

# Fact Sheet



## Vaccines

A survey regarding vaccine effectiveness was provided to community members by the Portsmouth City Health Department. Assessment of these members provides important information regarding the concern of preventable infectious diseases by proper vaccination. Among the participants in the survey, 95% believe that vaccines do prevent disease. Of that 95%, 52% believe that they are at risk of disease because others do not believe in vaccination.

### **What are Vaccines?**

Vaccines contain the same germs that cause disease. For example, measles vaccine contains measles virus and the flu vaccine contains flu virus. However, the virus or bacteria in a vaccine have either been killed or weakened to the point that they do not make you sick. Some vaccines only contain a part of the disease germ. A vaccine stimulates your immune system to produce antibodies, exactly like it would if you were exposed to the disease.

### **How do Vaccines Work?**

The diseases vaccines prevent can be dangerous, or even deadly. Vaccines reduce your risk of infection by working with your body's natural defenses to help 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 has a supply of cells that help recognize and fight that disease in the future. These supplies of cells are called antibodies.

Vaccines help develop immunity by imitating an infection, but this "imitation" infection does not cause illness. Instead it causes 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.

### ***What are the side effects of Vaccines?***

Like any medication, vaccines can cause side effects. The side effects from vaccines are almost always minor (such as redness and swelling where the shot was given) and go away within a few days. If you experience a reaction at the injection site, use a cool, wet cloth to reduce redness, soreness, and swelling.

Serious side effects after vaccination, such as severe allergic reaction, are very rare and doctors and nursing staff are trained to deal with them. Pay extra attention for a few days after vaccination. If you see something that concerns you, call your doctor.

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. Unvaccinated U.S. citizens who travel abroad can bring these diseases to the U.S., putting unvaccinated individuals at risk.

For more information regarding Vaccines, contact the Portsmouth City Health Department Clinic at 740-353-8863.

Other Resources include:  
Centers for Disease Control and Prevention (CDC):  
[www.cdc.gov](http://www.cdc.gov)