

MMR Vaccine

Concern: I have heard people say that the MMR vaccine causes autism.

General Responses:

- Autism is a burden for many families and people want answers - including me. But well-designed and conducted studies that I can share with you show that MMR vaccine is not a cause of autism.
- Scientists in the United States and other countries have carefully studied the MMR shot. None has found a link between autism and the MMR shot.

Risk of Disease:

Measles, mumps and rubella are highly contagious diseases caused by viruses and are spread to other people when the infected person coughs or sneezes. In fact, all of these viruses can be spread even before a rash (measles, rubella) or swelling (mumps) appears.

Measles:

- Can be easily spread to anyone who is not protected. If an infected person coughs or sneezes and leaves the room, the virus will still be in the air for at least 2 hours.
- Starts with high fever which is generally followed by a cough, runny nose, red eyes and a rash of tiny red spots that will eventually cover the whole body.
- For some children, it can lead to pneumonia, lifelong brain damage, deafness. Even with the best of care, 1 to 3 children per 1,000 who get measles will die from the disease.
- Countries, including the U.S., that have seen a decrease in MMR vaccination rates over the last several years are now seeing a large increase in the number of measles cases.

Mumps:

- Symptoms usually last for about 7-10 days and include fever, headache, muscle aches, and swollen glands.
- It can cause serious, lasting problems for some people such as meningitis, deafness, swelling of the brain and swelling of the testicles or ovaries.

Rubella:

- While the infection is generally mild with a fever and rash, it can be very dangerous for a pregnant woman.
- Rubella disease during pregnancy can lead to miscarriage, or the baby can be born with birth defects.

Benefit of Vaccination:

- MMR vaccine works!
- 2-5% of children who receive only 1 dose of MMR vaccine fail to respond to it.
- Most persons who fail to respond to the 1st dose will respond to a second dose.
- Studies indicate that more than 99% of persons with 2 doses will develop immunity.

Measles was almost eliminated from the United States. However, measles still rages throughout developing countries and is one of the leading causes of death worldwide.

- In the late 1980s and early 1990s in the United States, low immunization rates against measles were associated with epidemics of measles. About 11,000 people were hospitalized and 120 killed by measles virus.
- In recent years, we have started to again see outbreaks of measles in the U.S. Because the measles vaccine has no serious permanent side effects, its benefits still clearly outweigh its risks.

MMR Vaccine

In 2009 and 2010, a **Mumps** outbreak that started at a summer camp affected more than 1,500 people.

- In 2012, the Centers for Disease Control and Prevention (CDC) had reports of about 200 cases of mumps.
- Because the mumps virus has the potential to infect the brain and cause permanent deafness, and the mumps vaccine does not have serious side effects, the benefits of the mumps vaccine outweigh its risks.

In 2012, eight cases of **rubella** were reported to the CDC and three babies were born to women infected with rubella before coming to the U.S. One of the three babies died, and the remaining two will live with permanent disabilities.

- Rubella has been virtually eliminated from the United States; however, it is still quite common in many other regions (for example, China and Bangladesh).
- Because the rubella vaccine does not cause serious, permanent side effects, the benefits of the rubella vaccine still outweigh its risks.

Resources (*Available in Spanish)

CDC

*Measles and the Vaccine (Shot) to Prevent It

<http://www.cdc.gov/vaccines/vpd-vac/measles/downloads/PL-dis-measles-bw-office.pdf>

*Mumps and the Vaccine (Shot) to Prevent It

<http://www.cdc.gov/vaccines/vpd-vac/mumps/downloads/PL-dis-mumps-bw-office.pdf>

*Rubella and the Vaccine (Shot) to Prevent It

<http://www.cdc.gov/vaccines/vpd-vac/rubella/downloads/PL-dis-rubella-bw-office.pdf>

Children's Hospital of Philadelphia

*Vaccines and Autism - what you should know

<http://vec.chop.edu/export/download/pdfs/articles/vaccine-education-center/autism.pdf>

Ari Brown, MD, FAAP

Clear Answers and Smart Advice about your Baby's Shots

<http://www.immunize.org/catg.d/p2068.pdf>

Immunization Action Coalition

MMR Does Not Cause Autism - Examine the Evidence!

<http://www.immunize.org/catg.d/p4026.pdf>

American Academy of Pediatrics (Not a handout)

(Link to further information regarding MMR Vaccine and Autism)

<http://www2.aap.org/immunization/families/mmr.html>