

What doctors want patients to know about pertussis

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It may start with a sniffle or a mild cough—like a typical seasonal bug making the rounds. But then the coughing deepens and the telltale sound of a “whoop” begins, causing relentless, gasping fits that leave patients gasping for air. This is pertussis, or whooping cough, and it is more than just a nuisance as it can be deadly, especially for newborns.

Pertussis is a common disease in the U.S. with peaks in reported cases of whooping cough every few years. For 2024, the number of reported whooping cough cases was higher than what was seen in 2023. This is because the U.S. is returning to prepandemic patterns where more than 10,000 cases are reported each year. Although infection can occur throughout the year, the American Lung Association urges everyone to be particularly cautious during the summer and fall months when pertussis cases tend to peak. However, pertussis can occur year-round.

The AMA’s What Doctors Want Patients to Know™ series gives physicians a platform to share what they want patients to understand about today’s health care headlines.

In this installment, [Alyssa Kuban, MD](#), a pediatrician and associate medical director at Texas Children’s Pediatrics Cypress, took time to discuss whooping cough and what parents need to know.

[Texas Children's Pediatrics](#) is a member of the [AMA Health System Program](#), which provides enterprise solutions to equip leadership, physicians and care teams with resources to help drive the future of medicine.

It's a distinctive “whoop” cough

“Pertussis is an infection caused by bacteria called *Bordetella*,” Dr. Kuban said. “It’s called whooping cough because there’s a characteristic sound that sounds like a whoop that a child makes after a coughing attack.

“And the distinctive part of it is the whoop,” she added.

The cough is characterized by long, persistent fits and forces almost all of the air out of the lungs. The whoop signifies the child gasping and trying to rapidly breathe in to refill the lungs. It is extremely violent and scary to [watch a child with a whooping cough](#).

Pertussis is a 100-day cough

“In the first stage, the child will have some cough, runny nose, sometimes a fever,” said Dr. Kuban. “But what's different here is with a cold, the cough starts to get better after one to two weeks. And with pertussis, it starts to get worse after that time.”

“That's when they enter the second stage, where they'll start having coughing fits,” she added. For example, “they'll gag with cough, or I have a patient who vomited after every time they coughed, and they'll break the blood vessels in their eyes because they're coughing so hard.”

“Sometimes they can look a little blue around the lips, and this is where you'll hear the whoop. This stage can last two to eight weeks,” Dr. Kuban said. “Then there's the third stage, where the cough just slowly resolves over weeks to months.”

“It is called the 100-day cough for a reason,” she said, noting “one study showed in children 5 to 16 years old that the median duration of the cough was 112 days.”

Infants are at highest risk

Pertussis is “spread through coughing and sneezing and sharing close breathing space,” Dr. Kuban said, noting that “the risk of spread is highest for the first one to two weeks that a person has symptoms.”

However, without treatment people can be contagious for several weeks.

“Our highest-risk group is our infants. It affects young children and infants, but particularly infants are at highest risk for severe disease and complications,” she said. “That’s why it’s good to keep your kids home when they’re sick, clean surfaces, and wash your hands.”

Kids get pertussis from adults

It is important to note that “most kids actually get this from adults,” Dr. Kuban said, noting adults with pertussis are “often going to just have a really hard cough.”

“What’s different with the babies is what we call apnea, or when they stop breathing,” she said. “Seizures and severe [pneumonia](#) are a little more unique to the young infants, but adults will have a really strong cough.”

Vomiting is a red flag

“The problem is that the first week of symptoms is going to look like a cold for most kids,” Dr. Kuban said. “There will be some kids who will have different presentations, but if a kid has persistent vomiting after coughing, that would be a red flag for me.”

“And then, of course, if you hear the whoop or if they’re coughing so hard that you can see broken blood vessels around their eyes—those would be red flags to me,” she said. “The other distinguishing factor is if after one to two weeks of symptoms, things are getting worse instead of better in the way they would for a typical cold, that would be another red flag for me.”

Diagnosis requires a nasal swab

When it comes to diagnosing whooping cough, “it’s typically done with a nasopharyngeal swab like the original COVID-19 swabs that go far into the nose,” Dr. Kuban said. “There is also blood testing if the patient is in a later stage of pertussis.

“But most patients are tested by that nasopharyngeal swab,” she added.

Antibiotics help in first seven days

“It’s tricky because there are effective antibiotics,” Dr. Kuban said. “But they’re most effective when they’re given in the first seven days of illness, and they may shorten the duration of the symptoms and decrease spread before patients are in that second stage.”

After one to two weeks of symptoms, however, antibiotics don’t help.

There is a vaccine for pertussis

With the “severity of the pertussis season, getting it is preventable,” Dr. Kuban said, emphasizing that “[the vaccines](#) are safe and effective.”

