



UNDERSTANDING HOW VACCINES WORK

As a parent, you may wish to know more about how vaccines work. Vaccines prevent diseases that used to be common in this county and have saved millions of lives.

HOW VACCINES PREVENT DISEASES

The diseases that vaccines prevent can be dangerous or even deadly. Vaccines reduce the risk of infection by working with the body's natural defenses to help it safely develop immunity to disease. When germs, such as bacteria or viruses, invade the body, they attack and multiply. This invasion is called an infection, and the infection is what causes illness. The immune system then has to fight the infection. Once it fights off the infection, the body is left with a supply of cells that help recognize and fight that disease in the future.

Vaccines help develop immunity by imitating an infection, but this "imitation" infection does not cause illness. It does, however, cause the immune system to develop the same response as it does to a real infection so the body can recognize and fight the vaccine-preventable disease in the future. Sometimes, after getting a vaccine, the imitation infection can cause minor symptoms, such as fever. Such minor symptoms are normal and should be expected as the body builds immunity.

Receiving vaccines help protect people that cannot receive the vaccine because they are too young or have health problems. "Herd immunity" occurs when enough members of a population are vaccinated against a disease to provide protection for those who cannot receive immunizations due to age, a compromised immune system, or other health problems.

WHAT VACCINES SHOULD MY CHILD RECEIVE?

Many childhood diseases may have been forgotten, but they still exist. If your child gets sick from one of these diseases, it could be serious. They could suffer from blindness, brain damage, deafness, deformities, kidney damage, paralysis and even death. Vaccination is one of the best ways parents can protect infants, children and teens from the following diseases and bacteria:

- o Diphtheria
- o Tetanus (lockjaw)
- o Pertussis (whooping cough)
- o Hepatitis A
- o Hepatitis B
- o Haemophilus influenzae Type b (Hib)
- o Human papillomavirus (HPV)
- o Influenza (flu)
- o Measles
- o Mumps
- o Meningococcal
- o Rotavirus
- o Rubella

- o Pneumococcal
- o Polio
- o Varicella (chickenpox)

ARE VACCINES SAFE?

Like any medication, vaccines can cause side effects. The most common side effects are mild. On the other hand, many vaccine-preventable disease symptoms can be serious or even deadly. Even though many of these diseases are rare in this country, they still occur around the world and can be brought into Iowa, putting unvaccinated people at risk.

The side effects associated with getting vaccines, such as redness and swelling where the shot was given, are almost always minor and go away within a few days. Serious side effects following vaccination, such as severe allergic reaction, are very rare, and doctors and clinic staff are trained to deal with them.

YOUR CHILD'S IMMUNIZATION RECORD

It is important to maintain immunization records in a safe place. Proof of immunizations may be necessary throughout life. The Iowa Department of Public Health maintains a permanent statewide electronic database called Iowa's Immunization Registry Information System (IRIS). Talk with your healthcare provider about entering your child's immunization record into IRIS.

If you have questions about vaccines, please call your healthcare provider or the Iowa Department of Public Health at 1-800-831-6293.

FOR ADDITIONAL INFORMATION ON VACCINES AND DISEASES, PLEASE VISIT:

<https://idph.iowa.gov/immtnb/immunization>
www.immunize.org • www.cdc.gov/vaccines
www.vaccine.chop.edu • www.aap.org