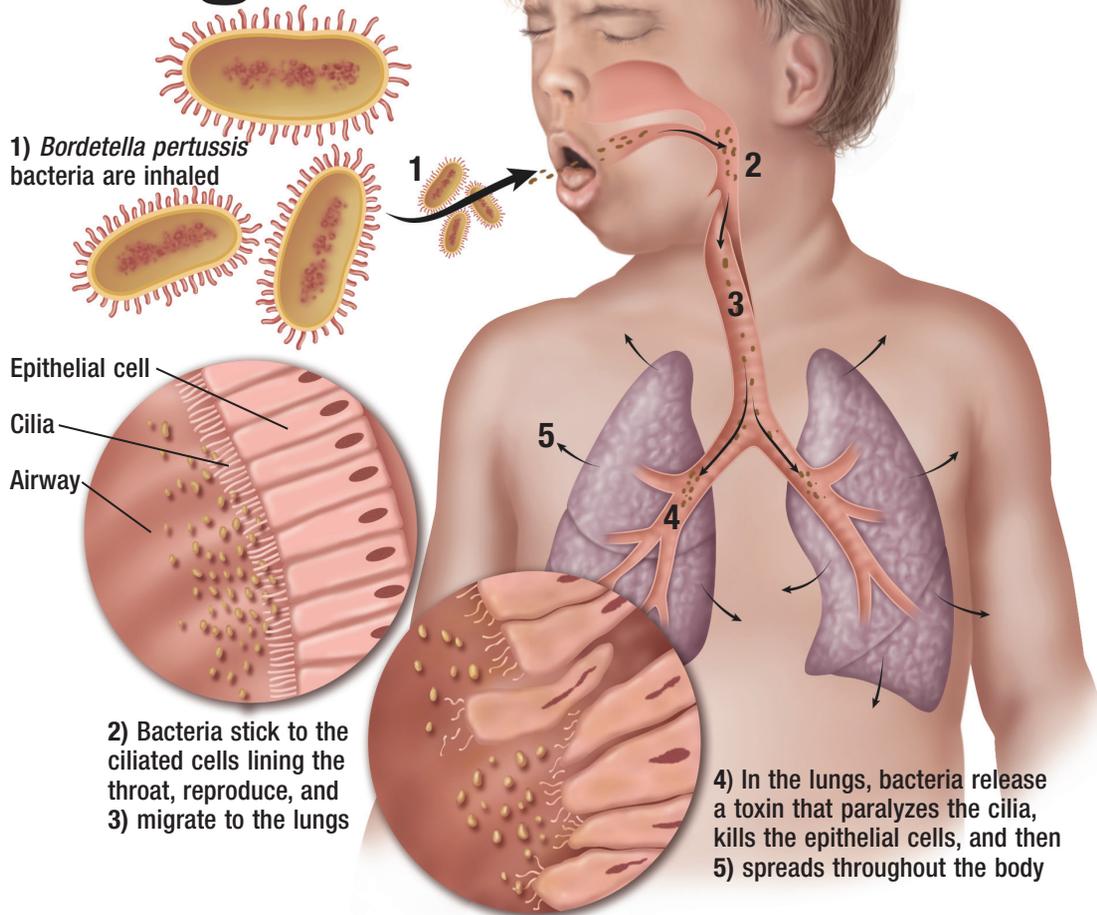


Whooping Cough



Pertussis *In whooping cough, an infection caused by *Bordetella pertussis*, the pertussis bacterium causes respiratory tract inflammation and induces mucus production. This inflammation makes it difficult for the lungs to clear mucus from the airways, resulting in severe coughing bouts that end with a whooping noise when the patient tries to take a breath.*

Whooping cough begins with coldlike symptoms, including congestion, sneezing, low-grade fever, and mild cough. After 7 to 10 days, the cough becomes more intense, with the coughing paroxysms making it difficult for the patient to breathe, eat, drink, or sleep. Young children may experience choking episodes, vomit after coughing, turn blue from lack of oxygen, or briefly stop breathing. Pertussis is especially dangerous in infants aged less than 1 year; more than 50% require hospitalization for complications such as irregular breathing, pneumonia, or seizures. Teens and adults typically have milder symptoms and are less likely to whoop or develop serious complications.

