

# PUBLIC HEALTH FACT SHEET

## Pertussis (Whooping Cough)

Massachusetts Department of Public Health, 305 South Street, Jamaica Plain, MA 02130

### What is pertussis?

Pertussis, also called "whooping cough," is a disease caused by bacteria (germs) that is easily spread from person to person. Pertussis is usually mild in older children and adults, but it often causes serious problems in very young children.

### What are the symptoms of pertussis?

Pertussis symptoms have three stages. The first stage begins like a cold with a runny nose, sneezing and cough. The cough lasts for a week or two then slowly gets worse. The second stage is marked by uncontrolled coughing spells, vomiting after coughing, and sometimes a whooping noise that you can hear when the person breathes in. During severe coughing spells or spasms, a person may stop breathing or become blue in the face from lack of air. Between spells, the person often appears to be well. This stage lasts for about 2 to 6 weeks. The final stage is when the symptoms begin to gradually lessen. The person still may have coughing spells, but is beginning to get better. The duration of classic pertussis is about 6 to 10 weeks. Adults, teens and vaccinated children often have milder symptoms that can be like bronchitis or some other cough illness.

### How is pertussis spread?

The germs that cause pertussis live in the nose, mouth and throat, and are sprayed into the air when an infected person sneezes, coughs or talks. Other people nearby can then breathe in the germs. Touching a tissue or sharing a cup used by someone with pertussis can also spread the disease. The first symptoms appear about 7 to 10 days after a person is exposed. People with pertussis can spread the disease starting up to 2 weeks before until 3 weeks after the cough starts, or until they have finished 5 days of an appropriate antibiotic treatment.

### Who gets pertussis?

In Massachusetts, pertussis is most common among people 10-20 years old who have lost the protection they got from childhood vaccines. Infants are the next group most likely to get the disease since they are often too young to have full protection from the vaccine. However, anyone can catch pertussis and it can be hard to diagnose because symptoms may resemble a cold, followed by a nagging cough that lasts for weeks or months.

### Is pertussis dangerous?

It can be, especially for infants. Pertussis can cause breathing problems, pneumonia, and swelling of the brain (encephalitis), which can lead to seizures and brain damage. Pertussis can also cause death, especially in very young infants, but this is rare. In older children, teens and adults, the disease is milder but may last for weeks or months.

### How is pertussis diagnosed?

Pertussis can be very hard to diagnose. A doctor may think a patient has pertussis because of the symptoms, but a culture and blood test are the only ways to be sure. The culture is taken by swab from the back of the nose. The blood test can only be used after someone has been coughing for at least 2 weeks. While cultures for pertussis can be performed at any lab, blood tests should be sent to the State Laboratory Institute (SLI) for testing. The SLI does tests for free when asked by a doctor or a board of health.

### How is pertussis treated?

The main treatment is plenty of rest and fluids, and antibiotics. Oxygen, medicine to help the patient breathe and mild sedatives are sometimes needed to help control severe coughing spells. Antibiotics can make the disease milder and the person less able to spread the disease if they are started early enough. Anyone who has been exposed to pertussis should see a doctor for antibiotics to prevent the disease, even if they were vaccinated.

## **If I had pertussis in the past, can I get it again?**

Although pertussis disease is likely to provide immunity against pertussis, the duration of such immunity decreases over time. For this reason, people exposed to pertussis should see their doctor for antibiotics, even if they had the disease in the past. Children less than 7 years old should have their immunization record reviewed by their doctor, in case they need more DTaP (diphtheria, tetanus and acellular pertussis) shots. Adolescents and adults who have never received a single booster dose of Tdap (tetanus, diphtheria and acellular pertussis) vaccine should talk to their doctor about getting a Tdap shot.

## **Can pertussis be prevented?**

Vaccination is the best way to protect against pertussis. Pertussis vaccine is given with diphtheria and tetanus vaccines in the same shot. The shot that is currently used for children less than 7 years old is called DTaP (diphtheria, tetanus, acellular pertussis). Older children or adults may have received the DTP (diphtheria, tetanus, whole cell pertussis) vaccine, which was used prior to 1996 in the U.S. Both kinds of shots work very well to prevent all three diseases. Tdap (tetanus, diphtheria, acellular pertussis) is a vaccine for adolescents and adults used mostly as a booster shot. Currently only 1 dose of Tdap is recommended. Before the Tdap vaccine was available, adolescents and adults did not have a good way to prevent pertussis because immunity to pertussis from childhood vaccines decreases over time.

## **What are the risks from these vaccines?**

All vaccines, like other medicines, can cause side effects in some people. The DTaP vaccine can cause redness, swelling, fever, drowsiness, or fretfulness. More serious reactions, including seizures and persistent crying lasting for more than 3 hours, are very rare. Getting the DTaP vaccine is much safer than getting pertussis, and most people do not have any problems with the vaccine. Many more young children will get pertussis if parents stop getting them vaccinated. The Tdap vaccine can cause pain, redness, swelling, fever, headache, nausea, vomiting, diarrhea and other mild problems. More serious reactions are very rare. Getting the Tdap vaccine is much safer than getting pertussis, and most people do not have any problems with the vaccine.

## **Who should get DTaP vaccine?**

All children younger than 7 years old should get this vaccine unless they have a history of seizures or other brain problem or had a serious health problem after getting DTaP before. If not, your child should get DTaP when he or she is: **2 months old, 4 months old, 6 months old, 12–15 months old, and 4–6 years old.**

## **Who should get Tdap vaccine?**

Adolescents and adults should get one shot of Tdap instead of a regular tetanus shot (Td). Adolescents usually get the Tdap shot at their 11-12 year old visit. It is especially important for adults in contact with young infants, such as parents, health care workers and child care providers, to get a single Tdap shot.

## **Where can I get more information?**

- Your doctor, nurse or clinic, or your local board of health (listed in the phone book under local government).
- The Massachusetts Department of Public Health, Immunization Program (617) 983-6800 or toll-free at (888) 658-2850, or on the MDPH website at [www.mass.gov/dph/](http://www.mass.gov/dph/).

Northeast Regional Office	Tewksbury	(978) 851-7261
Central Regional Office	West Boylston	(508) 792-7880
Southeast Regional Office	Taunton	(508) 977-3709
Metro/Boston* Regional Office	Jamaica Plain	(617) 983-6860
Western Regional Office	Amherst	(413) 545-6600

\*Boston providers and residents may also call the Boston Public Health Commission at (617) 534-5611.

- **CDC National Immunization Information Hotline**  
English: 1-800-232-2522 (Mon – Fri, 8am – 11pm) or Spanish: 1-800-232-0233 (Mon – Fri, 8am – 11pm)  
TTY: 1-800-243-7889 (Mon – Fri, 10am – 10pm)