

# Vaccines and immunization

## 10 myths about vaccination

***Myth 1. Better hygiene and sanitation will make diseases disappear – vaccines are not necessary.***

**Fact 1. The diseases we can vaccinate against will return if we stop vaccine programmes.**

While better hygiene, hand washing and clean water can protect people against diseases such as influenza and cholera, most viruses spread regardless of how clean we are. If people are not vaccinated, so-called old diseases will quickly reappear, such as measles.

***Myth 2. Most of the people that contract vaccine-preventable diseases are actually vaccinated.***

**Fact 2. Most of the people that suffer from vaccine-preventable diseases are not vaccinated.**

Owing to the complexity of the human immune system, no vaccine provides 100% protection, but this persistent myth also draws on the fact that true immunization status is not always recorded correctly and that numbers can be manipulated. Over 90% of the people with measles cases reported in 2009 had received less than the recommended two doses of measles vaccine.

***Myth 3. Vaccines have several damaging and long-term side-effects that are yet unknown. Vaccination can even be fatal.***

**Fact 3. Vaccines have side-effects, but none of them are as severe as the diseases themselves.**

All medical treatments, including vaccination, can have side-effects. But soreness, mild fever and the extremely rare serious side-effects must be compared to the consequences of having a vaccine-preventable disease. In the case of polio, these consequences can include paralysis; measles can cause encephalitis and blindness; and vaccine-preventable diseases can even result in death.

***Myth 4. The combined vaccines against diphtheria, tetanus, pertussis and the vaccine against poliomyelitis cause sudden infant death syndrome.***

**Fact 4. There is no documented correlation between the vaccines and sudden infant death syndrome.**

These vaccines are administered at a time when babies can suffer sudden infant death syndrome (SIDS), but there is no documented correlation. These four diseases, however, are life-threatening and babies who are not vaccinated against them are at serious risk.

***Myth 5. As vaccine-preventable diseases are almost eradicated from western Europe, there is no reason to be vaccinated.***

**Fact 5. Vaccine-preventable diseases still exist in Europe. Since the proportion of vaccinated people is below 95% in many western European countries, these diseases can quickly return to countries where they were once uncommon.**

In western Europe, measles outbreaks have occurred in Austria, Belgium, Denmark, France, Germany, Italy, Switzerland and the United Kingdom since 2005. In 2009, over 82% of measles cases were in the western part of Europe.

***Myth 6. The vaccine-preventable childhood illnesses are just an unfortunate fact of life.***

**Fact 6. Childhood illnesses are serious and can lead to severe complications in both children and adults.**

Diseases such as measles, mumps and rubella are called childhood illnesses because they usually affect children. They are not harmless and can lead to serious complications, including congenital rubella syndrome for rubella, and death.

***Myth 7. Giving a child more than one vaccine at a time can increase the risk of harmful side-effects, which can overload the child's immune system.***

**Fact 7. A child's immune system handles several hundred foreign bodies every day and can easily handle multiple vaccines administered at the same time.**

Antibodies are proteins designed to recognize harmful invasions. The antigens/antibodies a child is exposed to through vaccine regimens are insignificant compared to those a child is exposed to every day or while having a simple cold or sore throat.

***Myth 8. Influenza is just a nuisance.***

**Fact 8. Influenza is a serious disease that kills several hundred thousand people worldwide every year.**

The disease is extremely hazardous to small children, elderly people with poor health and anyone with a lung and/or cardiovascular disease. Further, unprotected people can transmit a virus to at-risk groups such as hospital patients and residents of nursing homes, where it can lead to death.

***Myth 9. The influenza vaccine is not very effective.***

**Fact 9. The influenza vaccine protects 70% of the people vaccinated.**

Despite vaccines, influenza causes many people to stay home from work or school and this may lead to the belief that the influenza vaccine is not very effective. In fact, a wide range of viruses can cause influenza-like symptoms, which lead people to think they had influenza. Additionally, numerous influenza strains circulate during each influenza season and the vaccine only offers immunity for the three most prevalent strains.

***Myth 10. It is better to be immunized through disease than through vaccines.***

**Fact 10. Vaccines provide the immune system with enough knowledge to fight an invading virus and can prevent serious complications and death.**

Diseases provide the immune system with more detailed knowledge than vaccines. The immune system only needs a certain amount of information to recognize an invading microorganism, however, and vaccines are fully capable of providing this to ensure long-term immunity.