

Whooping Cough and Adolescents

Whooping cough, or pertussis, is a highly communicable bacterial disease characterized by cough, followed by vomiting and whooping. It is named after the “whoop” sound that children often make when they try to breathe during a severe coughing spell. However, people who have mild whooping cough do not always make the “whoop” sound.¹

Whooping cough is caused by the bacterium *Bordetella pertussis* found in the mouth, nose and throat of an infected person, and is spread through close contact when an infected person talks, sneezes or coughs.²

How Whooping Cough is Spread

- Whooping cough can be most easily spread during the early stages of infection, typically before the beginning of severe coughing spells.³
- Adults and older children who may have a milder form of whooping cough, which is often mistaken for the common cold, can easily spread the disease to others, especially infants and young children.⁴
- Ninety percent of unvaccinated children living with someone with whooping cough will also get the disease.⁵

Whooping Cough in Adolescents

- Although most whooping cough cases in the past decade were in children, more than half of cases now occur in pre-teens, teens and adults.⁶
 - Pre-teens and teens get whooping cough more often than any other age group except for infants younger than one year (496 cases per 100,000 adolescents).⁸
 - The increase in whooping cough among pre-teens and teens may be due to the fact that more and more cases are reported and an increase in the bacteria that cause whooping cough.⁹ In addition, childhood whooping cough vaccinations last only 5 to 10 years; therefore, many pre-teens and teens are no longer protected against whooping cough and can be infected again.¹⁰
- Whooping cough causes as much as 25% of all severe cough illnesses lasting seven days or more among adolescents.¹¹
 - Most adolescents who get whooping cough are ill for several weeks and visit several physicians before they are diagnosed.¹²
- Among adolescents, whooping cough can cause long-lasting cough, difficulty breathing, and difficulty sleeping or vomiting after coughing. In some people, however, whooping cough infection does not cause any symptoms.¹³
- Whooping cough may cause pneumonia, bruised ribs, collapsed lungs, increased urination, seizures, infections of the brain and death in pre-teens and teens.¹⁴

Protecting Pre-teens and Teens from Whooping Cough

- The Centers for Disease Control and Prevention (CDC) recommends that pre-teens and teens are vaccinated to prevent infection with whooping cough:
 - Whooping cough infection may not produce any symptoms, and may therefore go undetected and become worse.

- Doctors may accidentally diagnose whooping cough as another disease.
- The childhood whooping cough vaccination may have stopped working by the time a child reaches adolescence.¹⁵
- Giving pre-teens and teens the whooping cough vaccine is the best way to protect them from the disease .¹⁶
- The CDC recommends that persons aged 11 – 12 years receive the tetanus-diphtheria-acellular pertussis vaccine, or Tdap. This FDA-approved vaccine helps prevent not only whooping cough, but also tetanus and diphtheria.¹⁷

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References:

- ¹ Edwards KM, Decker MD, Mortimer EA. Chapter 14: Pertussis vaccine. In: Plotkin SA, Orenstein WA, eds. *Vaccines*, 3rd ed. Philadelphia, PA: W.B. Saunders Company. 1999;293-342.
- ² Edwards KM, Decker MD, Mortimer EA. Chapter 14: Pertussis vaccine. In: Plotkin SA, Orenstein WA, eds. *Vaccines*, 3rd ed. Philadelphia, PA: W.B. Saunders Company. 1999;293-342.
- ³ American Academy of Pediatrics. Pertussis. In: Pickering LK, ed. *2000 Red Book: Report of the Committee on Infectious Diseases*. 25th ed. Elk Grove, IL: American Academy of Pediatrics; 2000;435-448.
- ⁴ <http://www.cdc.gov/nip/publications/pink/pert.pdf>.
- ⁵ Offit, P; Bell, L. *Vaccines: What Every Parent Should Know*; 3rd Ed., 2003; 35.
- ⁶ CDC. MMWR. School-Associated Pertussis Outbreak – Yavapai County, Arizona, September 2002 – February 2003; March 19, 2004: 53(10); 216-19.
- ⁷ CDC. MMWR. Pertussis Outbreak Among Adults at an Oil Refinery – Ill.; Jan. 10 2003. 52(01); 1-4.
- ⁸ CDC. MMWR. Preventing Tetanus, Diphtheria, and Pertussis Among Adolescents: Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP). 2006;55:1-34.
- ⁹ Entwistle Josephs, Judith. Pertussis in the Adolescent and Adult: A Primary Concern. *Clinical Excellence for Nurse Practitioners*. 2000; Vol. 4 (6): 361-65.
- ¹⁰ CDC. MMWR. Preventing Tetanus, Diphtheria, and Pertussis Among Adolescents: Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP). 2006;55:1-34.
- ¹¹ Pichichero, M, A Boost for Pertussis Prevention, *Family Practice News*, Vol. 34 No. 4
- ¹² Pichichero, M. Economic Impact of Pertussis. *Arch Pediatr Adolesc Med*. 1997; 151: 35-40.
- ¹³ CDC. MMWR. Preventing Tetanus, Diphtheria, and Pertussis Among Adolescents: Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP). 2006;55:1-34.
- ¹⁴ Pichichero, M. Economic Impact of Pertussis. *Arch Pediatr Adolesc Med*. 1997; 151: 35-40.
- ¹⁵ CDC. MMWR. Preventing Tetanus, Diphtheria, and Pertussis Among Adolescents: Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP). 2006;55:1-34.
- ¹⁶ Offit, P; Bell, L. *Vaccines: What Every Parent Should Know*; 3rd Ed., 2003; 40, 96.
- ¹⁷ CDC MMWR. Recommended Immunization Schedules for Persons Aged 0–18 Years, January 11, 2008. 57(1); Q1-Q4.