



“Vaccine”

A vaccine is a biological preparation that improves immunity to a particular disease. A vaccine typically contains an agent that resembles a disease-causing microorganism, and is often made from weakened or killed forms of the microbe, its toxins or one of its surface proteins. The agent stimulates the body's immune system to recognize the agent as foreign, destroy it, and "remember" it, so that the immune system can more easily recognize and destroy any of these microorganisms that it later encounters.

World Health Organization

Glossary of Vaccine and Immunization Terms

U.S. Department of Health & Human Services (HHS.gov)

A

Acellular vaccine: A vaccine containing partial cellular material as opposed to complete cells.

Active immunity: The production of antibodies against a specific disease by the immune system. Active immunity can be acquired in two ways, either by contracting the disease or through vaccination. Active immunity is usually permanent, meaning an individual is protected from the disease for the duration of their lives.

Acute: A short-term, intense health effect.

Adjuvant: A substance (e.g. aluminum salt) that is added during production to increase the body's immune response to a vaccine.

Adverse events: Undesirable experiences occurring after immunization that may or may not be related to the vaccine.

Advisory Committee on Immunization Practices (ACIP): A panel of 10 experts who make recommendations on the use of vaccines in the United States. The panel is advised on current issues by representatives from the Centers for Disease Control and Prevention, Food and Drug Administration, National Institutes of Health, American Academy of Pediatrics, American Academy of Family Physicians, American Medical Association and others. The recommendations of the ACIP guide immunization practice at the federal, state and local level.

Allergy: A condition in which the body has an exaggerated response to a substance (e.g. food or drug). Also known as hypersensitivity.

Anaphylaxis: An immediate and severe allergic reaction to a substance (e.g. food or drugs). Symptoms of anaphylaxis include breathing difficulties, loss of consciousness and a drop in blood pressure. This condition can be fatal and requires immediate medical attention.

Antibody: A protein found in the blood that is produced in response to foreign substances (e.g. bacteria or viruses) invading the body. Antibodies protect the body from disease by binding to these organisms and destroying them.



Antigens: Foreign substances (e.g. bacteria or viruses) in the body that are capable of causing disease. The presence of antigens in the body triggers an immune response, usually the production of [antibodies](#).

Antitoxin: Antibodies capable of destroying toxins generated by microorganisms including [viruses](#) and [bacteria](#).

Antiviral: Literally "against-virus" -- any medicine capable of destroying or weakening a virus.

Association: The degree to which the occurrence of two variables or events is linked. Association describes a situation where the likelihood of one event occurring depends on the presence of another event or variable. However, an association between two variables does not necessarily imply a cause and effect relationship. The term association and relationship are often used interchangeably. See [causal](#) and [temporal](#) association.

Asymptomatic infection: The presence of an infection without symptoms. Also known as inapparent or subclinical infection.

Attenuated vaccine: A vaccine in which live virus is weakened through chemical or physical processes in order to produce an immune response without causing the severe effects of the disease. Attenuated vaccines currently licensed in the United States include measles, mumps, rubella, polio, yellow fever and varicella. Also known as a *live vaccine*.

B

B cells: Small white blood cells that help the body defend itself against infection. These cells are produced in bone marrow and develop into plasma cells which produce antibodies. Also known as B lymphocytes.

Bacteria: Tiny one-celled organisms present throughout the environment that require a microscope to be seen. While not all bacteria are harmful, some cause disease. Examples of bacterial disease include diphtheria, pertussis, tetanus, *Haemophilus influenzae*, and pneumococcal.

Bias: Flaws in the collection, analysis or interpretation of research data that lead to incorrect conclusions.

Biological plausibility: A causal association (or relationship between two factors) is consistent with existing medical knowledge.

Booster shots: Additional doses of a vaccine needed periodically to "boost" the immune system. For example, the tetanus and diphtheria (Td) vaccine which is recommended for adults every ten years.

Breakthrough infection: Development of a disease despite a person's having responded to a vaccine.

C

Causal association: The presence or absence of a variable (e.g. smoking) is responsible for an increase or decrease in another variable (e.g. cancer). A change in exposure leads to a change in the outcome of interest.

Chronic health condition: A health related state that lasts for a long period of time (e.g. cancer, asthma).



Combination vaccine: Two or more vaccines administered in a single dose in order to reduce the number of shots given. For example, the MMR (measles, mumps, rubella) vaccine.

