



MY SECOND HOME PEDIATRICS

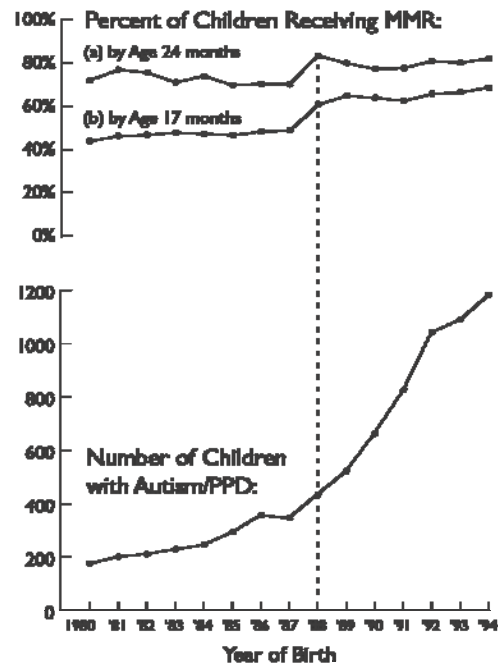
Should I vaccinate my child?

There has been a great deal of controversy lately regarding the administration of vaccines to children. A great deal of the controversy has been formed around the idea that vaccines cause autism or other neurological effects. The two items that have received the greatest amount of press have been the MMR vaccine and the vaccine preservative, thimerosal. We, at My Second Home Pediatrics, have put together this handout to assist you in making an informed decision about vaccinating your child.

What is the research on the link of the MMR vaccine to causing autism?

- California Data on Theory of Autism and MMR Immunization, see <http://www.dds.ca.gov/Autism/main/incidencrptfinal.pdf>

**The study looked at the percent of children born in 1980-1994 and enrolled in California kindergartens who received the MMR vaccine, by age when the vaccine was received, and the number of autism cases enrolled in the California Department of Developmental Services regional service center system. The number of autism cases in California increased greatly, over 373%, compared to only a small 14% increase in MMR vaccine coverage in children for the same time period. If there were a relationship between MMR vaccination and autism, one would expect the shape of the MMR immunization level curve to be very similar to the shape of the autism case number curve. This is not the case, thus the analysis in this study does not support any link between MMR vaccination and autism.



What is the research on the link of the preservative, thimerisol, to causing autism?

- CDC's Vaccine Safety Datalink study, see <http://www.cdc.gov/nip/vacsafe/concerns/thimerosal/researchQAs.htm#findings>

**The final results of this study found no consistent statistically significant associations between exposure to vaccines that contained thimerosal as a preservative and a wide range of neurodevelopmental problems, including autism, attention deficit disorder (ADD), language delays, sleep disorders, emotional disorders, and tics. None of the results found any associations with autism or ADD. Since it is necessary to first establish there is an association between two things (often called "variables"), the results from this study suggest there is not a "cause and effect" relationship between thimerosal and autism or ADD.

Why is thimerosal in vaccines and what started the controversy?

- Thimerosal is used as a preservative in some multi-dose vials of vaccines to prevent contamination. A review conducted by the Food and Drug Administration (FDA) concluded that the use of thimerosal as a preservative in vaccines might result in the intake of mercury during the first 6 months of life that exceeds the Environmental Protection Agency (EPA), but not the FDA, the Agency for Toxic Substances and Disease Registry (ATSDR), or the World Health Organization (WHO) guidelines for *methylmercury* intake (Ball et al., 2001). Thimerosal contains *ethylmercury*. Methylmercury is a related compound and has been more thoroughly researched than ethylmercury. Thus, federal safety standards are based on information we have about methylmercury.

FDA's review found no evidence of harm caused by doses of thimerosal in vaccines, except for minor local reactions (Ball et al., 2001). Nevertheless, in July 1999 the Public Health Service agencies (PHS), the American Academy of Pediatrics (AAP), and vaccine manufacturers agreed that thimerosal levels in vaccines should be reduced or eliminated as a precautionary measure, and the Food and Drug Administration (FDA) committed to expediting the review of new vaccines that do not contain thimerosal.

Therefore, thimerosal is no longer used as a preservative in routine childhood vaccinations. The only vaccine that has thimerosal in very small amounts is the influenza vaccine and there are thimerosal free vaccines available.

Why should I vaccinate my child if diseases like Measles, Mumps and Rubella don't even exist in the US any longer?

- In other parts of the world, many vaccine preventable diseases are very prevalent, even epidemic in some countries. Travelers can unknowingly bring these diseases into the United States, and if we were not protected by vaccinations these diseases could quickly spread throughout the population. At the same time, the relatively few cases we currently have in the US could very quickly become tens or hundreds of thousands of cases without the protection we get from vaccines.

