This sheet talks about exposure to vaccines in a pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare provider.

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

What is the difference between live and inactivated vaccines?
A “live” vaccine is made from viruses or bacteria that have been weakened, but not killed. Live vaccines generally provide long-lasting protection with a single dose. Given the small 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.

Are there any vaccines that are recommended in pregnancy?
It has been recommended that pregnant women receive the seasonal inactivated flu vaccine (flu shot). Pregnant women have a higher chance of developing serious complications from the flu. Getting the seasonal inactivated flu vaccine (flu shot) is the best way to protect yourself and your baby. You can get the flu vaccine anytime during your pregnancy. For more information, please see the MotherToBaby fact sheet on the Seasonal Influenza Vaccine (Flu Shot) at https://mothertobaby.org/fact-sheets/seasonal-influenza-vaccine-flu-shot-pregnancy/pdf/.

The Tdap vaccine has also been recommended in pregnancy. You can get the Tdap vaccine anytime during pregnancy; but getting it during the third trimester (between weeks 27-36) may help protect your baby from illness after being born. For more information, please see the MotherToBaby fact sheet on the Tetanus, Diphtheria and Pertussis (Tdap) Vaccine at https://mothertobaby.org/fact-sheets/tetanus-diphtheria-pertussis-tdap-vaccine-pregnancy/pdf/.

The need for other vaccines during pregnancy will vary. Talk to your healthcare providers about the potential risks and benefits of any other vaccines you might need.

Are there any vaccines that should be avoided, if possible, in pregnancy?
Live vaccines are usually not given in pregnancy because of the small possibility that the mother or baby could get the disease from the vaccine. However, if there is a good chance of the mother being exposed to a bacteria or virus that would be high risk for her or the baby, the benefits of getting a live vaccine might outweigh any risks.

If you require a specific vaccine, please contact MotherToBaby for more information. You can also refer to recommendations from the Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/vaccines/pregnancy/hcp/guidelines.html.

Is it ok for my child to be vaccinated while I am pregnant?
Vaccines do not make the child able to infect others. In addition, if you have received the recommended vaccines during your lifetime, you are highly protected from becoming infected by others.

Can vaccines make it harder for me to become pregnant?
Limited studies on this question have not shown that vaccines would make it harder to become pregnant.

Do vaccines increase the chance for miscarriage?
Miscarriage can occur in any pregnancy. Many different kinds of studies on vaccines in pregnancy have not shown an
increased chance of miscarriage.

**Do vaccines increase the chance of birth defects?**

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. Studies on vaccines in pregnancy have not shown an increased chance of any pattern of birth defects.

**Could vaccines cause other pregnancy complications or long-term problems for the baby?**

Studies have not shown that vaccines cause other pregnancy complications or long-term problems for the baby.

**What about thimerosal in vaccines?**

Pregnant women can safely receive vaccines containing thimerosal. Thimerosal is a preservative. It is found in very small amounts in some vaccines to help stop the growth of harmful bacteria in the vaccine. Large studies have not found thimerosal to cause any harmful effects for a pregnant woman or her baby. The CDC answers questions about thimerosal here: [https://www.cdc.gov/vaccinesafety/concerns/thimerosal/index.html](https://www.cdc.gov/vaccinesafety/concerns/thimerosal/index.html).

**Can I continue breastfeeding if I have been vaccinated?**

Studies have shown that 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 healthcare provider about all your breastfeeding questions. You can also refer to recommendations from the CDC: [https://www.cdc.gov/breastfeeding/breastfeeding-special-circumstances/vaccinations-medications-drugs/vaccinations.html](https://www.cdc.gov/breastfeeding/breastfeeding-special-circumstances/vaccinations-medications-drugs/vaccinations.html).

**If a man gets vaccines, could it affect his fertility (ability to get his partner pregnant) or increase the chance of birth defects?**

There is no evidence to suggest that inactivated or live vaccines affect the sperm or are transmitted to the developing baby through the semen. In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet on Paternal Exposures at [https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/](https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/).

Please click [here](https://www.cdc.gov/vaccinesafety/concerns/thimerosal/index.html) for references.