

Whooping Cough (Pertussis)

Whooping cough is caused by bacteria called *Bordetella pertussis*. It is spread by infected people coughing and spraying respiratory secretions into the air, which can then be inhaled by others and cause infection. It takes from 5 to 21 days to show symptoms. Infected people are most contagious in the first 2 weeks.

There are 3 stages:

1. Catarrhal stage – It is very similar to a cold. There is mild cough and runny nose. Fever is uncommon and if present is low grade. This stage lasts 1 to 2 weeks.
2. Paroxysmal stage – Coughing increases in severity. There is a long series of coughs, between which a person does not take any breaths. Some children may gag, turn blue and appear to struggle to breathe. Up to half of children will vomit. Some children will make a “whooping” sound when they take in a deep breath after coughing. The coughing episodes tend to be worse at night. This stage lasts for 2 to 8 weeks
3. Convalescent stage – The cough subsides over several weeks to months. Cough may recur or worsen when the child gets a new cold.

Pertussis infection in infants can be severe. Complications can include apnea (stoppage of breathing), seizures and pulmonary hypertension (increased blood pressure in the blood vessels of the lungs).

Prevention: Vaccination with either the DTaP or Tdap vaccines can prevent infection. Unfortunately, not every person who is vaccinated becomes protected and those that do lose immunity (protection from infection) over time. In order to protect young infants who have not been fully vaccinated, it is recommended that family members and caretakers be vaccinated.

Diagnosing: The most commonly used test is called a Pertussis PCR. A swab is done of the upper nose and sent to a laboratory where the test is performed. It is most accurate if done within the first 3 weeks of the cough.

Treatment: Pertussis is treated with antibiotics; azithromycin being the most commonly used. If treatment is started early, within the first week, the severity of the illness can be decreased. Treatment after this time period is to prevent spread of the infection. Treating people over the age of 1 year, who have had cough for more than 21 days is generally not of value as they are unlikely to be contagious at this point in time. Children under the age of 1 year should not be treated if they have had cough for greater than 6 weeks (they are contagious for a longer time).

Care of People Exposed to Pertussis:

1. People exposed to pertussis who have not been vaccinated or are not fully vaccinated, should begin or continue to receive pertussis vaccine, which is part of the DTaP and Tdap.
2. All household contacts should be given antibiotics (generally azithromycin) to prevent infection. If 21 days or more have elapsed since the infected family member started having symptoms, then treating asymptomatic family members to prevent infection is not necessary unless the family member is at high risk, such as an infant.
3. Child Care – All child care providers and children should be treated with antibiotics to prevent infection. Any with symptoms of pertussis or those with confirmed pertussis, should be excluded from the child care center until they have received 5 days of antibiotics
4. School - All students and staff members with pertussis should be excluded from school until they have received 5 days of antibiotics. Those who are not treated should be excluded for 21 days starting from the onset of symptoms. **Giving antibiotics to all children in the school is not recommended.** However, preventative antibiotics can be considered if a student has had intense close contact with an infected individual or the exposed student has underlying medical problems and pertussis infection could have severe consequences.

Infection with pertussis does **not** make a person immune. Again, vaccination is the best way to prevent infection.

Sources: 2015 AAP Red book, UpToDate March 2016

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