

# Measles, Mumps, and Rubella (MMR) Get the Facts!

Measles, mumps, and rubella are very serious diseases and easy to catch from a cough or sneeze. The science is clear, this vaccine is safe! Protect yourself and your family—ask your midwife or health care provider about the safety of vaccines.

## Measles

Also known as rubeola, measles is caused by a virus. Due to widespread use of a safe and effective vaccine, measles cases in the United States dropped to an all-time low in 2000.<sup>1</sup> In 2014-2015, the United States experienced a record number of measles cases: more than 800 cases, with 24 outbreaks reported around the country, including Disneyland.<sup>2</sup>

Measles is no longer native to this country. Most US measles cases start when someone who is not immune brings the virus into the United States from abroad and spreads it to others who are not immune, including babies too young to be vaccinated. The risk of getting measles may be very high for unvaccinated US residents who travel abroad. The reason for this high risk is because measles is common in other parts of the world, including countries in Europe, Asia, the Pacific, and Africa. Worldwide, about 20 million people get measles each year.

Measles is so contagious that if one person has it, 90% of the people around him or her will also become infected if they are not protected. It starts with a fever. Soon after, it causes a cough, runny nose, and red eyes. Then a rash of tiny, red spots breaks out. It starts at the head and spreads to the rest of the body. It is highly contagious for up to 4 days before and 4 days after the rash appears, and is spread by secretions from the nose and mouth, and from coughing and sneezing. The virus can also live up to 2 hours on surfaces and in the air where an infected person has coughed or sneezed. Individuals most at risk for complications are children under the age of 5 and adults over 20. Complications include pneumonia, brain damage, deafness, and death.



**Be a  
SUPERMOM**

*Protect yourself and  
your baby! Get vaccinated  
before you are pregnant.*

Illustrations by Abby Hellstrom

The best way to prevent measles is by getting vaccinated with two doses of the measles-mumps-rubella (MMR) vaccine. Complications from measles during pregnancy can be devastating, including a high chance of miscarriage, preterm labor, low birth weight infants, and a high chance the baby will have heart defects and deafness.<sup>3</sup>

## Mumps

Mumps is no longer very common in the United States, but outbreaks have occurred in recent years among those being in close contact, such as sports teams, classrooms, and especially college dormitories. The mumps virus causes an illness that typically starts with fever, headache, muscle aches, loss of appetite, and tiredness. Then most people will get swollen and tender salivary glands under one or both ears. Complications from mumps are rare but can include swelling of the testes in adolescent and adult males. This

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rarely leads to fertility problems. Other rare complications include swelling of the brain and/or tissue covering the brain and spinal cord, inflammation of the ovaries and/or breasts in adolescent and adult females, and deafness. Mumps is spread through sneezing and coughing. An individual can be contagious for a few days before and up to 5 days after the salivary gland swelling begins. The best way to prevent mumps is to be vaccinated with 2 doses of the MMR vaccine. If a pregnant woman gets mumps in early pregnancy, she has a high chance of a miscarriage.

## Rubella

Also known as German measles, or 3-day measles, rubella is a contagious disease caused by a virus. Due to an effective vaccine, rubella was declared eliminated in the United States in 2004. Rubella is usually mild in children. They may have a fever, red rash, and a sore throat. Adults are more likely to have a headache, pink eye, and general discomfort 1 to 5 days before the rash appears. But for some people—especially pregnant women and their babies—rubella can be serious. Rubella is spread by coughing and sneezing. Complications are rare, except in pregnant women. If a pregnant woman gets rubella, her baby has a high chance of having serious birth defects such as heart problems, hearing and vision loss, intellectual disability, and liver or spleen damage. Getting rubella infection during pregnancy can also cause a miscarriage or premature delivery.

## The MMR Vaccine

The MMR vaccine is very safe and highly effective at preventing measles, mumps, and rubella. The MMR vaccine is a live vaccine and should not be given to certain people, including pregnant women, people who were recently vaccinated, or have certain immune disorders or a recent blood transfusion. Pregnancy should be avoided for 4 weeks after receiving the vaccine. Women should be tested for immunity to rubella during pregnancy; if not immune, they should receive the MMR vaccine after pregnancy. It is safe to receive the vaccine while breastfeeding.<sup>4</sup>

There have been claims that the MMR vaccine is linked to developmental delays such as autism. An article making that link, originally published in 1998 with falsified data, was taken out of publication a few years ago.<sup>5</sup> Since then, 20 peer-reviewed articles have been published, all of which conclude there is no association or connection between MMR vaccine and any developmental delays like autism.<sup>6</sup> Vaccines do not cause children to have developmental delays.

All children should receive the MMR vaccine between 1 year and 15 months of age, with a second dose between age 4 and 6 years. Anyone not vaccinated as a child can be vaccinated at any age. Most children do not have any side effects from MMR vaccine. The side effects that do occur are usually very mild, such as fever or rash. More serious side effects are rare. These may include high fever that could cause a seizure (about 1 person out of every 3000 who get the vaccine) and temporary pain and stiffness in joints (mostly in teens and adults).

## REFERENCES

1. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5106a2.htm>
2. <http://www.cdc.gov/measles/cases-outbreaks.html>
3. Miller, E, Cradock-Watson, JE, and Pollock, TM. Consequences of confirmed maternal rubella at successive stages of pregnancy. *The Lancet*, Volume 320, Issue 8302, 9 October 1982, Pages 781–784. DOI: 10.1016/S0140-6736(82)92677-0
4. <http://www.cdc.gov/breastfeeding/recommendations/vaccinations.htm>
5. Retraction—lIeal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. *The Lancet*, Volume 375, Issue 9713, 6–12 February 2010, Pages 445. <http://www.sciencedirect.com/science/article/pii/S0140673610601754>
6. <http://www.immunize.org/catg.d/p4026.pdf>

## ADDITIONAL RESOURCES

<http://www.cdc.gov/measles/>  
<http://www.cdc.gov/rubella/>  
<http://www.cdc.gov/mumps/about/index.html>

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