

Pertussis Disease Fact Sheet

Pertussis Disease

- Pertussis, more commonly known as “whooping cough,” is a highly contagious respiratory disease characterized by severe coughing. It is named after the “whoop” sound most commonly demonstrated in children when they try to breathe in following a severe coughing spell.
- Pertussis is caused by bacteria called *Bordetella pertussis* that are found in the mouth, nose, and throat of the person with the disease, and is spread through contact with respiratory droplets generated when that person coughs or sneezes.
- Reported cases of pertussis increased from a record low of 1,010 in 1976 to a total of more than 25,000 in 2005.
 - Approximately 19,000 cases of pertussis were reported on average each year from 2004-2007.
- Since the U.S. began routine immunization of children against pertussis in the 1940s, the disease has declined significantly among the general population; average number of cases declined from 175,000 cases per year from 1940 to 1945, to just fewer than 2,900 cases per year from 1980 to 1990. However, since the early 1980s, reported number of pertussis cases has increased cyclically with peaks occurring every 3-4 years.
- Some experts link the rise in pertussis to:
 - More cases among adolescents and adults because immunity from childhood vaccinations wanes over time
 - Broader availability of diagnostic tests for pertussis
 - Greater awareness of the disease leading to better reporting
- There are both severe and milder forms of pertussis. Severe pertussis disease usually occurs in infants and young children, who are at higher risk for severe pertussis-related complications.
 - Mild pertussis disease is difficult to diagnose because its symptoms mimic those of other respiratory tract illnesses and the signature “whoop” may not be present.

Pertussis Transmission

- Pertussis is contagious during the early stages of disease, even before the beginning of the severe and more recognizable coughing spells.
- Pertussis immunity from early childhood vaccinations wears off, leaving adults and adolescents susceptible to the disease, which they can then transmit to others.

- Adults and older children may have a milder form of pertussis that is often mistaken for the common cold and can be easily spread. At particular risk are young infants who have not yet been fully vaccinated against pertussis; they are more vulnerable to severe pertussis and face the possibility of serious complications. In recent years, about 90% of pertussis deaths have occurred in infants younger than 4 months of age.
 - When a source can be identified, a 2007 study found that mothers were the source for nearly one-third (n=44) of pertussis cases in infants younger than 1 year of age and other family members were the source for over 40% of the cases.
- Schools and day care centers are common places where children can be exposed to pertussis. Fifty to eighty percent of unvaccinated children who are in school with someone who has pertussis will also catch the disease.
- Ninety percent of unvaccinated children living with someone with pertussis will also contract the disease.

Pertussis Prevention

- Immunization is the best measure to prevent pertussis. The vaccine to protect children against whooping cough is combined with other components to create diphtheria, tetanus, and acellular pertussis (DTaP) vaccine. DTaP vaccine, whether separately or in combination with additional vaccines, should be administered in 5 doses: at 2, 4, 6, and 15-18 months of age and 4-6 years of age. It is very important that every child receives all 5 doses on time for maximum possible protection.
- Parents should ensure their children receive the entire immunization series (as recommended by the Advisory Committee on Immunization Practices) to prevent all severities of pertussis, including mild cases that are important in disease transmission.

Pertussis in Adolescents and Adults

- Estimates indicate that there may be as many as 800,000 to 3.3 million adult and adolescent cases of pertussis in the U.S. in any given year.
- There has been over a 100% increase in average annual reported cases among individuals of all ages from 2000-2003 to 2004-2007.
- 97 percent cough for ≥ 3 weeks.
 - Most adolescents and adults with pertussis are ill for several weeks and have several physician office visits before they are diagnosed.
 - The impact of pertussis on patients includes sleep disturbances, difficulty breathing, and possible rib fracture.
- Lack of typical symptoms and inconclusive testing further complicate diagnosing pertussis.