

Pertussis (Whooping Cough)

Pertussis (whooping cough) is very contagious and can cause serious disease. It is caused by a bacterium called Bordetella pertussis.

Symptoms (three phases generally occur):

1. Presents as a mild upper respiratory infection (catarrhal phase): non-specific symptoms including runny nose, mild cough, and generally not feeling well. A mild fever may be present.
2. Cough stage (paroxysmal phase): begins during the second week. The cough comes in paroxysms (a series of severe, vigorous coughs that occur during a single breath). Taking a breath after coughing can cause the distinctive “whooping” sound. Paroxysms of coughing can occur after yawning, stretching, laughing, yelling, or exercise. It may also be worse at night and vomiting may accompany the coughing spells. There may be no other symptoms during this phase which can last two to three months if not treated.
3. Convalescent phase: characterized by a gradual reduction in the frequency and severity of cough. It usually lasts one to two weeks. The total duration of symptoms can be about three months.

Complications:

The disease is most severe in unimmunized persons especially children under the age of 12 months. It can cause seizures or pneumonia. It can also affect the brain and cause death.

Due to the severity of the cough, rib fractures, back strain, hernias, and urinary incontinence can occur.

Transmission:

- Humans are the only host.
- Whooping cough spreads easily through the air when an infected person breathes, coughs, or sneezes.
- It is highly contagious. As many as 80% of non-immune household contacts will acquire the disease.
- Patients are most infectious (transmit the disease to others) during the initial presentation and the first two weeks of coughing.

Incubation:

- Typically 7 to 10 days following exposure but can be three weeks or longer.
- This is much longer than the usual one to three days incubation period seen with the common cold.

Diagnosis:

- Anyone with a cough lasting two weeks without an apparent cause and with paroxysms, an inspiratory whoop or vomiting after coughing should be tested for pertussis.
- A special swab is used to collect a specimen from the back of the nose and sent to the laboratory for testing.

Treatment:

- Antibiotics are used to treat this. Azithromycin is the drug most often used but Erythromycin, Clarithromycin, and sulfa may also be prescribed in some cases.

- If treatment is started early, it will limit spread of the disease as well as reduce the duration of illness. If treatment is started late in the disease, it may not affect the course of the illness but could limit spread of the disease.

Prevention:

- Vaccines
 - DTaP (diphtheria, tetanus, pertussis) is the vaccine given to children under age seven.
 - Tdap, which is similar to DTaP, is the vaccine licensed for use in people age 7 or older.
 - Infants and children should receive the DTaP vaccine at 2, 4, and 6 months. The fourth shot is given at 15 to 19 months of age and a fifth shot when the child enters school.
 - Since the vaccine protection wanes with time, a booster vaccine (Tdap) is given at age 11 or 12.
 - A Tdap should also be given to all adults to boost their immunity.
 - Pregnant women generally get a Tdap during the third trimester. This helps to protect the baby as maternal pertussis antibodies transfer to the newborn.
- The vaccine is not 100% effective in preventing someone from getting whooping cough but it will help diminish the symptoms and duration of the illness.