

# Beware of the Autism-Vaccine Link

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This article is adapted from a guest editorial published in the *Orange County Register* in response to the publicized autism-vaccine link controversy in April.

There has been quite a bit of publicity recently about the possible relationship between vaccines and children with autistic spectrum disorder. Three of the main vaccine-related concerns expressed by parents are issues with: mercury, live measles vaccine, and giving multiple vaccines on the same day. All three concerns have been thoroughly studied, and the facts are as follows:

Mercury is known to cause injury to the brain (as are other heavy metals). However, the areas of the brain affected in mercury toxicity are different than the areas affected by autism, and the areas of the brain affected in autism are spared in mercury poisoning. In addition, the mercury that was formerly used in children's vaccines, ethyl mercury, is excreted far more rapidly than the much more toxic methyl mercury that is pervasive in the air, foods (especially fish), and even breast milk. In fact, breastfeeding infants ingest an average of 360 micrograms of the more toxic methyl mercury in the first six months of life, about double the total of the far less toxic ethyl mercury that was in all of the vaccines combined prior to its removal in children's vaccines in California. The presence of mercury in breast milk has not reduced strong pediatric support of breastfeeding.

The association of measles vaccine with autism came about from a paper published in the British medical journal *Lancet* in 1998 by Dr. Andrew Wakefield. He described eight children that he said developed autism soon after receiving the Measles-Mumps-Rubella (MMR) combination vaccine. John O'Leary, a molecular biologist, said he saw measles virus in intestinal photos of these children. However, other molecular biologists looking at the same

photos did not corroborate his findings. Numerous scientific studies have failed to confirm Dr. Wakefield's findings. Eventually, ten of the original thirteen authors of Wakefield's study repudiated his finding. The General Medical Council of England filed eleven misconduct charges against him. The fallout from the publicity of his "theory" was devastating. In England, the rate of autism in measles vaccinated and non-vaccinated children was known to be identical (as it is in Denmark and other countries that track this data). Despite that fact, the anxiety that spread from this unproven theory led to 100,000 children in England and Ireland not receiving the measles vaccine. This resulted in a mini-epidemic with scores of hospitalized children and many deaths. In one small hospital in Ireland alone, 100 children were hospitalized with measles with three deaths. In late January 2008, a non-vaccinated, seven-year-old San Diego child that had been in Switzerland came down with measles. In very rapid succession, eleven additional cases developed, despite public health attempts to control the spread of this serious illness. One child was hospitalized. None of these children had been vaccinated. Prior to the availability of measles vaccine, there were 3-4 million cases per year resulting in 450 deaths and thousands left with chronic disability from measles encephalitis. Measles is very contagious. It has been calculated that if only 80% of children become vaccinated against measles, an epidemic is likely. As a resident, I experienced a beautiful 15-month-old child with measles encephalitis die in my arms.

The last concern, an alternative vaccinating schedule that changes the six vaccines recommended at each of the 2, 4, and 6 month infant office visits into two vaccines at each visit, not only has no data to validate that this schedule is safer, it makes little sense. The FDA will not approve new vaccines unless the studies show that they provide equal protection and are as safe when separated or given the same day. That means that there is no "overwhelming" of the immune system. However, the separating-vaccine schedule triples visits to the doctor's office. That means three times the exposure of young, infection-susceptible infants to other patients and even medical personnel that can spread disease (yes, doctors and their employees are potential disease spreaders) and three times as many automobile trips and their attendant risk. This schedule also puts children at risk by delaying protection from vaccine-protecting, serious, life-threatening illnesses. It also leads to more expensive healthcare.

A better method of allaying parental vaccine fear is to educate them on the facts of the controversy and refer them to reliable information sources. The public must have trust that the American Academy of Pediatrics, the Centers for Disease Control, and the Institute of Medicine all have the welfare of children as their goal. Pediatricians are also desperately seeking answers to the causes of autism, but we want answers based on well-done scientific studies not unfounded opinions. We need to focus our attention and precious resources on facts not coincidence. ❖

