

# Whooping Cough and the Vaccine (Shot) to Prevent It

Last updated July 2014

**The best way to protect against whooping cough is by getting the diphtheria-tetanus-pertussis shot (also called the DTaP shot). Doctors recommend that all children get the vaccine.**

## Why should my child get the DTaP shot?

The DTaP shot:

- Protects your child from whooping cough (pertussis), a potentially serious disease (and also protects against diphtheria and tetanus)
- Protects other people who can't get the vaccine—especially newborn babies, who can get very sick and die from whooping cough
- Prevents your child from having violent coughing fits from whooping cough
- Keeps your child from missing school or childcare (and keeps you from missing work to care for your sick child)

## Is the DTaP shot safe?

Yes. The DTaP shot is very safe, and it is effective at preventing whooping cough (and two other diseases: diphtheria and tetanus). Vaccines, like any medicine, can have side effects. Most children who get the DTaP shot have no side effects.

## What are the side effects?

Most children don't have any side effects from the shot. When side effects do occur, they are usually mild, like redness, swelling, and pain from the shot, fever, and vomiting. They happen in about 1 child out of every 4 children who get the shot.

More serious side effects are rare but can include:

- A fever over 105 degrees
- Nonstop crying for 3 hours or more
- Seizures (jerking or twitching of the muscles or staring)

CDC recommends the tetanus-diphtheria-pertussis shot for everyone 11 years old and older, including pregnant women. This shot for older children and adults is called Tdap.

## What is whooping cough?

Whooping cough—or pertussis—is a very serious respiratory (in the lungs and breathing tubes) infection caused by the pertussis bacteria. It causes violent coughing you can't stop. Whooping cough is most harmful for young babies and can be deadly.

## What are the symptoms of whooping cough?

Whooping cough starts with the following symptoms:

- Runny or stuffed-up nose
- Sneezing
- Mild cough
- A pause in breathing in infants (apnea)



Doctors recommend that your child get five doses of the DTaP shot for best protection. Your child will need one dose at each of the following ages:

- 2 months
- 4 months
- 6 months
- 15 through 18 months, and
- 4 through 6 years of age

After 1 to 2 weeks, coughing, which can be severe, starts. Children and babies may then begin to develop these more serious problems:

- Coughing very hard, over and over.
- Gasping for breath after a coughing fit. They may make a “whooping” sound. This sound is where the name “whooping cough” comes from. Babies may not cough or make this sound—they may gag and gasp.
- Difficulty breathing, eating, drinking, or sleeping because of coughing fits. These coughing fits happen more at night.
- Turning blue while coughing from lack of oxygen.
- Vomiting after coughing fits.

Coughing fits can last for 10 weeks, and sometimes happen again the next time the child has a respiratory illness.

### Is it serious?

Whooping cough is most dangerous for babies and young children. In fact, babies younger than 1 year old who have pertussis may:

- Need to be cared for in the hospital
- Develop pneumonia (a serious lung infection)
- Have seizures (jerking or twitching of the muscles or staring)
- Suffer brain damage

Whooping cough can even be deadly. From 2000 through 2012, there were 255 deaths from whooping cough reported in the United States. Almost all of the deaths (221 of the 255) were babies younger than 3 months of age.

### How does whooping cough spread?

Whooping cough spreads easily through the air when a person who has whooping cough breathes, coughs, or sneezes. Almost everyone who is not immune to whooping cough will get sick if exposed to it. A person can spread the disease from the very beginning of the sickness (when he has cold-like symptoms) and for at least 2 weeks after coughing starts.

Your baby can catch whooping cough from adults, grandparents, or older brothers or sisters who don't know they have the disease. New moms with whooping cough can give it to their newborn babies.

## How can I protect my child against whooping cough?

- Get your Tdap shot in the third trimester of every pregnancy.
- Make sure your baby gets all of his doses of whooping cough vaccine on time.
- Encourage anyone who will be in contact with your baby to be up-to-date with the vaccine.

