

To Vaccinate or Not To Vaccinate?

A sensible review of childhood vaccination options

By Howard Woodwind Morningstar, MD

No topic in health care is more controversial than the question of whether or not to vaccinate our children against infectious diseases. It's part of the current scientific belief system that vaccinations improve the health of individuals and society by preventing disease. The effectiveness of vaccination programs against polio and smallpox are seen as proof of their benefits. Proponents of mandatory vaccination argue that these programs are effective only if everyone participates, creating what is called "herd immunity".

Others see these laws as unwelcome intrusions into what should be family and personal health choices. Opponents of mandatory vaccination argue that these are publicly funded experiments that benefit pharmaceutical companies while upsetting our balance with nature. Many believe that vaccinations harm children by weakening natural immunity and by contributing to a variety of immune disorders.

Both sides are motivated by love for children and an honest desire to do what's best for them. Consequently, the issue of vaccinations is difficult to approach objectively.

If you resist mandated vaccination programs you may jeopardize your child's right to attend school. You might face accusations of child abuse and neglect. Health professionals who question the benefits of vaccinations risk professional ridicule and sanctions.

However, it's important to be well informed before you consent to any medical procedure or intervention. What's right for one family in one community may be wrong for another. The key question to consider when deciding whether or not to vaccinate your child is: Will this action improve my child's chance for a healthier life?

Immunity and Vaccinations: Our immune defenses protect us from the many viruses, fungi and bacteria that cause infections. Specialized white blood cells recognize and destroy these invading micro-organisms. If they breach our defenses, we become ill until we overcome the invasion. When this occurs, our immune defenses create permanent "memory cells" which immediately recognize and destroy future attacks by that specific organism. This gives us lasting "natural immunity" to that disease. Optimal immune function depends on a healthy diet, good hygiene, and emotional factors such as a positive outlook and effective stress management.

Vaccines are either live, chemically weakened viruses or killed and preserved viral fragments that are injected into body tissues. They are designed to cause us to produce memory cells that confer lasting immunity against an infectious disease. Because injected vaccines bypass some of the normal steps of immune activation, they aren't as reliable or permanent as natural immunity. Natural immunity may be life long, but vaccine induced immunity usually fades with

time.

Statistics are often used to show how infectious diseases have been reduced through vaccination programs. An example is the elimination of wild polio from the United States in the generation since the polio vaccine was developed. Others, such as pediatrician Robert Mendelsohn in *Confessions of a Medical Heretic* have contended that improved hygiene, rather than vaccinations are largely responsible for disease reduction. For example, between 1860 and 1948 the incidence of measles in the United States decreased by 94% and that of pertussis by 91%, even before vaccinations were available.

How safe are vaccines? The answer is different for each vaccine, as discussed below. Most often, there are no noticeable adverse consequences except temporary soreness and swelling at the injection site and a low grade fever. In rare instances, vaccine reactions can be catastrophic, with results ranging from severe febrile illnesses to permanent neurological disability. Vaccines also contain a small amount of toxic preservatives, such as formaldehyde and mercury, whose long term health effects on children are questionable.

Vaccines have unknown long term effects on overall immune function. Some speculate that there is an association between vaccinations and the current epidemic of immune diseases, such as lupus, asthma and chronic fatigue syndrome, as well as neurological problems such as autism.

Vaccinations for specific diseases:

Diphtheria is a highly contagious bacterial illness that causes fever, cough and trouble swallowing. The Diphtheria vaccine is part of the “DPT” series, usually given to infants starting at age 2 months. The vaccine causes at least 10,000 significant reported adverse reactions annually, including high fever and occasionally, convulsions. The vaccine should not be given to any child who has had a previous serious reaction to it, or who is allergic to any of its components, which include eggs, neomycin (an antibiotic), mercury and formaldehyde. Diphtheria is currently very rare in the United States.

Pertussis, or “whooping cough”, is a bacterial infection characterized by high fever and intense coughing fits. There are about 4000 cases of pertussis a year in the US. Most people recover fully after about six weeks, but occasional complications include seizures and brain damage. Pertussis is fatal in about one out of 250 cases.

The live pertussis vaccine (the “P” in DPT) has historically had the highest complication rate of any approved vaccine. One in 25 children suffered from high fever after the vaccine, one in 1600 experienced seizures, while one in 300,000 suffered permanent brain damage. The newer acellular pertussis vaccine appears to be considerably safer, and provides approximately 5 years of immunity on average.

