

# Why Pertussis matters.....

Pertussis (Whooping cough) outbreaks continue to impact children & adults, both locally and across the US. Cases have been on the rise since the 1980's. However, recent data on immunization rates indicate that only 8% of adults  $\geq 65$  years and 15% of those 19-64 years have been immunized against tetanus, diphtheria and pertussis.

Did you know that more than 1/2 of infants who get pertussis must be hospitalized and about 1 in 4 infants with pertussis develop pneumonia? And when a source of infection for infant pertussis can be identified, 4 out of 5 babies are infected by someone at home. (1)

Since 2005 **ACIP, AAP, ACOG, AAFP, & SAM** have recommended one dose of Tdap vaccine as the **standard of care** for anyone age 10-64 years. Beginning in 2011, ACIP expanded these recommendations to include Tdap vaccinations for adults 65 years of age and older (2). Tdap may be administered regardless of interval since the last tetanus or diphtheria toxoid -containing vaccine.

## What can you as a provider do to protect infants?

- Cocoon to protect newborns by vaccinating their close contacts (siblings, parents, grandparents, care providers).
- Treat every office visit as an opportunity to educate your patients, and then immunize your patients with Tdap vaccine to protect both your patients and the infants they interact with.
- Develop an office policy for nursing staff to review immunization status as part of the assessment process.

## ACIP recommendations for Tdap vaccination:

- All adolescents 10 years of age and older.
- All adults aged 19 years and older who have not previously received a dose of Tdap.
- Those in close contact with infants, ideally 2 weeks prior to anticipated contact.

### Special target groups:

- **All healthcare workers and daycare personnel** -- to protect themselves and their patients
- **All pregnant females** -- Tdap should ideally be given during **each** pregnancy, preferably between 27-36 weeks gestation. Otherwise, administer Tdap immediately post-partum, preferably prior to discharge using standing orders.

1. <http://www.cdc.gov/pertussis/about/complications.html>
2. MMWR Jan 14, 2011 60(01); 13-15. Updated Recommendations for Use of Tetanus Toxoid and Acellular Pertussis (Tdap) Vaccine from the ACIP, 2010. [www.cdc.gov/mmwr/preview/mmwrhtml/mm6001a4.htm?s\\_cid=mm6001a4\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6001a4.htm?s_cid=mm6001a4_w)



## PERTUSSIS VACCINE FOR FAMILIES OF INFANTS

Congratulations on the birth of your baby! We are excited to begin our relationship with you and your child as we provide pediatric care for your family.

- We encourage parents and caregivers of infants to obtain **pertussis vaccination booster** for themselves as soon as possible upon knowledge of the pregnancy.
- Pertussis, or whooping cough, is a serious bacterial infection of the lungs.
- Young infants who get pertussis are at risk for lung damage, brain damage and death. Infant vaccines include pertussis (the “P” of DTaP vaccine), but it takes a series of vaccines given over months for the infant’s immune system to establish full protection.
- Immunity from pertussis vaccination in early childhood wears off by about the age of ten. Pertussis infection in older children or adults causes a prolonged cough but is often unrecognized, incorrectly assumed to be a bad cold.
- We know that most babies who get pertussis catch it from a parent, sibling or caregiver.
- We recommend that parents and caregivers of infants receive a Tdap vaccine. This is a combination tetanus, diphtheria and pertussis, and counts as a tetanus booster as well. There is no minimum interval needed between the most recent tetanus (Td) booster and receipt of a Tdap vaccination. Siblings age 11 and up should also receive Tdap vaccine.
- Please schedule an appointment as soon as possible to receive a Tdap vaccine booster for you and everyone over age 10 that interacts with your baby.

Talk with your health care provider regarding any questions you may have about this vaccine recommendation or any other vaccine recommendations for you and your family!



# Stop Pertussis: Protect Infants, Adolescents & Adults!

## Think pertussis

*Consider the diagnosis of pertussis in your patients and their close contacts*

**Symptoms of pertussis:** Pertussis starts with mild cold-like upper respiratory symptoms (catarrhal stage). In children, adolescents and adults, there is typically progression to cough (paroxysmal stage). Coughing paroxysms may be followed by an inspiratory whoop or post-tussive vomiting. Fever is absent or minimal and cough is nonproductive. A history of immunization does not preclude the possibility of pertussis.