### Do people still get whooping cough in the United States?

Yes. In 2012, whooping cough made more than 48,000 people sick. Sixteen babies died. Most of these babies were too young to be protected against whooping cough by getting the shots.

Before the DTaP shot was given routinely to infants, about 8,000 people in the United States died each year from whooping cough. Today, because of the vaccine, this number has dropped to fewer than 40.

But, cases of whooping cough have been increasing over the past several years, and outbreaks of whooping cough can occur. We don't know exactly why the number of cases is increasing, but we think it's a combination of many different reasons, including:

- Doctors and nurses are more aware of whooping cough and recognize it more often.
- The ways we test for the disease have gotten better.
- Protection from whooping cough vaccines is not long-lasting.
- More of the bacteria may be circulating.

### Where can I learn more about the DTaP shot and my child?

To learn more about the DTaP shot, talk to your child's doctor, call 1-800-CDC-INFO or visit [www.cdc.gov/vaccines/parents](http://www.cdc.gov/vaccines/parents).

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and American Academy of Pediatrics strongly recommend children receive all vaccines according to the recommended schedule.

# Pertussis Policy

## **DEFINITION:**

Pertussis is a highly contagious bacterial infection involving the respiratory tract. It begins with a mild upper respiratory infection and may resemble symptoms of the common cold. Within two weeks the cough becomes more severe and is characterized by numerous rapid coughs that may be more frequent at night. The incubation period is usually 5-10 days but may be as long as 21 days.

## **GOAL:**

Implement guidelines to be used when there is a suspected or confirmed case of pertussis in the school setting.

## **PLAN:**

- Implement state health regulations/CVES policy for control measures:
- People who have been in contact with an infected person but are asymptomatic will be monitored closely for respiratory tract symptoms for 21 days after last contact.
- If a known close contact is symptomatic, will be referred to MD and Public Health Department. Appropriate 5 day antibiotic treatment must be completed before returning to school.
- If tested but not treated will be excluded from school until test results are confirmed negative. Must have MD documentation to return to school.
- CVES nursing staff may consult with school physician. If needed school physician may consult with individuals' medical provider and/or Clinton County Health Department.

# **Pertussis (whooping cough)**

## **What is pertussis?**

Pertussis, or whooping cough, is a highly contagious bacterial infection that causes an uncontrollable, violent cough lasting several weeks or even months. It is caused by a bacterium that is found in the mouth, nose and throat of an infected person. Pertussis may begin with cold-like symptoms or a dry cough that progress to episodes of severe coughing.

## **Who gets pertussis?**

Pertussis can occur at any age. Children who are too young to be fully vaccinated and those who have not yet completed the primary vaccination series are at highest risk for severe illness. Since the 1980s, the number of reported pertussis cases has gradually increased in the United States. In 2005, over 25,000 cases of pertussis cases were reported in the United States, the highest number of reported cases since 1959. Approximately 60% of the cases were in adolescents and adults and may be a result of decreasing immunity in this population.

## **How is pertussis spread?**

Pertussis is primarily spread from person to person by direct contact with mucus or droplets from the nose and throat of infected individuals. Frequently, older siblings who may be harboring the bacteria in their nose and throat can bring the disease home and infect an infant in the household.

## **What are the symptoms of pertussis?**

Pertussis begins as a mild upper respiratory infection. Initially, symptoms resemble those of a common cold, including sneezing, runny nose, low- grade fever and a mild cough. Within two weeks, the cough becomes more severe and is characterized by episodes of numerous rapid coughs followed by a crowing or high pitched whoop. A thick, clear mucous may be discharged from the nose. These episodes may recur for 1 to 2 months, and are more frequent at night. Older people or partially immunized children generally have milder symptoms.

## **How soon after infection do symptoms appear?**

The incubation period is usually 7 to 10 days with a range of 4 to 21 days and rarely may be as long as 42 days.