Communicable: That which can be transmitted from one person or animal to another. Also known as infectious.

Community immunity: A situation in which a sufficient proportion of a population is immune to an infectious disease (through vaccination and/or prior illness) to make its spread from person to person unlikely. Even individuals not vaccinated (such as newborns and those with chronic illnesses) are offered some protection because the disease has little opportunity to spread within the community. Also known as herd immunity.

Conjugate vaccine: The joining together of two compounds (usually a protein and polysaccharide) to increase a vaccine's effectiveness.

Contraindication: A condition in a recipient which is likely to result in a life-threatening problem if a vaccine were given.

D

Disease: Sickness, illness or loss of health.

E

Efficacy rate: A measure used to describe how good a vaccine is at preventing disease.

Epidemic: The occurrence of disease within a specific geographical area or population that is in excess of what is normally expected.

Endemic: The continual, low-level presence of disease in a community

Etiology: The cause of.

Exposure: Contact with infectious agents (bacteria or viruses) in a manner that promotes transmission and increases the likelihood of disease.

F

Febrile: Relating to fever; feverish.

H

Herd immunity: See [Community immunity](#).

Hypersensitivity: A condition in which the body has an exaggerated response to a substance (e.g. food or drug). Also known as an allergy.



Hyposensitivity: A condition in which the body has a weakened or delayed reaction to a substance.

I

Immune globulin: A protein found in the blood that fights infection. Also known as gamma globulin.

Immune system: The complex system in the body responsible for fighting disease. Its primary function is to identify foreign substances in the body (bacteria, viruses, fungi or parasites) and develop a defense against them. This defense is known as the immune response. It involves production of protein molecules called antibodies to eliminate foreign organisms that invade the body.

Immunity: Protection against a disease. There are two types of immunity, passive and active. Immunity is indicated by the presence of antibodies in the blood and can usually be determined with a laboratory test. See [active](#) and [passive](#) immunity.

Immunization: The process by which a person or animal becomes protected against a disease. This term is often used interchangeably with vaccination or inoculation.

Immunosuppression: When the immune system is unable to protect the body from disease. This condition can be caused by disease (like HIV infection or cancer) or by certain drugs (like those used in chemotherapy). Individuals whose immune systems are compromised should not receive live, [attenuated vaccines](#).

Inactivated vaccine: A vaccine made from viruses and bacteria that have been killed through physical or chemical processes. These killed organisms cannot cause disease.

Inapparent infection: The presence of infection without symptoms. Also known as subclinical or asymptomatic infection.

Incidence: The number of new disease cases reported in a population over a certain period of time.

Incubation period: The time from contact with infectious agents ([bacteria](#) or [viruses](#)) to onset of disease.

Infectious: Capable of spreading disease. Also known as communicable.

Infectious agents: Organisms capable of spreading disease (e.g. [bacteria](#) or [viruses](#)).

Investigational vaccine: A vaccine that has been approved by the Food and Drug Administration (FDA) for use in clinical trials on humans. However, investigational vaccines are still in the testing and evaluation phase and are not licensed for use in the general public.

L

Live vaccine: A vaccine in which live virus is weakened (attenuated) through chemical or physical processes in order to produce an immune response without causing the severe effects of the disease. [Attenuated vaccines](#) currently licensed in



the United States include measles, mumps, rubella, shingles (herpes zoster), varicella, and yellow fever. Also known as an attenuated vaccine.

Lymphocytes: Small white blood cells that help the body defend itself against infection. These cells are produced in bone marrow and develop into plasma cells which produce antibodies. Also known as B cells.

M

Macrophage: A large cell that helps the body defend itself against disease by surrounding and destroying foreign organisms ([viruses](#) or [bacteria](#)).

Memory Cell: A group of cells that help the body defend itself against disease by remembering prior exposure to specific organisms (e.g. [viruses](#) or [bacteria](#)). Therefore these cells are able to respond quickly when these organisms repeatedly threaten the body.

Microbes: Tiny organisms (including viruses and bacteria) that can only be seen with a microscope.

O

Outbreak: Sudden appearance of a disease in a specific geographic area (e.g. neighborhood or community) or population (e.g., adolescents).

P

Pandemic: An epidemic occurring over a very large geographic area.

