



MEASLES, MUMPS, AND RUBELLA (MMR)

1. Why get vaccinated?

Measles, mumps, and rubella are serious diseases.

Measles

- Measles virus causes rash, cough, runny nose, eye irritation, and fever.
- It can lead to ear infection, pneumonia, seizures (jerking and staring), brain damage, and death.

Mumps

- Mumps virus causes fever, headache, and swollen glands.
- It can lead to deafness, meningitis (infection of the brain and spinal cord covering), painful swelling of the testicles or ovaries, and, rarely, death.

Rubella (German Measles)

- Rubella virus causes rash, mild fever, and arthritis (mostly in women).
- If a woman gets rubella while she is pregnant, she could have a miscarriage or her baby could be born with serious birth defects.

You or your child could catch these diseases by being around someone who has them. They spread from person to person through the air.

Measles, mumps, and rubella (MMR) vaccine can prevent these diseases.

Most children who get their MMR shots will not get these diseases. Many more children would get them if we stopped vaccinating.

2. Who should get MMR vaccine and when?

Children should get 2 doses of MMR vaccine:

- The first at 12-15 months of age
- And the second at 4-6 years of age.

3. Some people should not get MMR vaccine or should wait

* People should not get MMR vaccine who have ever had a life-threatening allergic reaction to gelatin, the antibiotic neomycin, or to a previous dose of MMR vaccine.

TRAVEL VACCINATION CENTER

Somerset Professional Plaza • 1527 Rt. 27 South • Suite 1600 • Somerset NJ 08873

Dayton Professional plaza, 401 Ridge Rd. Dayton, NJ 08810

(732) 418-1700 • Fax (732) 249 9599



* People who are moderately or severely ill at the time the shot is scheduled should usually wait until they recover before getting MMR vaccine.

* Pregnant women should wait to get MMR vaccine until after they have given birth. Women should avoid getting pregnant for 4 weeks after getting MMR vaccine.

* Some people should check with us about whether they should get MMR vaccine, including anyone who:

- Has HIV/AIDS, or another disease that affects the immune system
- Is being treated with drugs that affect the immune system, such as steroids, for 2 weeks or longer.
- Has any kind of cancer
- Is taking cancer treatment with x-rays or drugs
- Has ever had a low platelet count (a blood disorder)

* People who recently had a transfusion or were given other blood products should ask their doctor when they may get MMR vaccine

4. What are the risks from MMR vaccine?

A vaccine, like any medicine, is capable of causing serious problems, such as severe allergic reactions. The risk of MMR vaccine causing serious harm, or death, is extremely small.

Getting MMR vaccine is much safer than getting any of these three diseases.

Most people who get MMR vaccine do not have any problems with it.

Mild Problems

- Fever (up to 1 person out of 6)
- Mild rash (about 1 person out of 20)
- Swelling of glands in the cheeks or neck (rare)

If these problems occur, it is usually within 7-12 days after the shot. They occur less often after the second dose.

Moderate Problems

- Seizure (jerking or staring) caused by fever (about 1 out of 3,000 doses)
- Temporary pain and stiffness in the joints, mostly in teenage or adult women (up to 1 out of 4)
- Temporary low platelet count, which can cause a bleeding disorder (about 1 out of 30,000 doses)

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Severe Problems (Very Rare)

- Serious allergic reaction (less than 1 out of a million doses)
- Several other severe problems have been known to occur after a child gets MMR vaccine. But this happens so rarely, experts cannot be sure whether they are caused by the vaccine or not. These include:
 - Deafness
 - Long-term seizures, coma, or lowered consciousness
 - Permanent brain damage

5. What if there is a moderate or severe reaction?

Any unusual conditions, such as a serious allergic reaction, high fever or behavior changes. Signs of a serious allergic reaction include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness within a few minutes to a few hours after the shot. A high fever or seizure, if it occurs, would happen 1 or 2 weeks after the shot.

What should I do?

- Call a doctor, or get the person to a doctor right away.
- Ask your doctor, or yourself file a Vaccine Adverse Event Reporting System (VAERS) form. Or call VAERS yourself at 1-800-822-7967 or visit their website at <http://www.vaers.org>

6. The National Vaccine Injury Compensation Program

In the rare event that you or your child has a serious reaction to a vaccine, a federal program has been created to help you pay for the care of those who have been harmed.

For details about the National Vaccine Injury Compensation Program, call 1-800-338-2382 or visit the program's website at <http://www.hrsa.gov/osp/vicp>

MMR and autism

What You Should Know

- Because signs of autism may appear at around the same time children receive the MMR vaccine, some parents may worry that the vaccine causes autism.
- Carefully performed scientific studies have found no relationship between MMR vaccine and autism.
- The CDC continues to recommend two doses of MMR vaccine for all children.

Additional Facts

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- In 1998, a study of autistic children raised the question of a connection between MMR vaccine and autism.
- The 1998 study has a number of limitations. For example, the study was very small, involving only 12 children. This is too few cases to make any generalizations about the causes of autism. In addition, the researchers suggested that MMR vaccination caused bowel problems in the children, which then led to autism. However, in some of the children studied, symptoms of autism appeared *before* symptoms of bowel disease.
- In 2004, 10 of the 13 authors of the 1998 study retracted the study's interpretation. The authors stated that the data were not able to establish a causal link between MMR vaccine and autism.
- Other larger studies have found no relationship between MMR vaccine and autism. For example, researchers in the UK studied the records of 498 children with autism born between 1979 and 1998. They found:
 - The percentage of children with autism who received MMR vaccine was the same as the percentage of unaffected children in the region who received MMR vaccine
 - There was no difference in the age of diagnosis of autism in vaccinated and unvaccinated children
 - The onset of "regressive" symptoms of autism did not occur within 2, 4, or 6 months of receiving the MMR vaccine.
- Groups of experts, including the American Academy of Pediatrics, agree that MMR vaccine is not responsible for recent increases in the number of children with autism. In 2004, a report by the Institute of Medicine (IOM) concluded that there is no association between autism and MMR vaccine or vaccines that contain thimerosal as a preservative.
- There is no published scientific evidence showing that there is any benefit to separating the combination MMR vaccine into three individual shots.

For more information

- For information on Autism Spectrum Disorders - <http://www.cdc.gov/ncbddd/dd/ddautism.htm>
- For in-depth information on the MMR and autism theory <http://www.cdc.gov/nip/vacsafe/concerns/autism/autism-mmr.htm>
- National Immunization Hotline:
English (800) 232-2522
Spanish (800) 232-0233

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