



MotherToBaby

Medications & More During Pregnancy & Breastfeeding
Ask The Experts

Fact Sheet

by the **Organization of Teratology Information Specialists (OTIS)**

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Vaccines and Pregnancy

In every pregnancy, a woman starts out with a 3-5% chance of having a baby with a birth defect. This is called her background risk. This sheet talks about whether exposure to vaccines may increase the risk for birth defects over that background risk. This information should not take the place of medical care and advice from your health care provider.

What are vaccines?

Vaccines are given to help protect you from various diseases. They are made from killed or weakened bacteria or virus. Vaccines cause your body's immune system to make antibodies. Once these antibodies are made, your body has an easier job of stopping you from getting the disease if you are exposed in the future.

What is the difference between a live and inactivated vaccine?

A "live" vaccine is made from live viruses or bacteria that have been weakened. This causes the body to make protective antibodies but does not usually cause the infection. Live vaccines generally provide long-lasting protection with a single dose. Given the slight possibility that a live vaccine might cause the disease itself, live vaccines are not routinely given to pregnant women.

An "inactivated" vaccine is made from viruses or bacteria that have been killed. An inactivated vaccine cannot cause the disease that it is given to prevent. Inactivated vaccines may require multiple doses and periodic boosters to provide the best protection.

Which vaccines can be given safely in pregnancy? Which vaccines should not be given in pregnancy?

Inactivated vaccines have not been shown to cause birth defects or pregnancy complications. Live vaccines are usually not given in pregnancy because of the slight possibility of causing the disease in the mother or baby. However, when the likelihood of being exposed to a disease is high or when infection would pose a high risk to the mother or baby, vaccination with a live vaccine is discussed.

If there is a rare disease outbreak or you are traveling outside of North America and require a specific vaccine, please call MotherToBaby at 866-626-6847 for more information. You can also refer to recommendations from the Centers for Disease Control and Prevention (CDC): <http://www.cdc.gov/vaccines/pubs/preg-guide.htm>

What if I received a live vaccine in the first trimester before I knew I was pregnant? Will this harm my baby?

Probably not. The chance of the baby being harmed is very low. Call MotherToBaby at 866-626-6847 to speak with one of our specialists about your specific vaccine.

Are there any vaccines that are recommended in pregnancy?

Yes. It is recommended that pregnant women receive the seasonal inactivated flu vaccine (flu shot). Pregnant women are at an increased risk of developing serious complications from the flu. Getting vaccinated is the best way to protect yourself and your baby. You can get the flu vaccine anytime during your pregnancy but it is best to get the flu vaccine before the flu season begins for the most complete protection. For more information about seasonal flu vaccine during pregnancy, please see the MotherToBaby fact sheet Seasonal Influenza Vaccine (Flu Shot) during Pregnancy: <https://mothertobaby.org/fact-sheets/seasonal-influenza-vaccine-flu-shot-pregnancy/pdf/>.

Nasal spray flu vaccines that contain a live but weakened virus are also available. There have been no studies looking at the use of live virus flu vaccines during pregnancy. However, as with other live vaccines, the risk is probably slight.

It is also recommended that pregnant women get the Tdap vaccine, if possible during the third trimester of

pregnancy (between weeks 27-36). However, it can be given anytime during pregnancy. For more information, please see the MotherToBaby fact sheet Tetanus, Diphtheria and Pertussis (Tdap) Vaccine and Pregnancy:

<https://mothertobaby.org/fact-sheets/tetanus-diphtheria-pertussis-tdap-vaccine-pregnancy/pdf/>.

The need for vaccination for other diseases during pregnancy will vary and you should talk to your health care provider about the potential risks and benefits. For some diseases the benefit of vaccination outweighs any risks that may be associated with the vaccine.

What about thimerosal in vaccines? Is it safe?

Thimerosal is a preservative. It is found in some vaccines in very small amounts. Although some people have concerns about thimerosal, there has been no evidence, even in large studies, of any harmful effects. Pregnant women can safely receive vaccines containing thimerosal. Thimerosal-free vaccines are also available.

Is it ok for my child to be vaccinated while I am pregnant?

Yes. Inactivated vaccines cannot cause disease. If your child or other close contact receives an inactivated vaccine, you will not get the disease from being around them following their vaccination. Because it is very unlikely that a live vaccine will cause disease, being in the same household with a healthy child who has received a live vaccine is also not likely to increase the risk to a pregnant woman or her baby. Pregnant women can be in close contact with others who have gotten vaccines, including the nasal spray flu vaccine.

Can I continue breastfeeding if I have been vaccinated?

Live and inactivated vaccines that are routinely given in the United States and Canada are not harmful during breastfeeding. Be sure to talk to your health care provider about all your breastfeeding questions. You can also refer to recommendations from the Centers for Disease Control and Prevention (CDC):

<http://www.cdc.gov/breastfeeding/recommendations/vaccinations.htm>.

Should men delay fathering a child after they have been vaccinated?

No. There is no evidence to suggest that inactivated or live vaccines affect the sperm or are transmitted to the developing baby through the semen following vaccination in men. In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures and Pregnancy: <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/>.

Reference:

- Centers for Disease Control and Prevention. 2014. Guidelines for vaccinating pregnant women. Available at: <http://www.cdc.gov/vaccines/pubs/preg-guide.htm>.
- Centers for Disease Control and Prevention. 2015. Vaccinations. Breastfeeding Guidelines & Recommendations. Available at: <http://www.cdc.gov/breastfeeding/recommendations/vaccinations.htm>
- The American College of Obstetricians and Gynecologists (ACOG). 2013. Update on Immunization and Pregnancy: Tetanus, Diphtheria, and Pertussis Vaccination. Committee Opinion no. 566.
- The American College of Obstetricians and Gynecologists (ACOG). 2014. Influenza Vaccination During Pregnancy. Committee Opinion no. 608.

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