Passive immunity: Protection against disease through antibodies produced by another human being or animal. Passive immunity is effective, but protection is generally limited and diminishes over time (usually a few weeks or months). For example, maternal antibodies are passed to the infant prior to birth. These antibodies temporarily protect the baby for the first 4-6 months of life.

Pathogens: Organisms (e.g. [bacteria](#), [viruses](#), [parasites](#) and fungi) that cause disease in human beings.

Placebo: A substance or treatment that has no effect on human beings.

Polysaccharide vaccines: Vaccines that are composed of long chains of sugar molecules that resemble the surface of certain types of bacteria. Polysaccharide vaccines are available for pneumococcal disease, meningococcal disease and *Haemophilus Influenzae* type b.

Potency: A measure of strength.

Precaution: A condition in a recipient which may result in a life-threatening problem if the vaccine is given, or a condition which could compromise the ability of the vaccine to produce immunity.

Prevalence: The number of disease cases (new and existing) within a population over a given time period.



Prodromal: An early symptom indicating the onset of an attack or a disease.

Q

Quarantine: The isolation of a person or animal who has a disease (or is suspected of having a disease) in order to prevent further spread of the disease.

R

Recombinant: Of or resulting from new combinations of genetic material or cells; the genetic material produced when segments of DNA from different sources are joined to produce recombinant DNA.

S

Seroconversion: Development of antibodies in the blood of an individual who previously did not have detectable [antibodies](#).

Serology: Measurement of [antibodies](#), and other immunological properties, in the blood serum.

Serosurvey: Study measuring a person's risk of developing a particular disease.

Side Effect: Undesirable reaction resulting from immunization.

Strain: A specific version of an organism. Many diseases, including HIV/AIDS and hepatitis, have multiple strains.

Subclinical infection: The presence of infection without symptoms. Also known as inapparent or asymptomatic infection.

Susceptible: Unprotected against disease.

T

Temporal association: Two or more events that occur around the same time but may be unrelated, chance occurrences.

Teratogenic: Of, relating to, or causing developmental malformations.

Thimerosal: [Listen \[MP3\]](#)

Thimerosal is a mercury-containing preservative used in some vaccines and other products since the 1930's. There is no convincing evidence of harm caused by the low concentrations of thimerosal in vaccines, except for minor reactions like redness and swelling at the injection site. However, in July 1999, the Public Health Service agencies, the American Academy of Pediatrics, and vaccine manufacturers agreed that thimerosal should be reduced or eliminated in vaccines as a precautionary measure. Today, all routinely recommended childhood vaccines manufactured for the U.S. market contain either no thimerosal or only trace amounts with the exception of some flu vaccines. There are thimerosal-free influenza vaccines available.

Titer: The detection of [antibodies](#) in blood through a laboratory test.



V

Vaccination: Injection of a killed or weakened infectious organism in order to prevent the disease.

Vaccinia: A virus related to the smallpox and cowpox viruses, which is used in smallpox vaccine.

Vaccine: A product that produces immunity therefore protecting the body from the disease. Vaccines are administered through needle injections, by mouth and by aerosol.

Vaccine Adverse Event Reporting System (VAERS): A database managed by the Centers for Disease Control and Prevention and the Food and Drug Administration. VAERS provides a mechanism for the collection and analysis of adverse events associated with vaccines currently licensed in the United States. Reports to [VAERS](#) can be made by the vaccine manufacturer, recipient, their parent/guardian or health care provider. For more information on VAERS call (800) 822-7967.

Vaccine Safety Datalink Project (VSD): In order to increase knowledge about vaccine adverse events, the Centers for Disease Control and Prevention have formed partnerships with eight large Health Management Organizations (HMOs) to continually evaluate vaccine safety. The project contains data on more than 6 million people. Medical records are monitored for potential adverse events following immunization. The VSD project allows for planned vaccine safety studies as well as timely investigations of hypothesis.

Viremia: The presence of a virus in the blood.

Virulence: The relative capacity of a pathogen to overcome body defenses.

Virus: A tiny organism that multiplies within cells and causes disease such as chickenpox, measles, mumps, rubella, pertussis and hepatitis. Viruses are not affected by antibiotics, the drugs used to kill bacteria.

W

Waning Immunity: The loss of protective antibodies over time.

(Edits mine for specificity without any alterations in definitions)

Please refer to the link below for the complete Glossary

Glossary of Vaccine and Immunization Terms

https://www.vaccines.gov/more_info/glossary/index.html