Measles, Mumps, and Rubella (MMR) Vaccine

This sheet is about exposure to the measles, mumps, and rubella (MMR) 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 provider.

What is measles, mumps, and rubella?

Measles, mumps, and rubella are viral diseases that are mostly spread from person to person through coughing and sneezing. Measles can cause rash, high fever, cough, runny nose, and red watery eyes. Mumps can cause fever, headache, muscle aches, tiredness, loss of appetite, and swelling of the salivary glands under the ears. Rubella can cause fever, sore throat, a rash that usually starts on the face, and other symptoms. If a woman gets rubella during pregnancy, the virus can pass to the fetus and increase the chance of birth defects. This is called congenital rubella syndrome (CRS). For more information, please see our fact sheet on measles, mumps, and rubella here: https://mothertobaby.org/fact-sheets/measles-mumps-rubella-mmr-pregnancy/

What is the measles, mumps, and rubella (MMR) vaccine?

The MMR vaccine is a live vaccine (also called a live-attenuated vaccine). The MMR vaccine is a mixture of live but weakened measles, mumps, and rubella viruses. The vaccine helps the body build antibodies (immunity) to these viruses and protects against these viruses in the future. These antibodies usually last for life. In the U.S., the MMR vaccine is usually given during childhood in two doses.

I am not sure if I ever had the MMR vaccine. Should I get the vaccine before getting pregnant?

It is recommended that all women of childbearing age who do not have immunity to measles, mumps, and rubella receive the MMR vaccine at least one month before getting pregnant. If you were born outside the U.S., or are not sure if you were vaccinated, your healthcare provider can do a blood test to see if you have antibodies to these viruses. Getting the MMR vaccine before you are pregnant can help lower the chance of the fetus developing congenital rubella syndrome (CRS).

Getting the MMR vaccine before you are pregnant increases the amount of antibodies that you will naturally pass down to your baby once they are born. This will help protect your baby from getting measles, mumps, or rubella until they are old enough to receive the MMR vaccine.

I just got an MMR vaccine. How long should I wait until I get pregnant?

The Centers for Disease Control and Prevention (CDC) suggests waiting to get pregnant, if possible, until one month after receiving the MMR vaccine and your immunity is confirmed by a blood test.

Does getting the MMR vaccine increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. It is not known if the MMR vaccine can increase the chance of miscarriage. Infection with measles, mumps, and/or rubella during pregnancy might increase the chance of miscarriage.

Does getting the MMR 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 getting the MMR vaccine, might increase the chance of birth defects in a pregnancy. There is no evidence to suggest that getting the MMR vaccine during pregnancy can increase the chance of birth defects. Information from at least 1,600 pregnancies in which the MMR vaccine was given right before or during pregnancy found no increased chance of birth defects.

The MMR vaccine is not recommended during pregnancy because of a very small chance of illness from the weakened viruses in the vaccine itself. This is very rare in the general population. There has been one documented case of a pregnant woman getting the MMR vaccine during the first trimester and then their baby was diagnosed with congenital rubella syndrome (CRS) after being born.

Does getting the MMR vaccine increase the chance of other pregnancy-related problems?

It is not known if getting the MMR vaccine during pregnancy can increase the chance of other pregnancy-related problems, such as preterm delivery (birth before week 37) or low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth). Because the MMR vaccine is not recommended for use during pregnancy, vaccination in the second and third trimester has not been well studied.

Will getting the MMR vaccine during pregnancy affect future behavior or learning for the child?

Getting the MMR vaccine during pregnancy is not expected to increase the chance of behavior or learning issues for the child.

What screenings or tests are available to see if my pregnancy has birth defects or other issues?

Prenatal ultrasounds can be used to screen for some birth defects. Ultrasound can also be used to track the growth of the pregnancy. Talk with your healthcare provider about any prenatal screenings or testing that are available to you. There are no tests available during pregnancy that can tell how much effect there could be on future behavior or learning.

Breastfeeding and getting the MMR vaccine:

The MMR vaccine can be given to women who are breastfeeding. Be sure to talk to your healthcare provider about all your breastfeeding questions.

If a man gets the MMR vaccine, could it affect fertility or increase the chance of birth defects?

Studies have not been done to see if the MMR vaccine could affect men's fertility (ability to get a woman pregnant) or increase the chance of birth defects. When a man gets vaccinated, this can help protect his partner, a pregnancy, and children from getting infected with these illnesses. 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 and Pregnancy at https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/.

Please click here for references.

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, November 1, 2024.