



## **Pertussis (Whooping Cough)**

### *Disease Fact Sheet*

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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. It is most serious among infants and young children.

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

The bacteria are spread (transmitted) 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?**

Among 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 one to two 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. Among older children, adolescents and adults, the signs and symptoms are usually milder and without the typical whoop.

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

Among infants aged less than six months, the most common complication is bacterial pneumonia, followed by neurologic complications such as seizures and encephalopathy. Approximately half of the infants with confirmed pertussis require hospitalization.

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

Symptoms typically appear 7-10 days after exposure, but can occur as early as 5 days and as late as 21 days after exposure.

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

Pertussis is most contagious (infectious) during the early stage of the illness, before the onset of the explosive coughing spells. The spread of bacteria that cause pertussis may occur up to three weeks or more after cough onset. This infectious period can be reduced to five days after the initiation of an appropriate course of antibiotics administered during 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. Clinicians 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?**

After a case of pertussis has been identified, those who had close contact with the case should either be monitored closely for 21 days to determine if they develop symptoms or receive antibiotic treatment to prevent the development of disease. Currently, antibiotic treatment is targeted to household contacts, close contacts at highest risk of severe disease (such as infants aged <1 year), and close contacts who may spread the bacteria that cause pertussis to those at high risk of severe disease (such as pregnant women in their third trimester of pregnancy). Any close contacts who develop symptoms of pertussis should be tested for pertussis and treated with appropriate antibiotics.

### **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 to 18 months of age with a booster dose at 4 to 6 years of age. It is given in combination with diphtheria and tetanus vaccines called DTaP. Protection after immunization with aP is not lifelong, but is highly effective during the years immediately following vaccination. Persons who acquire pertussis after having been immunized against pertussis usually have milder illness than persons who have never been immunized against pertussis. Since 2006, a pertussis vaccine for adolescents and adults, called Tdap, has been routinely recommended as a one-time booster to be given at age 11 or 12 years. Adolescents and adults who have never received Tdap should receive one dose of Tdap as soon as possible. To prevent pertussis among newborn infants, pregnant women are recommended to receive a dose of Tdap during every pregnancy, ideally between weeks 27 and 36 of gestation.

### **Does previously having pertussis make a person immune?**

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