

# Pertussis (Whooping Cough)

## What is pertussis (whooping cough)?

Pertussis is a very contagious disease, characterized by severe coughing, caused by the bacterium *Bordetella pertussis*. Among vaccine-preventable diseases, pertussis is one of the most commonly occurring ones in the United States. The disease can be very serious in children less than 1 year of age where it can cause lung infections and, less often, seizures or inflammation of the brain. In rare cases, pertussis can result in death in children less than 1 year of age.

## Who gets pertussis?

Pertussis can occur at any age, but vaccination reduces the risk. It most commonly occurs in very young children who have not been vaccinated. Protection from vaccination wanes over time so even vaccinated persons may get pertussis. Pertussis in older children and adults often causes milder illness that may not be diagnosed.

## What are the symptoms of pertussis?

The symptoms of pertussis occur in stages. The first stage begins like a cold, with a runny nose, sneezing, mild fever, and cough. The cough lasts 1-2 weeks and then worsens. The second stage includes uncontrolled coughing followed by a whooping noise when the person breathes in air. During these severe coughing spells, a person may vomit, or their lips or face may look blue from a lack of oxygen. Between coughing spells a person may appear well. This stage may last 4-6 weeks. The last stage is where symptoms begin to disappear.

## How is pertussis spread?

The bacterium that causes pertussis is found in the nose and throat of infected people. These bacteria spread through the air in droplets produced by sneezing and/or coughing. Persons in the early stage of illness are the most contagious. Older children and adults are often the source of infection for infants with whom they have close contact. Antibiotics will shorten the length of time the illness can be spread. Children should be kept out of childcare or school until they have been treated with antibiotics for at least five days and are well enough to return. Adults with pertussis should also stay home from work until they have been treated with antibiotics for at least five days.

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

Symptoms usually appear between 4 and 21 days after exposure to someone with the illness. If a person is exposed to pertussis, antibiotic treatment may help prevent or lessen the disease.

### **How is pertussis diagnosed?**

A physician may suspect pertussis from the symptoms described above. To be sure of the diagnosis, a swab of the back of the nose, taken during the early stage of the illness, can be tested for the *Bordetella* bacterium.

### **What is the treatment for pertussis?**

Certain antibiotics may make the illness less severe if started in the early stage of the disease. Infants younger than six months of age and persons with severe cases may need to be hospitalized for treatment.

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

Pertussis can be prevented by immunization with pertussis vaccine. Pertussis vaccine is combined with vaccines for tetanus and diphtheria and given as a single injection. The combination vaccine is given at 2, 4, 6, and 15 months of age, and when a child enters school. Current recommendations also advise that children receive a single booster dose of vaccine, preferably at 11–12 years of age. Adults who anticipate having close contact with an infant younger than age 12 months (e.g., grandparents, childcare providers, healthcare providers) should also receive a single booster dose. Other adults may also receive a single booster dose of vaccine, if they have not previously had a booster.

Household members and close contacts (such as other children in childcare settings) of a person with pertussis should be treated with antibiotics, whether or not they have been immunized. If started early, this may prevent illness or make it less severe. Close contacts less than ten years old who are either unimmunized, or who have received fewer than four doses of the pertussis vaccine, should finish the immunization process as soon as possible. Contacts who may be eligible for a booster dose should contact their healthcare provider. Children who develop symptoms within 21 days of exposure should see a physician right away for testing for pertussis. Anyone with symptoms should stay at home for at least 5 days after beginning antibiotic treatment.

### **Can a person who had pertussis get it again?**

Yes. Protection from either vaccination or previous disease wanes with time (typically in 5 to 10 years) so it is possible to get pertussis again. The disease may present as a persistent cough rather than typical pertussis.

### **Where can I get more information about pertussis?**

More information about pertussis may be found at: <http://www.cdc.gov/pertussis> and <http://www.cdc.gov/pertussis/outbreaks-faqs.html>.