

## Fact Sheet

### *Pertussis*

#### **What causes pertussis?**

Pertussis is caused by a bacterium, *Bordetella pertussis*.

#### **How does pertussis spread?**

Pertussis is spread through the air by infectious droplets and is highly contagious.

#### **How long does it take to show signs of pertussis after being exposed?**

The incubation period of pertussis is commonly five to 10 days, with an upper limit of 21 days.

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

Pertussis disease can be divided into three stages:

*Catarrhal stage:* can last 1-2 weeks and includes a runny nose, sneezing, low-grade fever, and a mild cough (all similar symptoms to the common cold).

*Paroxysmal stage:* usually lasts 1-6 weeks, but can persist for up to 10 weeks. The characteristic symptom is a burst, or paroxysm, of numerous, rapid coughs. At the end of the paroxysm the patient suffers from a long inhaling effort that is characterized by a high-pitched whoop (hence the name, "whooping cough"). Infants and young children often appear very ill and distressed, and may turn blue and vomit.

*Convalescent stage:* may last for months. Although the cough usually disappears after 2-3 weeks, paroxysms may recur whenever the patient suffers any subsequent respiratory infection.

The disease is usually milder in adolescents and adults, consisting of a persistent cough similar to that found in other upper respiratory infections. However, these individuals are still able to transmit the disease to others, including unimmunized or incompletely immunized infants.

#### **How serious is pertussis?**

Pertussis can be a very serious disease, especially for infants. From 1997-2000, one out of every five children with pertussis was hospitalized, including more than half (63%) of all infants under six months. There were also 62 deaths during this period and most (90%) of the deaths were in infants.

As noted above in the section on symptoms, the breathing difficulties associated with this disease can be very distressing and scary for the patient and his or her family.

### **What are possible complications from pertussis?**

Again, younger patients have a greater chance of complications from pertussis than older patients. The most common complication is secondary bacterial infection, which is the cause of most pertussis-related deaths. Pneumonia occurs in one out of 20 cases.

Infants are also more likely to suffer from such neurologic complications as seizures and encephalopathy, probably due to the reduction of oxygen supply to the brain. In 1997-2000, 0.8% of all cases, and 1.4% of cases under six months of age, involved seizures.

Other less serious complications include ear infection, loss of appetite, and dehydration.

### **How do I know if my child has pertussis?**

The diagnosis of pertussis is usually made based on its characteristic history and physical examination. A laboratory test may be done, which involves taking a specimen from the back of the patient's throat (through the nose).

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

Antibiotics are somewhat helpful in treating pertussis. The drug of choice is usually erythromycin. This antibiotic should also be given for 14 days to all household and other close contacts of the patient to minimize transmission, regardless of age and vaccination status.

All close contacts younger than seven years of age should complete their DTaP vaccine series if they have not already done so. If they have completed their primary four dose series, but have not had a dose within the last three years, they should be given a booster dose.

Patients also need supportive therapy such as bed rest, fluids, and control of fever.

### **How long is a person with pertussis contagious?**

Persons with pertussis are most infectious during the catarrhal period and during the first two weeks after onset of the cough (approximately 21 days).

### **How common is pertussis in the United States?**

Before a vaccine against pertussis was available, whooping cough was a major cause of childhood sickness and death in the United States. From 1940-1945, over one million cases of pertussis were reported.

With the introduction of the vaccine in the 1940s, the incidence of pertussis cases fell dramatically. After the vaccine became widely used, the number of cases dropped to about 4,400 cases/year.

Unfortunately, since the 1990s, the number of pertussis cases has risen. A total of 9,771 cases were reported in 2002, the largest number since 1967. Children are the most frequent age group with reported pertussis, but older persons have accounted for a larger proportion of cases than they have in the past.

### **Can you get pertussis more than once?**

Reinfection appears to be uncommon but does occur. Reinfection may present as a persistent cough, rather than typical pertussis.

If a child has had a documented case of pertussis he or she does not need additional immunization against the disease, however, the diagnosis should be confirmed by laboratory evidence before deciding that vaccination is not necessary.

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*This fact sheet is for information only and is not meant to be used for self-diagnosis or as a substitute for consultation with a health care provider. If you have any questions about the disease described above or think that you may have this infection, consult a health care provider.*

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