What is the process for assuring that vaccines are safe for children?

- Please see the FDA website at the following address, indicating how safety and efficacy of vaccines is assured:
http://www.fda.gov/fdac/features/095_vacc.html

** Vaccines go through a number of safety and efficacy evaluations in the laboratory followed by clinical trials in animals, then in humans. Phase 1 clinical trials usually have between 20-100 volunteers and focus on detecting serious side effects. Phase II clinical trials usually involve several hundred volunteers and take anywhere from a few months to three years. Phase II trials focus on the body's immune response to vaccines. Phase III clinical trials involve thousands of volunteers, where some receive an already approved vaccine and others receive the vaccine under trial to compare for adverse health effects. After passing Phase III, the manufacturer applies for a license from the FDA, which is only granted after the vaccine has met rigorous standards of efficacy and safety and when its potential benefits in preventing disease clearly outweigh its risks.

Vaccines save lives.

We, at My Second Home Pediatrics, believe in the safety and efficacy of vaccines and trust the CDC and FDA in their research and recommendations for vaccine use. In the not too distant past, our parents and grandparents struggled with the devastating effects of paralysis from polio, death from diphtheria and meningitis from HIB. All of these illnesses now have been eradicated from our country with the use of vaccines. When considering the risks of vaccines vs the risks of actually getting one of the vaccine preventable diseases, see chart below from the CDC.

| Risk from Disease versus Risk from Vaccines |
|--|
| DISEASE Measles Pneumonia: 6 in 100 Encephalitis: 1 in 1,000 Death: 2 in 1,000 Rubella Congenital Rubella Syndrome: 1 in 4 (if woman becomes infected early in pregnancy) |
| VACCINES MMR Encephalitis or severe allergic reaction: 1 in 1,000,000 |
| DISEASE Diphtheria Death: 1 in 20 Tetanus Death: 2 in 10 Pertussis Pneumonia: 1 in 8 Encephalitis: 1 in 20 Death: 1 in 200 |
| VACCINES DTaP Continuous crying, then full recovery: 1 in 1000 Convulsions or shock, then full recovery: 1 in 14,000 Acute encephalopathy: 0-10.5 in 1,000,000 Death: None proven |

Because we see side effects from vaccinations much more frequently than the actual diseases themselves, it is easy to casually say that vaccines are not safe and the actual diseases "not that bad". We truly cannot appreciate how fortunate we are to have vaccines that have eliminated diseases like the measles from our country, which still kills 450,000 children each year worldwide.

See this article from Nepal:

<http://www.nytimes.com/2006/04/30/world/asia/30measles.html?ex=1304049600&en=956c44efcf97ab34&ei=5088&partner=rssnyt&emc=rss>

Another thought to consider is that there are some children who are either allergic or immunocompromised and cannot receive vaccines. These children can benefit from the "herd effect" of all other children being vaccinated to provide a buffer from any disease that may enter the country. However, if we are not vaccinating our well children, this "herd effect" will no longer be applicable and outbreaks will quickly recur.

Will such a large number of antigens introduced into the infant's small body be harmful to their immune system?

There is no evidence to suggest that the recommended childhood vaccines can "overload" the immune system. From the moment babies are born, they are exposed to numerous bacteria and viruses on a daily basis. Eating food introduces new bacteria into the body, numerous bacteria live in the mouth and nose, and an infant places his/her hands or other objects in his/her mouth hundreds of times every hour, exposing the immune system to still more antigens. An upper respiratory viral infection exposes a child to 4 - 10 antigens, and a case of "strep throat" to 25 - 50.

Should you decide not to vaccinate your child:

My Second Home Pediatrics requires that you sign a refusal to vaccinate form that will be updated at each visit, with a reminder of the reasons for your signature. It will be stated to you that in not vaccinating your child, you understand that by not vaccinating, serious illness and even death can occur.

We feel that the benefits of vaccines far outweigh the risks. You should know that if your child is not vaccinated, he or she must be treated differently than our vaccinated patients. Because your child will not be immunized, fevers and mild illnesses will be taken more seriously with a lower threshold for emergency room visits. The reason for this precaution is that we will not have a way of knowing if your child is infected with a much more serious pathogen than children who are immunized.

We respect each parents' individuality but we want you all to know where we stand on immunizations. We also strongly urge you NOT to browse the internet for information because you will find the scary things that you are looking for- which are not the facts as reported by the CDC and FDA. Please feel free to browse these reputable websites (CDC & FDA) and also ask us any questions you may have.

Information for this handout was taken from the Center for Disease Control (CDC) and Food and Drug Administration (FDA) websites.