

Whooping Cough

also known as pertussis

“A Preventable Tragedy”: A True Story

Preventing whooping cough—and saving lives in the process—must be a community-wide effort to vaccinate infants, children, adolescents, and adults. Pertussis vaccine has saved thousands upon thousands of lives, but we need to keep up the fight against whooping cough by using vaccines. Here is one family's story.

On Christmas Eve 2009, Katie and Craig welcomed their daughter Callie Grace into the world. After trying for 5 years to have a child—and suffering several miscarriages—the couple considered Callie their miracle baby. Callie was born 6 weeks early, but she was healthy and strong and came home after only 2 weeks in the hospital.

In January, when she was a month old, Callie developed a soft, dry cough. “It sounded like when a child mimics their parent to get attention. I took her to the doctor,” Katie recalls. The doctor did not find any serious signs of illness, so he sent them home.

However, over the next couple of days, Callie's condition worsened. She continued to cough, and she also became pale, didn't move around much, and suddenly lost her healthy appetite. Katie took Callie back to the doctor, and while they waited, Callie stopped breathing. A nurse was able to get Callie breathing again, and they were rushed to the hospital by ambulance.

“At the hospital, nurses and doctors flocked to our room,” Katie remembers. “It was truly overwhelming. I was scared and Callie was screaming.” Callie was admitted to the Pediatric Intensive Care Unit, where the staff ran tests to try to find out what was wrong. After a couple of days of monitoring, they started her on antibiotics, while still waiting on test results.

During Callie's second day at the hospital, she seemed to be doing OK and her parents were hopeful that she'd recover. According to Katie, “Callie was alert and would smile. She kept sticking her feet in the air so we could rub them for her. We never really thought her life was in danger.”

But the next night, Callie stopped breathing again. Family members watched helplessly from behind a glass wall as doctors tried for 45 minutes to revive her. Tragically, Callie could not be saved. She was only 5 weeks old. “We never dreamed we'd lose her,” Katie said. “Callie was a more loved, more wanted baby than you'd ever find.”

A few days later, the family found out that whooping cough was the cause of Callie's death. “We could not believe it,” Katie says, “We were so careful to not expose her to a lot of people. She never left the house except to go to the pediatrician,” Katie says.

The first dose of DTaP vaccine is recommended at 2 months of age but babies are not fully protected until they get all the recommended doses. Callie was too young to even get her first dose of DTaP.

Babies need whooping cough vaccination on time, but there's another important way to protect them. Family members and others who are around babies should be vaccinated—children should be up to date with DTaP, and everyone 11 years of age and older should get Tdap, the booster shot that prevents pertussis.

“Callie could have caught whooping cough from any of the few people that she had contact with—even from someone in the hospital right after she was born. People with even a slight cough might have whooping cough but not know it. I urge everyone to make sure their children have all their DTaP shots on time. I also encourage people to be sure they get the Tdap booster shot,” Katie says. “Getting that shot could save a life.”

What is Whooping Cough?

Whooping cough, another name for pertussis, is a very contagious disease caused by the bacteria *Bordetella pertussis*. It can be serious for anyone, but life-threatening for newborns and infants.

Symptoms—Sometimes the Cough is the Clue, but not Always

Whooping cough may begin like a common cold—runny nose, low-grade fever, and coughing. It spreads when an

infected person sneezes or coughs while in close contact with others. Unlike the common cold, the pertussis cough continues and may get worse.

Coughing can come in violent fits. The name “whooping cough” comes from the high-pitched noise—a “whoop”—that infants and children make when they gasp for air after a fit of coughing.

“If you've ever heard the coughing and whooping, you never forget it,” says Donna Weaver, a nurse educator at the Centers for Disease Control and Prevention (CDC). “It's especially ▶

CS231405K



AMERICAN ACADEMY OF
FAMILY PHYSICIANS
STRONG MEDICINE FOR AMERICA

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

frightening to see babies who have become so weak they have a hard time catching their breath—some even become blue because they cannot get enough air.”

Very young infants may not actually cough as the disease gets worse. Instead, they may have a hard time breathing, or even stop breathing for short periods.

Adolescents and adults usually do not whoop. But, for them and for children, coughing can last up to 10 weeks or more. That’s why this disease is called the 100-day cough.

Benefits of DTaP Vaccination for Infants and Young Children

In addition to protecting from diphtheria and tetanus, getting the vaccine to protect against pertussis (also known as whooping cough) as recommended—

- Saves lives.
- Prevents hospitalizations.
- Protects young infants, for whom the disease can be especially serious.
- Protects the community, especially infants who are too young to get pertussis vaccine.

