



Why Parents Should Vaccinate Their Children

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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,