- Infants <6 months of age:** The diagnosis of pertussis in young infants is often delayed because of deceptively mild initial symptoms. Cold-like symptoms may be brief. Gagging, emesis, gasping, cyanosis, apnea, or seizures may be apparent rather than a cough or whoop. Leukocytosis (white blood cell count of  $>20,000$  cells/mm<sup>3</sup>) with  $>50\%$  lymphocytes is suggestive of pertussis and may increase over time. Mild illness may rapidly progress into respiratory distress.
- Children, adolescents and adults:** Pertussis after infancy is common, but is often misdiagnosed. Studies have demonstrated that up to 20% of prolonged cough illnesses in adults are due to pertussis. Some older patients have typical pertussis symptoms, but others have non-specific cough illness that may be difficult to distinguish from bronchitis or asthma. Adolescents and adults may report a choking sensation and sweating episodes. Complications include syncope, sleep disturbance, incontinence, rib fractures and pneumonia. Patients typically appear well when not coughing and may have normal physical findings and complete blood counts.

## Test for pertussis

*Delays in recognition of pertussis may contribute to adverse clinical outcomes*

Promptly obtain a nasal aspirate (preferred specimen) or nasopharyngeal swab for PCR and/or culture. For guidance, see: <http://bit.ly/PertussisTesting>

## Treat for pertussis

*Delays in treatment before or after hospital admission may increase the risk of fatal illness*

**Infants <6 months of age:** Pertussis may progress rapidly in young infants. Treat suspected cases promptly with azithromycin, monitor them closely, and consider hospitalization in a facility that has intensive care (especially infants <3 months of age). Severe cases will need treatment of extreme leukocytosis, pneumonia, and pulmonary hypertension.

## Reduce Transmission

**Report pertussis—***Prompt reporting supports prevention and control efforts*

Report suspected and confirmed cases of pertussis promptly to your local public health department to assist in preventing additional cases.

**Immunize against pertussis—***Assess pertussis immunization status at every patient encounter*

- Immunize women during each pregnancy between 27 and 36 weeks gestation.
- Immunize all close contacts of infants, especially postpartum women who have not received Tdap.
- Immunize healthcare workers, particularly those working with infants and pregnant women.
- Immunize other patients at the earliest opportunity during checkups and visits for wound management or acute care.



# Whooping Cough: What You Need to Know



## What Is Whooping Cough?

- Whooping cough (also called pertussis) causes coughing fits that make it hard to breathe.
- It spreads easily when someone with the disease coughs or sneezes.
- It can kill young babies.

## Starts Like a Cold. Gets Worse Fast.

### Early Symptoms

Often, symptoms start like a common cold:

- runny nose
- low or no fever
- sneezing
- mild cough

### Symptoms After 1-2 Weeks

Bad coughing attacks may lead to:

- vomiting
- problems breathing
- a red or blue face
- extreme tiredness
- broken ribs
- sweating spells

Symptoms can last for months.

## Babies Are Most at Risk

Infants younger than 6 months old often do not have a typical cough. In the early stages, infants may:

- gasp or gag
- get very tired
- stop breathing
- have seizures

Symptoms can get worse very fast. Often, babies need to go to the hospital for care.

## Treat Whooping Cough Early

### Call Your Doctor If You or a Family Member:

- Are around someone who has whooping cough or a bad cough.
- Have any symptoms of whooping cough.

### Your Doctor May Prescribe an Antibiotic Medicine to:

- Keep you from getting sicker (if taken early).
- Prevent others from getting sick.

### If You Have Whooping Cough:

- Stay home. Avoid contact with others until you have finished treatment.
- If you are caring for an infant, ask a healthy adult to feed, hold, and care for your baby.

## Prevention is Key

- DTaP doses are recommended at 2 months, 4 months, 6 months, 15 months, and 4-6 years of age.
- Tdap is recommended for everyone 11 years and older.
- To protect their newborn babies, pregnant women need a Tdap shot during their third trimester of pregnancy, even if they got it before pregnancy.
- Women need a Tdap shot each time they are pregnant.

**Talk with your doctor about whooping cough shots for you and your family.**



*"We were beyond stunned. The disease just moved so fast. Only after Brady was gone was he diagnosed with whooping cough." —Brady's Parents*

Read more at [www.ShotByShot.org/pertussis/bradys-story](http://www.ShotByShot.org/pertussis/bradys-story)



# Stop Pertussis.

Pregnant Women and Their Babies Rely on You.



## Immunize with Every Pregnancy

Newborns can die from pertussis. Infants most often contract pertussis from family members.

**Pregnant women should get a pertussis booster shot (Tdap) with every pregnancy** *irrespective* of their prior history of receiving Tdap.

Immunize between 27 and 36 weeks gestation to maximize the transfer of maternal antibody to the infant.

### Tdap should also be given:

- to all adolescents and adults who have not received Tdap.
- after giving birth, before hospital discharge, to women who have not received Tdap (even if breastfeeding).
- to other family members and close contacts of infants who have not received Tdap, ideally at least 2 weeks prior to contact with the baby.

