

Topic Page: [Immunization](#)

Definition: **immunization** from *Philip's Encyclopedia*

Conferring immunity against disease by artificial means. Passive immunity may be conferred by the injection of an antiserum containing antibodies. Active immunization involves vaccination with dead or attenuated (weakened) organisms to stimulate production of specific antibodies and so provide lasting immunity.

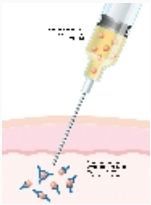


Image from: [Fighting Infections in The Human Body Book: An Illustrated Guide to Its Structure, Function and Disorders](#)

Summary Article: **immunization**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Process of conferring immunity or resistance to an infectious disease by artificial methods, usually by the administration of a vaccine. Immunization is an important public health measure, highly successful in containing the spread of infectious diseases and preventing epidemics.

Vaccination works by introducing small quantities of dead or inactive forms of the disease-causing agent (pathogen) into the body. The substances in this vaccine act as antigens and stimulate the white blood cells to produce antibodies. Antibodies are capable of binding to pathogens, resulting in their destruction. Once the body has produced antibodies to fight a disease, it is able to recognize it in the future and generate the appropriate antibody to combat it. This prevents the disease from establishing itself and stops the infection before it becomes symptomatic. The micro-organism or virus can then be inactivated and removed before it harms the body. The person contacted by the disease will probably feel well all the time and will be unaware of having been infected. This approach is called active immunity.

Prevention of infection using vaccination is the best way to treat viral diseases, as antibiotics are not effective against viruses and few alternative treatments are available.

If vaccination covers a large proportion of the population at risk, a disease can become very rare, or even die out. Smallpox was eliminated in this way. The World Health Organization (WHO) is running global vaccination programmes with the aim of eradicating other infectious diseases as well.

Vaccination against smallpox was developed by Edward Jenner in 1796. In the late 19th century, Louis Pasteur developed vaccines against cholera, typhoid, typhus, plague, and yellow fever. By 2012, UNICEF had supplied vaccinations for six killer diseases – measles, tetanus, polio, diphtheria, whooping cough, and tuberculosis – to 83% of the world's children.

essays

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immunization. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. Abington, UK: Helicon. Retrieved from <https://search.credoreference.com/content/topic/immunization>



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