
- Apnea – a pause in breathing (in infants)

During the next stage, severe coughing fits with “whooping” occurs. Coughing can be so severe that vomiting occurs. Coughing episodes can continue for 10 weeks or more. The whooping sound can be heard at <http://www.pkids.org/diseases/pertussis.html>

**Complications** are most severe in infants and include pneumonia, seizures, apnea, encephalopathy (infection around the brain) and death. More than half of infants less than one year old who get pertussis must be hospitalized. In teenagers and adults, complications are much less severe and include pneumonia and rib fractures from severe coughing; hospitalization is uncommon.

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## How do you prevent it?

Pertussis is prevented through vaccination. The recommended vaccine is DTaP which is a combination vaccine for diphtheria, tetanus and pertussis. Children need five DTaP shots. A sixth dose is now recommended at age 11 or 12 years. Healthcare personnel should receive a single dose of Tdap if they have not previously received Tdap and regardless of the time since last Td (tetanus and diphtheria) dose.

In addition to vaccination, you can help prevent the spread of pertussis by:

- Preventing contamination and performing decontamination of surfaces
- Using Universal Precautions
- Assume patients with respiratory symptoms are contagious and provide masks for symptomatic patients
- Limit the number of crew members having direct patient contact
- Hand hygiene (wash with soap and water or using an alcohol based hand rub)
- Personal protective equipment (PPE) (gloves, gowns, and respiratory protection).  
**IAFF recommends P100 respirators** for all patients with respiratory symptoms such as cough

## What should you do if you believe you have been exposed?

Pertussis prevention (post exposure prophylaxis) with antibiotics can be provided to close contacts of patients and to exposed persons who are at high risk for having severe pertussis (infants aged <1 year, persons with suppressed immune systems or other diseases such as chronic lung disease or cystic fibrosis).

Exposure includes:

- Face-to-face exposure within 3 feet of a symptomatic patient
- Direct contact with respiratory, oral, or nasal secretions from a symptomatic patient (e.g., cough, sneeze, sharing food and eating utensils, mouth-to-mouth resuscitation, or performing a medical examination of the mouth, nose, and throat)
- Shared the same confined space in close proximity with a symptomatic patient for >1 hour

Some health care workers still get pertussis even though they have been vaccinated. Therefore, in 2011, the CDC's Advisory Committee for Immunization Practices recommended antibiotic prophylaxis for all health care workers who have unprotected exposure to pertussis and are likely to expose a patient at risk for severe pertussis (e.g.,

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hospitalized neonates and pregnant women). They recommended that all other health care workers either receive postexposure antibiotic prophylaxis or be monitored daily for 21 days after pertussis exposure and treated if they develop signs and symptoms of pertussis.

Antibiotic treatment information can be found at <http://www.cdc.gov/pertussis/about/diagnosis-treatment.html> which has a link to the Centers for Disease Control and Prevention's Recommended antimicrobial agents for the treatment and postexposure prophylaxis of pertussis: 2005 CDC guidelines. (MMWR 2005;54[No. RR-14]).

## For More Information and Frequently Asked Questions (FAQs), Check Out:

- Centers for Disease Control and Prevention (CDC):  
<http://www.cdc.gov/pertussis/about/index.html>
  - CDC, Pertussis Vaccination <http://www.cdc.gov/vaccines/vpd-vac/Pertussis/default.htm#surv>
  - CDC, Epidemiology and Prevention of Pertussis: <http://www.cdc.gov/vaccines/pubs/pinkbook/pert.html>
- Public Health Agency of Canada (PHAC): <http://www.phac-aspc.gc.ca/id-mi/pertussis-coqueluche-eng.ph>