



Definitions

Immunity is protection from an infectious disease. If you are immune to a disease it means that you can be exposed to it without becoming infected.

Immunization is a process by which a person lowers their chance of getting a disease through vaccination. This term is often used interchangeably with vaccination or inoculation (1).

What is a Vaccine?

A vaccine is a type of medicine that teaches a person's immune system to make antibodies to create immunity to a specific disease. Immunity protects the person from that disease. Vaccines are usually given through needle injections (1).

What is Vaccination?

Vaccination is the act of placing a vaccine into the body to create immunity to a specific disease (1). Vaccination may also be referred to as immunization or inoculation. Vaccination is a highly effective, safe and easy way to keep people healthy (2).

How Do Vaccines Work?

Vaccines help develop immunity by imitating an infection. Your body's immune system responds by making cells and proteins, like antibodies.

Sometimes, after getting a vaccine, the imitation infection can cause side effects, like a fever or soreness at the injection spot. Such side effects are normal and should be expected as the body builds these cells to defend against the disease (3).

Side effects are temporary and usually last 1 or 2 days. Once the imitation infection goes away, the body is left with a supply of "memory" cells that will remember how to fight that disease in the future.

It takes a few weeks for the body to produce these protecting cells after vaccination. Therefore, it is possible that a person infected with a disease just before or just after vaccination could still get the disease, because the vaccine has not had enough time to provide protection.

Are Vaccines Safe?

Before a vaccine can be given to the general public, the producers of the vaccine must conduct tests called clinical trials and share their results publicly. Health officials review the results carefully to make sure the vaccine is safe and effective. Then, the health officials will approve the vaccine.



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Why Should I Get Vaccines?

Vaccines protect people from becoming infected with a disease. Vaccinations are one of the best ways to end the serious effects of certain diseases (4). Vaccinations save millions of lives by preventing widespread cases of diseases. When a disease is not common anymore because of a vaccine, some people think that the vaccine is not important. Actually, the opposite is true! When we continue to get vaccinated, we make sure that disease do not return and begin to infect people again.

What Diseases do Vaccines Prevent?

Vaccination protects against these 14 diseases, which used to be common in the United States. Polio, Mumps, Measles, Hepatitis A, Hepatitis B, Tetanus, Flu (Influenza), Rubella, Hib, Whooping Cough, Pneumococcal Disease, Rotavirus, Chickenpox, Diphtheria. Shingles, HPV and Meningococcal meningitis are other vaccine-preventable diseases. Vaccination against COVID-19 (the disease caused by SARS-CoV- 2) is coming soon (5).

Has Vaccination Ever Eliminated a Disease?

Smallpox is a disease that has been eliminated in the United States. Our children do not have to get smallpox vaccine anymore because the disease no longer exists. Smallpox is now only a memory, and if we keep vaccinating against other diseases, the same will be true for other diseases too (5).

Resources:

1. Immunizations the basics
<https://www.cdc.gov/vaccines/vac-gen/imz-basics.htm>
2. Vaccine Preventable diseases
<https://www.cdc.gov/vaccines/adults/vpd.html>
3. Understanding how vaccines work
<https://www.cdc.gov/vaccines/hcp/conversations/understanding-vaccine-work.html>
4. Why immunize
<https://www.cdc.gov/vaccines/vac-gen/why.htm>
5. 14 Diseases you almost forgot about thanks to vaccines
<https://www.cdc.gov/vaccines/parents/diseases/forgot-14-diseases.html>



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