

PERTUSSIS (Whooping Cough)

Signs & Symptoms

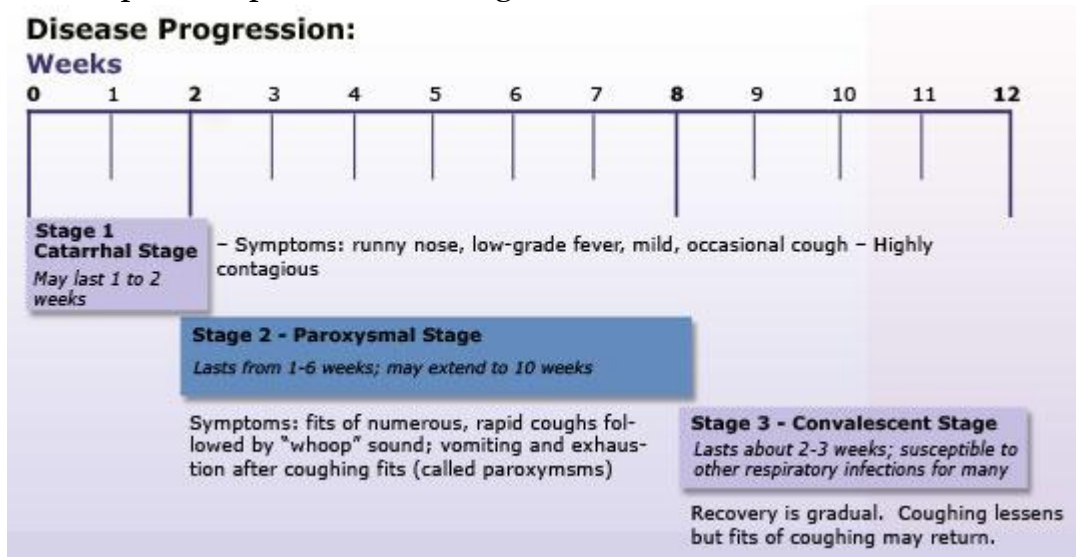
Pertussis (whooping cough) can cause serious illness in infants, children and adults. The disease usually starts with cold-like symptoms and maybe a mild cough or fever. After 1 to 2 weeks, severe coughing can begin. Unlike the common cold, pertussis can become a series of coughing fits that continues for weeks.

In infants, the cough can be minimal or not even there. Infants may have a symptom known as "apnea." Apnea is a pause in the child's breathing pattern. Pertussis is most dangerous for babies. More than half of infants younger than 1 year of age who get the disease must be hospitalized. Learn more about [pertussis complications](#).

Pertussis can cause violent and rapid coughing, over and over, until the air is gone from the lungs and you are forced to inhale with a loud "whooping" sound. This extreme coughing can cause you to throw up and be very tired. The "whoop" is often not there and the infection is generally milder (less severe) in teens and adults, especially those who have been vaccinated.

Early symptoms can last for 1 to 2 weeks and usually include:

- Runny nose
- Low-grade fever (generally minimal throughout the course of the disease)
- Mild, occasional cough
- Apnea – a pause in breathing (in infants)



[View Larger Image](#)

Because pertussis in its early stages appears to be nothing more than the common cold, it is often not suspected or diagnosed until the more severe symptoms appear. Infected people are most contagious during this time, up to about 2 weeks after the cough begins. Antibiotics may shorten the amount of time someone is contagious.

As the disease progresses, the traditional symptoms of pertussis appear and include:

- Paroxysms (fits) of many, rapid coughs followed by a high-pitched "whoop"
- Vomiting (throwing up)
- Exhaustion (very tired) after coughing fits

The coughing fits can go on for up to 10 weeks or more. In China, pertussis is known as the "100 day cough."

Although you are often exhausted after a coughing fit, you usually appear fairly well in-between. Coughing fits generally become more common and severe as the illness continues, and can occur more often at night. The illness can be milder (less severe) and the typical "whoop" absent in children, teens, and adults who have been vaccinated.

Recovery from pertussis can happen slowly. The cough becomes less severe and less common. However, coughing fits can return with other respiratory infections for many months after pertussis started.

Complications

Infants and Children

Pertussis (whooping cough) can cause serious and sometimes life-threatening complications in infants and young children, especially those who are not fully vaccinated.

In infants younger than 1 year of age who get pertussis, more than half must be hospitalized. The younger the infant, the more likely treatment in the hospital will be needed. Of those infants who are hospitalized with pertussis about:

- 1 in 5 get pneumonia (lung infection)
- 1 in 100 will have convulsions (violent, uncontrolled shaking)
- Half will have apnea (slowed or stopped breathing)
- 1 in 300 will have encephalopathy (disease of the brain)
- 1 in 100 will die

Causes & Transmission

Causes

Pertussis, a respiratory illness commonly known as whooping cough, is a very contagious disease caused by a type of bacteria called *Bordetella pertussis*. These bacteria attach to the cilia (tiny, hair-like extensions) that line part of the upper respiratory system. The bacteria release toxins, which damage the cilia and cause inflammation (swelling).

Transmission

Pertussis is a very contagious disease only found in humans and is spread from person to person. People with pertussis usually spread the disease by coughing or sneezing while in close

contact with others, who then breathe in the pertussis bacteria. Many infants who get pertussis are infected by older siblings, parents or caregivers who might not even know they have the disease (Bisgard, 2004 & Wendelboe, 2007). Symptoms of pertussis usually develop within 7 – 10 days after being exposed, but sometimes not for as long as 6 weeks.

Pertussis vaccines are very effective in protecting you from disease but no vaccine is 100% effective. If pertussis is circulating in the community, there is a chance that a fully vaccinated person, of any age, can catch this very contagious disease. If you have been vaccinated, the infection is usually less severe. If you or your child develops a cold that includes a severe cough or a cough that lasts for a long time, it may be pertussis. The best way to know is to contact your doctor.

Diagnosis & Treatment

Diagnosis

Pertussis (whooping cough) can be diagnosed by taking into consideration if you have been exposed to pertussis and by doing a:

- History of typical signs & symptoms
- Physical examination
- Laboratory test which involves taking a sample of secretions (with a swab or syringe filled with saline) from the back of the throat through the nose – see Figure 1
- Blood test

Treatment

Pertussis is generally treated with antibiotics and early treatment is very important. Treatment may make your infection less severe if it is started early, before coughing fits begin. Treatment can also help prevent spreading the disease to close contacts (people who have spent a lot of time around the infected person) and is necessary for stopping the spread of pertussis. Treatment after three weeks of illness is unlikely to help because the bacteria are gone from your body, even though you usually will still have symptoms. This is because the bacteria have already done damage to your body.

There are several antibiotics available to treat pertussis. If you or your child is diagnosed with pertussis, your doctor will explain how to treat the infection.

Centers for Disease Control and Prevention
1600 Clifton Rd. Atlanta, GA 30333, USA
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348
24 Hours/Every Day - cdcinfo@cdc.gov