

## Pertussis (Whooping Cough)

### *Disease Fact Sheet Series*

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#### **What is pertussis?**

Pertussis is a contagious bacterial disease that affects the respiratory tract.

#### **Who gets pertussis?**

Pertussis can infect persons of all ages, but is most serious in infants and young children.

#### **How is pertussis spread?**

The bacteria are spread by contact with the respiratory droplets from an infected person through coughing. Exposure usually occurs after repeated indoor face-to face contact. Household spread is common.

#### **What are the signs and symptoms of pertussis?**

In infants and young children, the disease begins much like a cold with a runny nose, possible low grade fever and a mild but irritating cough for 1-2 weeks. The illness progresses to spells of explosive coughing that can interrupt breathing, eating and sleeping and is commonly followed by vomiting and exhaustion. Following the cough, the patients may make a loud crowing or "whooping" sound as they struggle to inhale air (hence the common name "whooping cough"). The severe coughing spells can last for several weeks to two months or longer. In older children, adolescents and adults the symptoms are usually milder and without the typical whoop.

#### **What are the complications associated with pertussis?**

In infants less than 6 months of age, the most common complication is bacterial pneumonia (17%) followed by neurologic complications such as seizures (2.1%) and encephalopathy (0.2%). Loss of weight from nutritional disturbance and dehydration is also a complication from the disease. More than half of the infants with confirmed pertussis require hospitalization.

#### **How soon do symptoms appear after exposure?**

Usually 7-20 days.

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### **When and for how long is a person able to spread pertussis?**

Pertussis is most contagious in the early stage of the illness before the onset of the explosive coughing spell. The spread of pertussis may be up to three weeks or more after cough onset. The spread period can be reduced to 5 days after the initiation of an appropriate course of antibiotics administered in the early stages of illness.

### **Is there treatment for pertussis?**

There are four antibiotics recommended for the treatment of pertussis that will shorten the period of communicability. Your doctor may choose one of these antibiotics for treatment. The appropriate antibiotics include either a 5-day course of azithromycin, a 7-day course of clarithromycin or a 14-day course of either erythromycin or trimethoprim/sulfamethoxazole (TMP/SMX). Persons with pertussis should be isolated from school, work or similar activities until they have completed at least the first 5 days of an appropriate antibiotic therapy. The remaining doses of antibiotics need to be taken as prescribed.

### **How can the spread of pertussis be prevented?**

Treatment is recommended for well persons who are close contacts (especially household contacts) of the case to prevent or reduce the severity of illness. Any untreated contacts of a case that develops a persistent cough should be tested for pertussis. Confirmed or suspected cases of pertussis that do not receive appropriate antibiotics should be isolated for 3 weeks.

### **How is pertussis confirmed?**

Confirmation is by Polymerase Chain Reaction (PCR) assay or by laboratory culture of a nasal swab specimen obtained during the early stage of illness. PCR is the test of choice for laboratory diagnosis of pertussis.

### **How can pertussis be prevented?**

Routine immunization of infants and children with acellular Pertussis (aP) vaccine is recommended at 2, 4, 6 and 15-18 months of age with a booster dose at 4-6 years of age. It is given in a combination with Diphtheria and Tetanus vaccines called DTaP. The effectiveness of the vaccine in children who have received at least 3 doses is estimated to be 80%; and protection is even greater against severe disease. Protection will begin to diminish after about 3 years. Persons who experience pertussis after immunization usually have a milder case. DTaP vaccine is currently recommended for children 2 months through 6 years of age. A safe and effective acellular pertussis vaccine for adolescents and adults was licensed in 2005. Called Tdap, the vaccine is routinely recommended as a one time booster for children 11-12 years of age. It is also recommended as one time booster for adults.

### **Does past infection with pertussis make a person immune?**

Confirmed pertussis is likely to confer immunity. However, the duration of immunity from past infection is unknown.