## **When and for how long is a person able to spread pertussis?**

If untreated, a person can transmit pertussis from onset of symptoms to 3 weeks after the onset of coughing episodes. The period of communicability is reduced to 5 days after treatment with antibiotics.

## **What are the complications associated with pertussis?**

Major complications of pertussis are more common among infants and young children and may include pneumonia, middle ear infection, loss of appetite, sleep disturbance, syncope (temporary loss of consciousness), dehydration, seizures, encephalopathy (a disorder of the brain), apneic episodes (brief delay in breathing) and death.

## **What is the treatment for pertussis?**

The recommended antibiotics for the treatment and postexposure prevention of pertussis include azithromycin (Zithromax), erythromycin and clarithromycin (Biaxin). Alternately, trimethoprim-sulfamethoxazole (Bactrim) can be used.

## **Does past infection with pertussis make a person immune?**

Neither vaccination nor natural infection with pertussis guarantees lifelong protective immunity against pertussis. Since immunity decreases after 5-10 years from the last pertussis vaccine dose, older children, adolescents and adults are at risk of becoming infected with pertussis and need vaccination.

## **What is the vaccine for pertussis?**

### **Infants and Children**

The childhood vaccine for pertussis is usually given in combination with diphtheria and tetanus. Immunization authorities recommend that DTaP (diphtheria, tetanus, acellular pertussis) vaccine be given at 2, 4, and 6 and 15-18 months of age and between 4 and 6 years of age.

### **Pre-teens and Adolescents**

In 2005, a new vaccine was approved as a single booster vaccination for adolescents and adults called Tdap (tetanus, diphtheria, and acellular pertussis).

The preferred age for routine vaccination with Tdap is 11 or 12 years old. Adolescents, aged 11 through 18 should receive a single dose of Tdap instead of Td (tetanus, diphtheria) for booster immunization against tetanus, diphtheria, and pertussis if they have completed the recommended childhood DTP/DTaP vaccination series.

A single dose of Tdap vaccine is also recommended for children aged 7 through 10 years who are not fully vaccinated against pertussis.

### **Adults**

All adults over 19 years of age who have or who anticipate having close contact with an infant should receive a single dose of Tdap to protect against pertussis and reduce the likelihood of transmission. For other adults aged 65 years and older, a single dose of Tdap vaccine may be given instead of Td vaccine in persons who have not previously received Tdap. Tdap can be administered regardless of interval since the last Td vaccine.

Healthcare personnel, regardless of age, should receive a single dose of Tdap if they have not previously received Tdap and regardless of the time since their most recent Td vaccination.

In New York State, pertussis vaccine is required of all children born after 1/1/2005 who will be enrolled in pre-kindergarten programs and schools. Tdap vaccine is required for children born on or after 1/1/1994 and enrolling in the 6<sup>th</sup> through 11<sup>th</sup> grade.

## **What can be done to prevent the spread of pertussis?**

The single most effective control measure is maintaining the highest possible level of immunization in the community. Treatment with appropriate antibiotics, such as Zithromax, will shorten the time a person can spread pertussis to 5 days after the beginning of treatment. People who have or may have pertussis should stay away from young children and infants until properly treated. Treatment of people who are close contacts of pertussis cases is also an important part of prevention.

## **What is parapertussis?**

Parapertussis is a bacterial illness that is similar to pertussis (whooping cough) but is not as common and generally causes less severe symptoms. Up to 40% of all cases of parapertussis will present with no symptoms. Very young infants (<6 months of age) may have a more severe course of parapertussis than older persons. Parapertussis is spread through the air in droplets produced during coughing and sneezing. A person can be infected with parapertussis and pertussis at the same time. Parapertussis can be distinguished from pertussis by certain laboratory tests. Antibiotic treatment should be started as soon as parapertussis is suspected. All infants less than 6 months of age should receive antibiotics as a preventive measure if they have been in contact with a person who has parapertussis.