

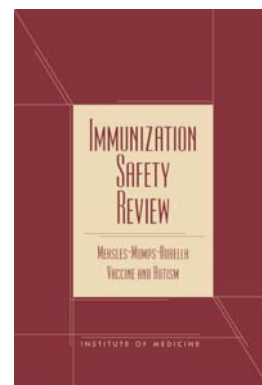
INSTITUTE OF MEDICINE

Shaping the Future of Health

FREQUENTLY ASKED QUESTIONS

Measles-Mumps-Rubella Vaccine and Autism

At the request of the Centers for Disease Control and Prevention and the National Institutes of Health, the Institute of Medicine (IOM), an arm of the National Academy of Sciences, evaluated whether the MMR vaccine causes autism. In *Immunization Safety Review: Measles-Mumps-Rubella Vaccine and Autism*, the IOM committee carefully examines the hypothesized MMR-autism link and addresses other vaccine-safety issues.



What is the MMR vaccine?

The MMR vaccine protects against three different diseases (measles, mumps, and rubella) through one shot made up of three separate vaccines. The shot is given twice during childhood. The MMR vaccine has been very successful in making the serious childhood diseases of measles, mumps, and rubella (German measles) very uncommon. For example, before the vaccine was given to children, there were about 400,000 measles cases reported each year in the United States but in 1999 there were only 100 cases reported.

What is autism?

Autism is a severe and permanent developmental disorder. Children with autism mainly have problems interacting and communicating with others. Parents usually notice difficulties in language skills when their child is around two years old.

What causes autism?

Autism is complex, and scientists are still trying to understand what causes it. Researchers believe that genetics play a big part in causing autism and that other medical or environmental factors may also be involved. Researchers believe that most cases of autism begin before or shortly after birth.

Why is there concern about the MMR vaccine causing autism?

A small study in London in 1998 first raised the possibility that autism is linked to the MMR vaccine. While the study did not prove that MMR causes autism, it did increase the level of concern of many parents.

The question whether MMR vaccine causes autism has also been raised because the number of cases of autism in the general population seems to be growing, and some parents have noticed the developmental problems occurring soon after their child receives the MMR vaccine.

Does the MMR vaccine cause autism?

After reviewing all of the studies, including the study from London, which raised the possibility of an association between MMR and autism, the Institute of Medicine has found that the evidence suggests no link at the population level between MMR and autism. The committee does believe, however, that the studies they reviewed do not rule out the possibility that in some rare cases, autism might be associated

with the MMR vaccine. The IOM recommends further research in order to investigate this rare possibility and to understand better the causes of autism in general.

Is the MMR vaccine safe?

No vaccine is 100% safe. Vaccines can cause minor side effects such as fevers or rashes and can sometimes also result in some serious side effects. Like medications, however, the MMR vaccine and all other vaccines have to pass safety testing required by the government before they are used. To learn more about the potential side effects of vaccines please talk to your doctor.

What are the risks of not vaccinating with MMR?

Measles caused over a million deaths in children around the world last year, mainly in countries without widespread vaccinations. A decline in the number of children who are vaccinated could cause an increase in the number of measles, mumps, and rubella cases and sickness (such as pneumonia and brain damage) and much death in the United States. For example, before measles vaccines were introduced, 1-2 children died out of every 1000 children who got measles.

Should I not have my child vaccinated with MMR until more is known about the risks of getting autism?

It is not clear that there is any risk at all of getting autism from MMR vaccine. After evaluating the scientific evidence, the committee supports the advice of pediatricians that people should continue getting their children vaccinated using the current recommended dose schedule.

Would it be better to vaccinate my child with separate measles, mumps, and rubella vaccines rather than the MMR vaccine?

The committee did not specifically look at this question and supports the current recommended dose schedule.

Where can I get more information on this issue?

You should discuss with your doctor any concerns or questions you have regarding your child's vaccinations. You can learn more about the Immunization Safety Review Committee and read the full report titled *Immunization Safety Review: Measles-Mumps-Rubella Vaccine and Autism* at www.iom.edu/imsafety. From this website, you may also download copies of the FAQ, and report summary. To contact the project staff, please email (imsafety@nas.edu) or phone us (202/334-1342).

Any adverse effects experienced by your child after a vaccination should be reported to your doctor. Additional reporting information can be found through:

Vaccine Adverse Event Reporting System
1-800-922-7967 or <http://www.vaers.org/vaers.htm>

National Vaccine Injury Compensation Program
1-800-338-2382 or <http://bhpr.hrsa.gov/vicp/qanda.htm>

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