Myths and misconceptions about vaccines

Modern Day Old Wives Tales

An old wives tale is a supposed truth that is actually false and makes unsubstantiated claims with exaggerated and/or inaccurate details. The concept of "old-wives" tales has a long history, and many, such as "butter on a burn" and "starve a fever, feed a cold" have not only been shown to be useless, but often damaging to health. With the growth of the internet and social media, many of these "old wives tales" have been updated, and many of these stories about vaccines are simply incorrect. However, just as spreading butter on a burn can make the burn worse, so these modern day "old wives tales" can result in increased risk from serious diseases.

When it comes to the health of our children and our communities, we should not be relying on old wives tales to determine what responsible policies and actions should be taken to keep our families healthy.

There is no doubt that to parents the media stories and celebrity "experts" talking about the harmful effects of vaccines can be frightening. But their child's physician or nurse is a trusted and better source of considerable scientific information about vaccines and their importance.

In spite of considerable science-based evidence to the contrary, a number of myths about vaccines are still circulating. For many people, especially parents of young children, these are a cause for concern. The scientific evidence debunking these myths comes from many different sources and scientists in a number of different countries (the USA, Canada, Europe, the UK, Australia).

Vaccines cause autism: this myth arose from a paper that was published by a researcher who had an undisclosed financial conflict of interest in the outcome of his study and which was subsequently retracted by some of the authors. Researchers in the US and Europe tried to repeat his study and found that there was no association between a child developing autism and having received the MMR vaccine [1,2,3,4,5]. Recent studies indicate that autism develops during fetal development and although the cause is still unclear, exposure to environmental toxins may be implicated [6,7,8].

Infant immune systems cannot handle all these vaccines: infant immune systems are exposed to hundreds of "foreign" substances every day, in what they breath, drink and put in their mouths (think dirty fingers). A small scratch, almost too small to see, can let into the baby's body many hundreds of bacteria or viruses. The immune system of a healthy baby easily handles this work—that what it was designed for. The immune system can, in fact, handle many more substances that would be injected in all of the vaccines recommended for babies [9,10, 11, 12]. The other thing to remember is that advances in technology and purification methods, means that vaccines today contain far fewer components that vaccines in the 1960s.

Natural immunity is better than immunity from vaccines. With some infections, the natural immunity following infection and illness is much stronger than immunity following vaccination. The problem is that natural immunity frequently entails getting sick with a disease that can kill or cause long-term damage. The risk of natural infection therefore outweighs the benefits and the alternative, that is vaccine-produced immunity, is very safe and very effective in almost all cases.

Vaccines contain chemicals that are harmful: First of all, chemical are what our bodies are made of, and many of these have long, complicated names. But they are essential to our existence. Vaccines, as all medicines, whether they be manufactured or "natural" contain many chemicals. Some vaccine contain very small amounts of chemicals which can stabilize, preserve and enhance the functions of the vaccine. However, the levels of these types of chemicals are very, very low and many of which, such as formaldehyde, can be found naturally in our bodies anyway. Other chemicals called adjuvants such as aluminum compounds, are added to vaccines to make it easier for the immune system to respond to the vaccine.

It is better to space out vaccines and delay some of them: A number of parents, not sure about some of the myths/misconceptions that they hear about vaccines decide to compromise and space out the vaccines given to their children by greater intervals than are recommended by pediatricians and vaccine experts. This is sometimes known as the alternative schedule. It is not however recommended for a number of reasons. Delaying vaccination lengthens the time that a child may be vulnerable to the disease. With the recent increases in measles and pertussis seen in Michigan and in around the country, this could have tragic consequences for under-immunized infants. Spreading out vaccine doses beyond the recommended schedule requires additional vaccination visits, which could increase the stress on children. Lastly, there is no evidence that this practice decreases the risks of unwanted effects.

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