



Pertussis

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.

While pertussis vaccines are the most effective tool we have to prevent this disease, 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.

Signs & Symptoms

In those who have been vaccinated:

- In most cases, the cough won't last as many days
- Coughing fits, whooping, and vomiting after coughing fits occur less often
- The percentage of children with apnea (long pause in breathing), cyanosis (blue/purplish skin coloration due to lack of oxygen) and vomiting is less

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. About half of infants younger than 1 year of age who get the disease are hospitalized. 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)

Diagnosis

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

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). 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.

Vaccines

The best way to prevent pertussis (whooping cough) among infants, children, teens, and adults is to get vaccinated. Also, keep infants and other people at high risk for pertussis complications away from infected people.

In the United States, the recommended pertussis vaccine for infants and children is called DTaP. This is a combination vaccine that protects against three diseases: diphtheria, tetanus and pertussis.

The childhood whooping cough vaccine (DTaP) protects most children for at least 5 years. Vaccine protection for these three diseases fades with time. Before 2005, the only booster available contained protection against tetanus and diphtheria (called Td), and was recommended for teens and adults every 10 years. Today there is a booster for preteens, teens and adults that contains protection against tetanus, diphtheria and pertussis (Tdap).

The easiest thing for adults to do is to get Tdap instead of their next regular tetanus booster—that Td shot that they were supposed to get every 10 years. The dose of Tdap can be given earlier

than the 10-year mark, so it is a good idea for adults to talk to a healthcare provider about what is best for their specific situation. **Being up-to-date with pertussis vaccines is especially important for families with and caregivers of new infants.**