## Think Pertussis

- Pertussis is often misdiagnosed. It starts like a cold with runny nose and cough.
- Typically, after 1-2 weeks, symptoms in adults progress to severe coughing attacks that may include:
  - post-tussive vomiting
  - a high-pitched “whoop”
  - sweating episodes, gagging, choking sensation
  - complications, such as broken ribs or pneumonia.
- Pertussis immunity wanes, so it is possible to get pertussis even with a history of vaccination or disease.

## Test for Pertussis

If your patient has pertussis-like symptoms (especially in the 3rd trimester), promptly obtain a nasal aspirate (preferred specimen) or nasopharyngeal swab for PCR and/or culture.

## Treat Pertussis, Reduce Transmission

- Antibiotics stop transmission, and if given early, may reduce pertussis severity. Erythromycin or Azithromycin are the preferred antibiotics for pertussis treatment or post-exposure prophylaxis during pregnancy.
- If your pregnant patient is exposed to pertussis, particularly in her 3rd trimester, prophylactic antibiotic therapy is recommended to protect her and the newborn.
- If she has pertussis, especially near-term or at delivery, treat her with antibiotics, and ensure that her newborn and household contacts receive prophylactic antibiotic therapy.
- Place new mothers with pertussis on droplet precautions during their hospitalization for delivery or until they have received 5 days of a full course of antibiotics. However, if both mother and infant are receiving antibiotic treatment, it is not necessary to isolate the baby from the mother, and breastfeeding is encouraged.



### Dylan's Story

*I caught pertussis in my 9th month of pregnancy. Two weeks after giving birth, my son Dylan died of pertussis that he caught from me. My doctor thought it was just a cold. — Mariah, Dylan's Mom* (Watch her full story on ShotbyShot.org)

For more information, visit [www.pregnancyshotsca.org](http://www.pregnancyshotsca.org)





### Babies Are Most At Risk

Whooping cough disease (also called pertussis) causes very serious coughing fits. Some babies stop breathing and even die.

### Expectant Moms Need Tdap Protection

**Ask your doctor for a whooping cough shot (Tdap) during your third trimester of pregnancy, even if you got it before pregnancy. You'll need a Tdap shot each time you are pregnant.**

Tdap is safe for you and your baby<sup>1</sup>. Some of the protection you get from Tdap during pregnancy passes to your baby. This will help protect your baby until she's old enough to get her first whooping cough vaccine at 6–8 weeks of age.



### Circle Your Baby with Protection

To further protect your baby, family members, friends, and caregivers also need to be up-to-date on their whooping cough shots.

You can catch whooping cough again even if you had it before. Protection from past shots also wears off.

Make sure everyone 11 years of age or older gets a Tdap booster shot at least two weeks before they are around your baby.

### Treat Whooping Cough Early

Call the doctor if:

- You or your baby are sick. Early signs of whooping cough are like a mild cold but can get worse fast; or
- You or your baby are around someone with whooping cough or a bad cough.

If your baby is having trouble breathing take him to the hospital or the doctor right away.



### Dylan's Story

Before Dylan was born, I was sick and had a bad cough. I coughed so hard that it caused contractions to start early. Dylan was born a healthy, beautiful baby. But I continued to cough, and it was hard to keep Dylan awake during feedings – the only sign of pertussis he ever had.

**Two weeks later, my son Dylan, died of pertussis that he caught from me.** He was 17 days old. It is possible to prevent babies like Dylan from catching pertussis. Now I urge parents to vaccinate their children, and adults to get a Tdap booster. I don't want to see any family suffer the way mine has.

For more personal stories, go to [shotbyshot.org](http://shotbyshot.org)

Reference:

1. The Centers for Disease Control and Prevention (2013, February 22). Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis Vaccine (Tdap) in Pregnant Women — Advisory Committee on Immunization Practices (ACIP), 2012. Retrieved August 2013 from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6207a4.htm>

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**“Getting Tdap is something easy I can do to protect my baby.”**

*—Danielle, first time mom*



If you take care of children...

# Protect against flu and whooping cough



## Child Care Providers Need:

- ✓ **flu vaccine** — every year
- ✓ **Tdap** — now to protect against whooping cough. Get additional boosters later.

## Protect Yourself

Child care providers can catch all sorts of infections. By getting immunized, you can prevent most cases of some serious diseases, like flu and whooping cough.

## Protect Our Children

You can spread the flu and whooping cough to the children you care for even before you feel sick. Children can become seriously ill from these diseases.

## Avoid Missing Work

If you get sick, you can miss weeks of work. Vaccines are safe and help you stay healthy. And, *you can't get the flu from a flu shot.*

**Kids, parents, and coworkers count on you to get your shots.**

## Have Questions?

**Talk to your doctor about any other vaccines you may need. Contact your local health department or call the Centers for Disease Control and Prevention Hotline:  
1-800-CDC-INFO (1-800-232-4636)**

