Measles, Mumps, Rubella and the MMR Vaccine during 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 measles, mumps, rubella, or the MMR vaccine may increase the risk for birth defects above that background risk. This information should not take the place of medical care and advice from your health care provider.

What are measles, mumps and rubella?

- Measles (rubeola) is a virus that can cause a rash, high fever, cough, runny nose and red, watery eyes.
- Mumps is a virus that affects the lymph nodes closest to the jaw. Symptoms usually include fever, headache, swollen salivary glands, and body aches.
- Rubella (German measles) is a virus that usually causes a mild rash with a fever. A person with rubella may also have headaches, achy joints, a runny nose and reddened eyes.

Rarely, serious problems can occur with these viruses, including pneumonia, meningitis, deafness and death.

Measles, mumps and rubella used to be common in the U.S., but vaccination programs have greatly lowered the number of cases. These viruses are still common in parts of the world and in areas of the U.S. where people have not been vaccinated.

Are measles, mumps or rubella contagious? How does the virus spread?

Yes, all three illnesses are contagious (can be spread from person to person). They can be spread by coughing, sneezing, or by sharing cups or utensils that come in contact with the saliva of a sick person. A person can be contagious as many as ten days before and up to two weeks (14 days) after the rash appears. You can lower the chance of spreading the virus by isolating and avoiding those who are sick, properly washing hands with soap and water, and vaccinating all members of the household.

If you have been exposed to someone with a confirmed case of measles, non-immunized people, including infants, may be given the MMR vaccine within 72 hours of exposure. This can provide protection against the disease. If measles still develops, the illness usually has milder symptoms and lasts for a shorter time. Once you have been infected with measles, mumps, or rubella, it is rare to get it again.

If I have one of these viruses during pregnancy could it be harmful to the baby?

There might be an increased chance for miscarriage when a woman gets these illnesses in the first trimester. The data on whether measles or mumps increase the chance for birth defects is uncertain. Rubella has been shown to increase the chances for birth defects. When a woman gets rubella during pregnancy, her baby is at risk to develop congenital (present at birth) rubella syndrome (CRS). Some of the symptoms of CRS include: vision loss due to cataracts (cloudy films that form over the lens of the eyes) and other defects of the eye, heart defects, small head size, and developmental delay. The most common symptom is hearing loss. Not all babies with CRS will have all these symptoms. Because of these concerns, women are usually screened early in pregnancy for antibodies to rubella.

What is the MMR vaccine?

The MMR vaccine is a mixture of live weakened viruses from measles, mumps and rubella. The vaccine causes a person to develop antibodies to these viruses and gives protection against the viruses in the future. You may experience mild side effects from the vaccine including temporary rash or joint aches.
I had the MMR vaccine as a child, but was recently exposed to rubella while traveling. Is there any risk to the baby?

When a person receives a vaccine, they make antibodies to the virus. These antibodies typically last for life and make a person immune to the measles, mumps or rubella viruses. People who are vaccinated and develop antibodies will not get the virus if they are exposed again. Also, they will not be able to transmit the virus to the baby before birth. Make sure you received the recommended two doses of the MMR vaccine for the most protection.

What if I was never immunized or infected with these viruses, was exposed, and am now pregnant?

Speak with your health care provider right away to see if there are treatment options. The MMR vaccine is not recommended in pregnancy because of the low but still possible risk of contracting the viruses.

I am not sure I have received the MMR vaccine. Should I be immunized before becoming pregnant?

Yes. A rubella infection can cause severe problems in a pregnancy. The effects of measles and mumps, while not as severe as rubella, can still affect a pregnancy. It is recommended that all women of childbearing age who do not have immunity to MMR receive the vaccine before pregnancy. In the U.S. it is recommended that all children be immunized twice before reaching school age, and most women will have been immunized before pregnancy. If you were born outside of the U.S., or are not sure if you have received a vaccination, your health care provider or local health department can perform a blood test to see if your body has antibodies to these viruses.

I just received the MMR vaccine. How long should I wait before becoming pregnant?

The Centers for Disease Control and Prevention (CDC) recommends waiting 28 days after immunization with a rubella-containing vaccine before trying to get pregnant.

I received the MMR vaccine before I knew I was pregnant. Will this harm the baby?

Probably not. In very rare cases, a person who receives the measles vaccine will develop the illness. However, there is information on a large number of pregnancies where a woman received the MMR vaccine during pregnancy. They did not have pregnancy complications and there was no increased rate of birth defects.

I have heard about a chance of autism with vaccines. Is there a chance for autism with the MMR vaccine?

There is no evidence to suggest that getting the MMR vaccine before or during pregnancy, or while breastfeeding would increase the chance for autism in a child. Also, there is no evidence of an increased chance for autism when young children are exposed to these viruses or immunized with the MMR vaccine at the recommended ages.

I am pregnant. Can my child receive the MMR vaccine?

Yes. There is no known risk to others when a child receives the MMR vaccine.

Is there anyone who should not receive the MMR vaccine?

People who have had severe reactions to either the antibiotic neomycin or a reaction to the MMR shot in the past should not receive the vaccine. People taking certain medications or that have health conditions that severely lower their immunity (such as HIV/AIDS or steroid treatments) or have cancer should not receive this vaccine until their immunity improves. Talk to your health care provider if you have concerns about getting this vaccination.

Can I get an MMR vaccine while breastfeeding?

Yes. It is safe for the baby to breastfeed after the mother receives the MMR vaccine. Breastfeeding does not affect how well the vaccine will works in the mother. Be sure to talk to your health care provider about all your breastfeeding questions.

References Available By Request