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Vaccines: The real risk is in forgoing them

Vaccines continue to be the most common topic of conversation in pediatricians' offices. Discussions regarding the potential complications from "baby shots" have been front and center in the media, causing concern and anxiety amongst parents of infants and toddlers.

Any mention of standard vaccinations generates the same three questions: Are vaccines necessary? Are vaccines safe? Do vaccines cause autism?

In many ways, routine vaccination has become a victim of its own success. In the last 20 years we have vaccinated over 100 million American children. Immunization rates are at an all time high in the United States, and epidemic disease is at an all time low.

We are now more than a generation away from the last epidemic. The vast majority of today's parents, having never experienced these horrific diseases, have no understanding of the suffering involved when someone contracts polio, measles, tetanus, diphtheria, pneumococcal meningitis, haemophilus meningitis, mumps, or hepatitis. They ask why we continue to immunize kids against non-existent disease.

On the surface, it may seem appropriate for parents to "protect" their children from the implied perils of vaccines by refusing to have them vaccinated. The reality, however, is quite different. Vaccines work by protecting individuals when they are exposed to specific "germs." In protecting individuals, they protect the community, as well.

If a very high percentage (over 90 percent) of children are immunized, there is group or, what we call in medicine, "herd" immunity. (For some, vaccination doesn't work or can't be administered, as in cases of immune deficient or cancer patients). Given our mobile society each of us may be only a plane ride away from any one of these diseases, we must depend on one another for much of our protection.

These are not insignificant issues. Haemophilus influenza is just one example. Before the haemophilus influenza vaccine became available, 20,000 children under the age of five in the United States contracted Hib meningitis each year and 1,000 of them died. Today we rarely encounter this disorder. However, there is currently a small outbreak of measles in San Diego, and, as physicians, we worry that, if vaccination rates fall, the entire country will be at risk.

As with all medications, there can be side effects and long term complications from vaccines. At times, they can cause minor illness such as the aches, pains and fevers associated with the vaccine for influenza. Varicella vaccination can result in very mild cases of chicken pox.

We seek to avoid possible complications through close surveillance and scrutiny of vaccines. For example, in the United States, live polio vaccine was replaced by a "killed" vaccine product to avoid the rare case of polio (less than 1 per year) related to vaccination. A number of years ago, a Rotavirus vaccine was introduced to prevent diarrhea, but was removed from the market a few months later when it was found to play a role in intestinal blockage.

More recently there has been speculation of a relationship between vaccines and autism. Autism or ASD (autism spectrum disorders) are a group of severe developmental disorders characterized by detachment. The incidence of autism has risen over the last two decades; and nearly 1 in 150 children carry a diagnosis of an autism spectrum disorder. This apparent increase in cases can be related to many factors including a real increase in incidence, a broader classification system, increased societal awareness, or a combination of the three.

Autism is most commonly diagnosed during a period when children receive the majority of their vaccines. Vaccines are given to young children, because they are most at risk and in need of protection. Although autism spectrum disorders often appear during the same time period as the vaccination process, intensive scientific study has revealed no causal relationship between the two factors. To stop vaccinating children, based on unscientific speculations and conclusions, would put tens of thousands of children in harm's way.

As we move forward, we must continue to protect our children and ourselves through active immunization programs. We must also press on with vigorous efforts to more clearly define autism spectrum disorders, determine their causes, and initiate effective preventions and interventions. If you are worried or concerned about vaccines make sure you discuss with your pediatrician.

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