Tetanus, Diphtheria and Pertussis (Tdap) Vaccine

This sheet is about exposure to the Tetanus, Diphtheria and Pertussis (Tdap) vaccine in pregnancy and while breastfeeding. This information is based on published research studies. It should not take the place of medical care and advice from your healthcare providers.

What are tetanus, diphtheria, and pertussis?

Tetanus, diphtheria, and pertussis are diseases caused by bacteria.

Tetanus causes tightening of the muscles and painful muscle spasms. Even with good medical care, 10-20% of people with tetanus die from tetanus. The tetanus bacteria come from soil and animal waste. The bacteria get into the body through an open cut or sore.

Diphtheria often starts with a fever and sore throat. A thin layer (called a membrane) can form over the back of the throat and airways, making it hard to breathe. Without treatment, diphtheria is often deadly. People get the illness from other people with diphtheria through droplets when they cough or sneeze. The use of vaccines has made diphtheria uncommon in the United States, Canada, and many other countries.

Pertussis is sometimes called whooping cough. Symptoms usually start similar to those of the common cold. Severe coughing can develop over several weeks. Fast, heavy coughing can cause a high-pitched whooping sound when breathing in. People get pertussis from other people with pertussis through droplets when they cough or sneeze. In people not vaccinated, the chance of getting pertussis in a household with an infected person is 80%. Pertussis is most serious in infants. In an outbreak in 2010 in California, 10 infants died. Serious symptoms and the need for hospital care can happen in up to 5% of teens and adults that get pertussis.

Do these diseases cause problems in pregnancy?

Tetanus and diphtheria can be deadly to the pregnant woman and can also cause the loss of the pregnancy. Preterm delivery (birth before week 37) has also been reported.

Pertussis infection during pregnancy has not been well studied. There were no pregnancy complications seen in 1 case series of 32 women who were pregnant and had pertussis late in pregnancy. Severe disease could be a risk to the health of the mother and baby. There are a few reports of problems for the baby, but it is not known if those problems were due to pertussis during the pregnancy or for other reasons. Pertussis infection can be severe for babies under age 6 months; especially in babies born premature (birth before week 37) and babies who also have other health problems.

What is the Tdap vaccine?

The Tdap vaccine protects people from getting tetanus, diphtheria, and pertussis. Childhood vaccination for these diseases does not provide lifelong protection. Some brand names of Tdap are Adacel®, Boostrix® and Daptacel®.

The Tdap vaccine is noninfectious, meaning you cannot get the diseases from the vaccine. People get the vaccine by an injection. Like any vaccine, it does not provide 100% protection against the diseases.

Why should women who are pregnant get the Tdap vaccine during late pregnancy?

In the past, pregnant women did not regularly get the Tdap vaccine because pertussis used to be rare in adults. However, this is no longer the case and outbreaks have been happening across the United States. It is recommended that pregnant women get the vaccine during the third trimester of pregnancy (between weeks 27-36). However, it can be given anytime during pregnancy, if needed earlier.

After getting the vaccine, the body starts to make antibodies against the bacteria that can cause these diseases. Some of these antibodies can cross the placenta (the organ that grows in the uterus during pregnancy) and reach the fetus. Receiving the vaccine in the third trimester of pregnancy can help the baby get as many antibodies as possible. After

delivery, these antibodies provide some protection against pertussis until the baby can receive their own vaccines. If all household members and caregivers get the vaccine, it can lower the chance for the baby to get pertussis.

I had Tdap in my last pregnancy. Do I need it again?
It has been recommended to get the Tdap vaccine in the third trimester of every pregnancy. Discuss current recommendations with your healthcare team.

I just got the Tdap vaccine. How long should I wait until I get pregnant?
There is no recommended waiting period after getting the Tdap shot. In addition, women can get the vaccine at any time during pregnancy.

Does taking the Tdap vaccine increase the chance for miscarriage?
Miscarriage is common and can occur in any pregnancy for many different reasons. The Tdap vaccine is not associated with an increased chance for miscarriage.

Does the Tdap vaccine increase the chance of birth defects?
Birth defects can happen in any pregnancy for different reasons. Out of all babies born each year, about 3 out of 100 (3%) will have a birth defect. We look at research studies to try to understand if an exposure, like the Tdap vaccine, might increase the chance of birth defects in a pregnancy. Noninfectious vaccines, like Tdap, do not increase the chance for birth defects. The tetanus and diphtheria vaccines have a long history of use during pregnancy without increased risk.

Does the Tdap vaccine increase the chance of other pregnancy related problems?
The Tdap vaccine has not been associated with a higher chance for other pregnancy problems, such as preterm delivery (having the baby before 37 weeks), low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth), preeclampsia (high blood pressure and problems with organs, such as the kidneys, which can lead to seizures), or stillbirth.

Does the Tdap vaccine in pregnancy affect future behavior or learning for the child?
One study found no increased risk for ADHD in children whose mothers received the Tdap vaccine in the third trimester of pregnancy. Studies have not been done to see if Tdap vaccines in pregnancy can cause other behavior or learning issues for the child.

Breastfeeding and the Tdap vaccine:
Noninfectious vaccines like Tdap are compatible with breastfeeding. If you get the vaccine while breastfeeding, it can help prevent you from getting sick and passing the illness to your baby. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

If a male gets a Tdap vaccine, could it affect fertility or increase the chance of birth defects?
There is no proof that vaccines will affect sperm, and vaccines given to men do not reach the developing baby. Vaccination of others in the home will help protect newborns from illness. In general, exposures that fathers or sperm donors have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures at https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/.

MotherToBaby is currently conducting a study to learn more about the BOOSTRIX Tdap vaccine in pregnancy. If you are pregnant and have received the Tdap vaccine or plan to do so, and you are interested in learning more about this study, please contact MotherToBaby Pregnancy Studies at 877-311-8972 or visit https://mothertobaby.org/join-study/.

Please click here for references.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at MotherToBaby.org.

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