Risks of DTaP Vaccine

- Mild side effects are fever; redness, swelling or soreness at the site of the shot; fussiness; tiredness or poor appetite; or vomiting.
- Moderate side effects are uncommon. One out of 1,000 children may cry for 3 or more hours; 1 out of 14,000 children may have a seizure; 1 out of 16,000 children may have high fever.
- Severe side effects are very rare. For example, fewer than one in a million children have a severe allergic reaction.

Selected References:

Centers for Disease Control and Prevention (CDC). Pertussis. In: Atkinson W, Hamborsky J, McIntyre L, Wolfe S, eds. Epidemiology and Prevention of Vaccine-Preventable Diseases (The Pink Book). 11th ed. Washington, DC: Public Health Foundation, 2009. p. 199-216. <http://www.cdc.gov/vaccines/pubs/pinkbook/default.htm>

Bisgard KM et al. Infant pertussis. Who was the source? *Pediatr Infect Dis J* 2004;23:985-989. Abstract available at http://journals.lww.com/pidj/Abstract/2004/11000/Infant_Pertussis_Who_Was_the_Source_.2.aspx

Cherry JD. Pertussis in adults. *Ann Intern Med* 1998;128:64-66. <http://www.annals.org/cgi/content/full/128/1/64#T1>

Whooping Cough—Most Serious for the Very Young

Whooping cough in infants is very concerning because infants suffer the most serious complications. In infants younger than 1 year old who get whooping cough, about half are hospitalized. For infants who are hospitalized, 1 out of 4 develops pneumonia (lung infection), and, sadly, about 1 or 2 out of 100 dies.

Whooping Cough Today

While most vaccine-preventable diseases are rare in the United States today, whooping cough continues to spread. Often, people who have a serious or long-lasting cough don’t see a doctor to get diagnosed or treated, and they unknowingly spread the disease.

“In the United States, we’ve been using vaccines widely against whooping cough since the 1940s,” says CDC pediatrician Dr. Tom Clark. “As a result, cases and deaths from whooping cough have dropped more than 90%. Unfortunately, since protection from childhood vaccination wears off, thousands of people each year still get the disease.”

Whooping cough comes in cycles, with higher numbers of reported cases some years. The last peak was in 2010, when, nationally, more than 27,000 cases of whooping cough were reported and 23 infants younger than age 3 months died. Provisional data report more than 41,000 people got sick with whooping cough in 2012.

Whooping Cough Vaccine for Baby

Whooping Cough vaccine is part of the DTaP— diphtheria, tetanus, and pertussis—shot that also protects against diphtheria and tetanus. Shots that contain protection against whooping cough are recommended at ages 2 months, 4 months, and 6 months, with a booster at 15 through 18 months old. Another booster is recommended at age 4 through 6 years.

Whooping Cough Vaccines for Pre-Teens and Adults

In health care professionals got a vital new tool in the fight against whooping cough—the Tdap booster. Says CDC’s Dr. Clark, “We knew that pertussis immunity from childhood vaccination wears off, which is why teens and adults get

whooping cough. But we didn’t have a booster shot to use for anybody older than 6 years of age. Now we do.”

According to Dr. Meg Fisher of the American Academy of Pediatrics, “When an infant gets whooping cough, we don’t always know who in the baby’s environment had the disease and passed it on. Often, though, a family member or other close contact has whooping cough, but they don’t know their cough is caused by a disease that can be very serious for infants. Infected teens and adults may think they just have a cold.”

Preteens going to the doctor for their regular check-up at age 11 or 12 years should get the recommended dose of Tdap. Teens and adults who have not gotten Tdap should get a dose. Women who are pregnant should ask their doctor about getting Tdap during each pregnancy.

“Tdap is important for two reasons. It protects preteens, teens, and adults from whooping cough, which can cause coughing that lasts for months. And the more people who get Tdap,” says Dr. Clark, “the better for reducing the number of infants who are too young to be fully vaccinated who might catch whooping cough from them.”

According to Dr. Clark, “The easiest thing for adults to do is to get one recommended dose of Tdap instead of their next regular tetanus booster (Td)—the shot that you’re supposed to get every 10 years. You can get your dose of Tdap earlier than the 10-year mark. Pregnant women, their partners, grandparents and others who will be caring for infants should talk to their doctor about when to get Tdap.”

The Centers for Disease Control and Prevention, the American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend vaccines.

800-CDC-INFO (800-232-4636) <http://www.cdc.gov/vaccines>