Whooping cough is highly contagious and is easily spread through the air by coughs and sneezes. A person with pertussis is contagious once coldlike symptoms start and up to 3 weeks after a cough begins, or up to 5 days after antibiotics are initiated.

Pertussis symptoms typically last 6 weeks. Early antibiotic treatment can lessen symptom severity and duration and keep the disease from spreading, so early diagnosis is important. Infants aged less than 1 year and pregnant patients should be treated for up to 6 weeks after symptoms appear. Teens and adults may not realize they have whooping cough because their symptoms are milder, but they can easily spread it to infants and young children. To prevent disease spread, any close contact of a person with pertussis should receive antibiotic therapy within 3 weeks of exposure.

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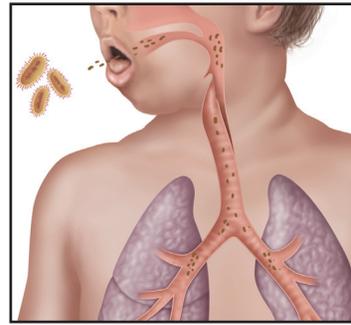
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TEAR ALONG PERFORATION

MEDICAL ILLUSTRATION: KRISTEN WIENANDT MARZEJON 2013

The Vaccine's Protection Doesn't Last a Lifetime

Until the mid-1900s, whooping cough (pertussis) was a common and deadly childhood disease. After the pertussis vaccine (combined with the diphtheria and tetanus vaccines) was introduced in the 1940s, the number of whooping cough cases in the United States declined dramatically. Recently, however, several isolated outbreaks have occurred.



The inflammation caused by the pertussis bacterium makes it hard to clear the mucus that is produced, resulting in severe coughing fits.

Symptoms and Complications

Whooping cough begins with coldlike symptoms—stuffy or runny nose, low-grade fever, and mild cough—that last for 7 to 10 days. This is followed by rapid coughing fits that interfere with eating, sleeping, and breathing. A characteristic whooping sound at the end of the cough, when the patient tries to take a breath, is the hallmark symptom. This whoop is not always present in very young infants or in older adults. The severe cough, lasting up to 6 weeks, can cause vomiting, difficulty breathing, poor sleep, and dehydration. The cough eventually disappears in another 7 to 10 days.

Regardless of a patient's age, complications of pertussis include dehydration, lack of appetite, the coughing up of blood, hernia, and ear infection. Infants and young children may develop irregular breathing, pneumonia, or seizures. In adults, the severe cough may cause dizziness, involuntary urination, or a broken rib. The most serious complications occur in infants aged less than 1 year; they need careful monitoring and, often, hospitalization.

Diagnosis and Treatment

Diagnosis of whooping cough is usually made by reviewing symptoms and performing a physical examination. A mucus sample may be tested for pertussis bacteria, but treatment should not be delayed.

To effectively reduce symptoms of pertussis, treatment must begin early (within the first 2 weeks after symptoms begin, if possible). However, antibiotic therapy can help prevent the disease from spreading. Macrolide antibiotics (azithromycin, clarithromycin, or erythromycin) are used to treat pertussis, as well as to protect against it, in people who have been exposed to someone with whooping cough.

Prevention

Vaccination against pertussis has successfully limited the number of cases of whooping cough, but the vaccine's protection does not last indefinitely. Children should receive five doses of pertussis vaccine, which is combined with tetanus and diphtheria vaccines in the DTaP vaccination. After the last dose of the five-dose series, the vaccine's protection begins to fade; 5 years later, it is only 70% effective. Therefore, a booster dose of Tdap—a tetanus, diphtheria, and pertussis vaccine for teens and adults—is administered.

Adults aged 19 years and older who did not previously receive a Tdap booster should get one dose of Tdap. This is especially important during a whooping cough outbreak or when an adult may come in contact with a newborn in the 2 weeks following the booster. Pregnant women must be vaccinated during each pregnancy.

Make sure your family is properly vaccinated against whooping cough. If you or a family member develops pertussis symptoms or is exposed to someone with the disease, contact your health care provider immediately. Early treatment with antibiotics and proper vaccinations can help stop the spread of this highly contagious respiratory infection.