“I’ll never forget what a family had told me. I had taken care of a young child who had been unvaccinated and developed whooping cough, and the parents said, ‘I didn’t know it was going to be this bad,’” she shared. “There is something we can do to protect our children, and that’s where vaccination is helpful.”

Vaccination “must start in pregnancy,” Dr. Kuban said. “When women get the Tdap—a vaccine that protects against tetanus, diphtheria and pertussis—what happens is the mom’s antibodies cross the placenta and give the baby immunity for the first couple months of life.

“This has been remarkably effective. It has prevented 78% of pertussis cases in infants under 2 months old and 90% of hospitalization rates in infants younger than 2 months old who end up getting pertussis,” she added. “So, protecting infants actually starts before the baby is born.”

Then “DTaP is a vaccine infants will get at 2, 4 and 6 months of life. And then they get another one around 15 months,” Dr. Kuban said. “Then they get another dose when they’re 4 years old. With immunization, 98% of kids are fully protected after their final dose, and 71% are fully protected after five years from their last dose of the DTaP.”

“Now, there is a booster for older children between 11 and 12 years old. That is when it goes from DTaP to Tdap,” she said. Beyond that, the Tdap vaccine is recommended “every 10 years for adults, or if you’re pregnant, it’s actually with every pregnancy to protect the baby.”

Because children often get pertussis from adults, it’s important that everyone who is in contact with young children—parents, grandparents, friends and other family members—is up to date with their Tdap vaccine.

Expect some vaccine side effects

When getting DTaP or Tdap, there are some expected side effects that are easily managed at home. For example, there may be a lump at the injection site, which “we call a large, localized reaction that happens about 20% of the time,” Dr. Kuban said. “It’s not infected. I tell my patients to put a bag of frozen peas on it and call it a day.”

Meanwhile, “an infant sometimes can have a fever that day or the following day as a side effect of the immunization or some fussiness that day or the following day,” she said. “As long as the fever is not too high and it’s better with some acetaminophen, they’re fine to let it pass.

“Of course, if the family is concerned, I tell them to give me a call” Dr. Kuban added.

Postexposure medicine is also available

“If someone in the household has been diagnosed with whooping cough, they should contact their doctor,” Dr. Kuban said, noting “there are situations where we prescribe postexposure prophylaxis, meaning that we give medicine to people who have already been exposed.

"Or if someone in the household has been in contact and someone's at high risk for severe disease—so an infant, a pregnant woman, someone who's immunocompromised or has chronic lung disease or cystic fibrosis—they may qualify for being put on the medicine, especially if they're within 21 days ... from that contact," she added. "So, if they have a known contact, they should contact their physician."

Focus on hydration

While "there are no over the counter medicines that really work for pertussis, care is focused on making sure the child can stay hydrated and can eat," Dr. Kuban said, "especially young children."

"We don't recommend any over-the-counter cough or cold medications for young children so there's not any other really good medicine other than just focusing on staying hydrated," she said. If a child "can't take in water, or if they're throwing up with the cough so much that they can't keep things down, then an oral electrolyte solution is certainly also an option."

Health complications can occur

It's more than just a terrible cough, "these children can be coughing so hard they develop hernias," said Dr. Kuban. Other complications include, "they can crack ribs and sometimes they'll have pauses or stop breathing, seizures and pneumonia."

"The one thing I point out is that, for children under 6 months, the mortality rate is 1%," she said, emphasizing that "if there is an outbreak where 100 babies have pertussis, one in 100 would die."

Additionally, pertussis "can certainly worsen asthma and cause an asthma exacerbation," Dr. Kuban said. And "some studies that show that it can increase the risk of developing asthma later."

Return to school after treatment

For day care and schools, “first of all, hopefully they report pertussis infections to their students, so families have that knowledge,” Dr. Kuban said. Beyond that “kids should not return to daycare or school until five days of the completed antibiotic.

“If they’re not treated, they can return 21 days after the symptom starts,” she added, emphasizing “it’s a lot of missed school and a lot of missed work” when someone has pertussis.

Try these remedies for relief

“For school age children, you could consider a cough medication that contains dextromethorphan, which is a really common ingredient in over-the-counter cough medicines and see if that helps, especially if they’re having coughing fits,” Dr. Kuban said. “For children over the age of 1, they can have a teaspoon of honey for the cough.

“If they’re a little older, sometimes just drinking something warm like warm apple juice can help soothe the throat a little bit,” she added, noting “if they’re a toddler or older child, those can be helpful things as well.”

Parents, heed this advice

The main guidance Dr. Kuban wants parents to keep in mind is to “make sure everyone’s up to date on their vaccines,” she said. That’s because “sometimes our best offense is defense. And immunization teaches the body how to fight this before you encounter it.”

“Second, if you think you or your child are having symptoms, see your doctor early on and tell them this is something you’re concerned about,” she said. “Your doctor can then evaluate and see what they think are the next best steps.”