Tetanus (the “T” in DPT) also called lockjaw, is a bacteria responsible for about 40 cases of illness a year in the United States. Even trivial appearing wounds, such as a scratch from a dirty

thorn can become infected. Tetanus is a catastrophic illness that causes severe, often fatal muscle spasms.

The tetanus vaccine is usually given to infants starting at age 2 months as part of the DPT series. Boosters are recommended every 10 years throughout life. Serious reactions to this part of the vaccine are very unusual. While proper hygiene and wound care are very helpful in preventing tetanus, because of the severity of the illness and the relatively safe nature of the vaccine, I recommend tetanus vaccination for almost everyone. Those who are concerned about giving it to an infant may consider waiting until the child is a year old before starting the series of four shots.

Polio is a viral illness that, until the 1950's was responsible for devastating epidemics in the United States. It can cause permanent nerve damage, paralysis and death. Wild polio has been totally eliminated in the entire Western Hemisphere and "developed" world since the early 1990s. The injected polio vaccine (IPV) is given 4 times, usually starting at 2 months, and is considered to be relatively safe, with few serious complications.

Measles is a virus causes a high fever, rash, malaise, cough, and occasionally pneumonia. It's extremely contagious, and may result in epidemics of several thousand cases a year. While most people recover fully from measles, it occasionally causes encephalitis and permanent brain damage.

The measles vaccine is given twice as part of the MMR series. Most people born before 1956 have been exposed to the wild virus, and are naturally immune for life, while the vaccine provides about 10 years of immunity. Measles vaccine complications are rare, the most serious being seizures and a bleeding disorder called "idiopathic thrombocytopenic purpura" (ITP).

Mumps is a viral illness that, until recently, was an almost universal disease of childhood. In children mumps causes a few days of fever and swelling of the parotid glands in the cheeks. Exposure to the virus gives lifelong natural immunity.

Mumps is now uncommon, with only about 1500 cases a year occurring in the US. Most of these occur in adults whose vaccine-induced immunity has worn off. In adults, mumps can be a serious illness, with complications that include permanent sterility.

Rubella, also called German measles (but not in Germany!) until recently was another almost universal childhood viral infection. It's usually a mild illness, causing an itchy rash, fever and joint aches. However, when rubella occurs during pregnancy it damage the developing fetus' nervous system and heart.

The natural disease gives lifelong immunity, while the vaccine is about 80% effective after 20 years. This means that about 20% of all vaccinated women are vulnerable to Rubella. There are about 200 cases of rubella a year in the United States.

The **HIB** vaccine helps prevent bacterial infections with Hemophilus influenza B, a frequent

cause of ear and sinus infections, and a rare cause of devastating meningitis. The vaccine, which has few severe adverse reactions, is given four times starting at age 2 months.

Hepatitis B is a virus that infects many thousands of Americans a year. While most people recover from hepatitis B, hundreds die each year from complications such as cirrhosis and liver cancer. The virus is spread through blood and body fluids, so individuals with multiple sex partners, health care workers and those who share intravenous needles are at highest risk and should be vaccinated. The current hepatitis B vaccine very rarely causes serious side effects. This vaccine has been required for Oregon children since 1998.

Varicella is the virus that causes chicken pox, a common and usually mild disease of childhood. The virus can later reactivate as painful “shingles” during times of immune stress. It’s unclear whether vaccinating children against varicella will increase or reduce resistance to shingles later in life. The vaccine has been required for Oregon children since the year 2000.

Legal aspects: Oregon law requires that children must be fully immunized against diphtheria, pertussis, tetanus, polio, measles, mumps, rubella, HIB, hepatitis B and varicella in order to attend school. Exceptions are made if the parents declare in writing their religious or philosophical objections *to all vaccinations*, or if the child’s doctor documents that a specific contraindication exists to a particular vaccine. Unlike some states, Oregon does not deny food stamps or other government benefits to those who do not vaccinate their children.

Whatever you decide, use common sense to keep yourself and your children well. Your child’s immune health depends on good nutrition, hygiene and a loving and nurturing environment. In infancy, breast milk is very important for building immunity. Later, it’s best to feed your children a healthy diet that emphasizes organic foods, whole grains and fresh produce. Clean air, pure water and a positive attitude about yourself and your place on Mother Earth will help you maintain immune balance. Remember to avoid toxic foods, environmental pollutants and unnecessary drugs. And if you decide to vaccinate your children, do so wholeheartedly with loving blessings, and the deepest intent to protect them from harm.

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