



Why Parents Should Vaccinate Their Children

By Karen Lewis, M.D.

Medical Director, Arizona Immunization Program Office
Arizona Department of Health Services

Parents have to make many decisions about their children's health. This includes deciding about childhood vaccines. The Centers for Disease Control and Prevention and the American Academy of Pediatrics say that children should be immunized as soon as possible against 15 vaccine-preventable diseases. However, many parents worry about vaccine side effects. Sometimes they choose to delay vaccines or not to give them at all.

Sixty years ago, parents were much more worried about the side effects of diseases than about side effects from vaccines. Most people knew of someone whose child had been paralyzed by polio, hospitalized with measles, deafened by German measles (rubella), brain damaged from meningitis, or killed by whooping cough. As more and more vaccines became available, most parents did not ever see any vaccine-preventable diseases.

In the 1930s, scientists developed a whooping cough vaccine that was good at preventing whooping cough and death. However, the vaccine was not as purified as the current vaccine. It often caused high fevers as well as redness, swelling, and pain at the vaccine site. As this whooping cough vaccine was used, fewer children got ill and died from whooping cough. For example, in the United States in 1950, there were 120,718 reported cases of whooping cough and 1,118 deaths. By 2005, there were only 25,616 reported cases and 31 deaths.

As whooping cough disappeared, parents did not see how terrible it was. Instead, their attention was naturally drawn to vaccine reactions like fever, redness, swelling, and pain. For awhile, some parents stopped giving their children whooping cough vaccine because they were worried that it might cause a serious illness. Then a new, more purified vaccine was developed that caused less fever and other reactions, so parents didn't worry as much about side effects from the whooping cough vaccine.

It is important to remember that just because an illness happens after a vaccine does not mean that it was caused by the vaccine. What if someone put gas in a car's gas tank and soon after there was a flat tire? Does that mean that there was a cause-and-effect relationship and that it was bad gas that caused the flat tire? We all know that this is not the case—they were two completely separate things and one just happened to come after the other.

In order to study which illnesses are caused by vaccines and which happen just by chance, scientists give the vaccine to one group of people but not to another group. They then study what illnesses happen in both groups. Illnesses that only happen in the vaccinated group are shown to be caused by the vaccine. Illnesses that happen in *both* groups are shown to have happened just by chance. By such studies, scientists have shown that vaccines are very safe.

Doctors and parents are sometimes saying different things when they ask the question "Are vaccines safe?" When doctors say that vaccines are very safe, they have examined studies in hundreds of thousands of patients and know that serious vaccine reactions are not common. On the other hand,

when a parent asks “Are vaccines safe?” the parent is really asking “Is my child going to get sick after this shot?” It is important to remember that some children will get sick after vaccinations with an illness that has nothing to do with the shot. Childhood shots will not protect against illnesses that children are going to develop anyway.

Measles vaccine has gotten rid of most cases of measles in the United States. In 1950, there were 319,124 reported cases of measles and 468 deaths. As more children were vaccinated, the numbers of measles cases and deaths decreased. In 2005, there were only 66 reported cases of measles and one death. However, parents started to worry about measles vaccines after a *Lancet* journal article by Dr. Andrew Wakefield in 1998. The article suggested that there was a link between the measles vaccine and autism. Most parents had never seen a case of measles, but they knew about autism and were frightened by it. So, more and more parents started having their children skip the measles vaccine “just to be on the safe side.” This has led to many outbreaks of measles in areas of the world that had almost gotten rid of measles.

Over 20 studies have tested if vaccines could cause autism. No connections between vaccines and autism have been found in these studies. However, some parents are sure that their child’s autism was caused by the vaccine, explaining that their child was normal before the vaccine. The example of putting gas in a gas tank and then having a flat tire applies here. Just because something happens after a vaccine doesn’t mean that it is caused by the vaccine. Yet, when parents are dealing with the difficulties of autism, it is sometimes hard to step back and see the difference.

When the findings of Dr. Wakefield’s study could not be copied by other scientists, people started questioning the results. Problems with the study were so serious that Dr. Wakefield had his license to practice medicine in the United Kingdom taken away. Also, other investigations showed that Dr. Wakefield’s claims were all a fraud. Brian Deer, a newspaper reporter in the UK, found that Dr. Wakefield had been paid a lot of money to find “evidence” for lawyers who were trying to sue vaccine manufacturers. Deer showed how Wakefield took advantage of the measles vaccine scare for his own financial gain (www.briandeer.com).

Although Dr. Wakefield’s claims have been shown to be a fraud, they have already caused a lot of damage. Parents are more distrustful of vaccines, and sometimes demand alternate schedules or even no vaccines. Alternate schedules have not been studied to see if they are safer, and delaying vaccines leaves the child open to getting vaccine-preventable diseases. Also, the family who decides not to vaccinate their own children put others at risk. The unimmunized child can get infected and spread the infection to others.

In addition, Dr. Wakefield’s fraud has contributed to taking money and energy away from research into understanding the real causes of autism and how to help children and families who live with it.

We are lucky to live in a time when vaccines can protect children against 15 serious diseases. Vaccines prevent infections and save lives. Vaccinating children protects not only the child, but also protects the rest of us. Vaccines are very good. Vaccine-preventable diseases are very bad. Please vaccinate your children fully, on schedule, and as soon as possible to protect them and the rest of us.