

MMR (Measles, Mumps, and Rubella) Vaccine

Benefits of the MMR vaccine

Protects against measles infection. Measles can cause fever, cough, rash and ear infections. It can lead to pneumonia, and 1 in 1000 children who get measles die.

Protects against mumps infection. Mumps causes a fever, soreness, and significant swelling of the face. It can lead to complications such as sterility, inflammation of the brain, and deafness.

Protects against rubella infection. Rubella causes a rash, fever, and aching joints. If a pregnant woman gets rubella, her child has a 20% chance of developing birth defects such as mental retardation, heart defects, and deafness.

Keeps others safe. Not every child can get vaccinated due to allergies. To avoid measles and other contagious diseases, these children rely on the community getting vaccinated.

Side effects of the MMR Vaccine

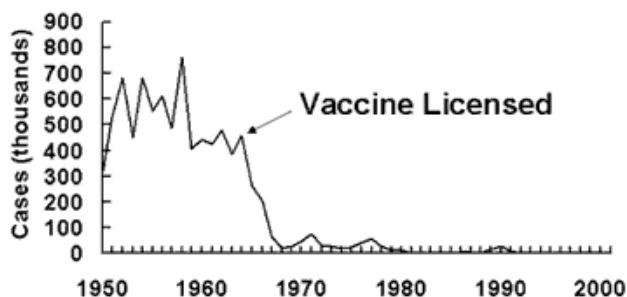
The MMR vaccine has some potential side effects. These include a mild fever lasting 1-2 days (1 out of 6 people), a mild rash (1 out of 20 people), and swelling of glands in the neck (1 out of 75 people). Rarer, more serious side effects include seizure (1 out of 3,000 people), and a severe allergic reaction (less than 1 in 1 million people).

Concerns about the MMR vaccine

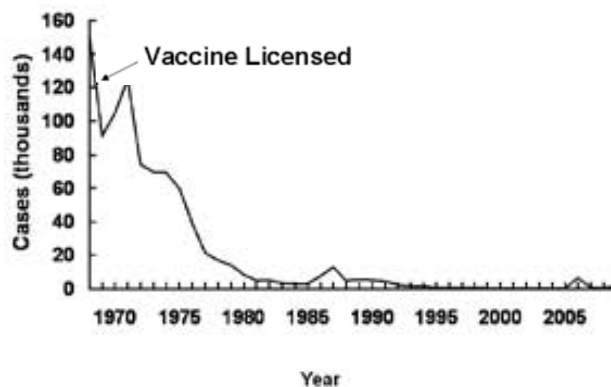
Is the MMR vaccine linked to autism?

There is currently a very strong scientific consensus that the MMR vaccine does not cause autism. The rumors about the connection to autism started when Andrew Wakefield published a study seeming to show a connection between the two. It was later revealed that he had falsified his data, and had his medical license revoked for professional misconduct. At least 30 studies involving 15 million children since then have not found any connection between the vaccine and autism.

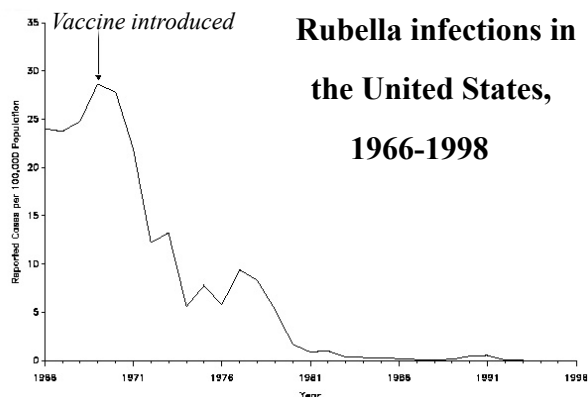
Measles—United States, 1950-2001



Mumps infections in the United States, 1967-2008



Rubella infections in the United States, 1966-1998



Isn't it true that the MMR vaccine isn't 100% effective?

Yes, but it's pretty close. After two doses of the vaccine, 99% of children are protected from measles, 97.4% from mumps, and 99.9% from rubella.

Weren't the rates of measles, mumps, and rubella falling before the vaccine was introduced?

In some cases— but vaccines are the main factor in their decline. If you look at the graphs above, you can see that there were fluctuations in the number of cases in each disease before the vaccines were introduced. However, it is only after the introduction of the vaccines that rates dropped to close to zero.

Where does the MMR vaccine come from?

The rubella portion of the vaccine comes from a line of fetal stem cells. The mumps and measles portion of the vaccine comes from animal cell lines.

Does the MMR vaccine contain aluminum, mercury, formaldehyde, or thimerosal?

No, the MMR vaccine does not contain any of these substances.

What are the biases of the sources used for this handout?

The sources used for this handout are the Center for Disease Control (CDC), Public Health Agency of Canada (PHAC), the American Academy of Pediatrics (AAP), and the Children's Hospital of Philadelphia (CHoP). While some employees at the CDC, PHAC, AAP, and CHoP have ties to pharmaceutical companies, all those organizations are up-front about these connections. The CDC in particular took steps in 2006 to make its vaccine recommendation unit more independent and less subject to bias.

References:

<http://www.cdc.gov/vaccines/vac-gen/side-effects.htm#mmr>

<http://www.cdc.gov/measles/>

<http://www.cdc.gov/rubella/>

<http://www.cdc.gov/mumps/>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/00053391.htm>

<http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-meas-roug-eng.php#effimm>

<http://www.chop.edu/service/vaccine-education-center/vaccine-safety/vaccine-ingredients/fetal-tissues.html>

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

<http://www.chop.edu/service/vaccine-education-center/vaccine-safety/vaccine-ingredients/thimerosal.html>

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

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