

IMMUNIZATION: BENEFITS & ERADICATED DISEASES

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2021/2022

Year 1

04/06/2022



Objectives

- Define immunization
- Describe the main mechanism of immunization
- Discuss the benefits of immunization
- List the eradicated & eliminated diseases
- Discuss the myths & misinformation related to immunization

Immunization

The World Health Organization 'WHO' defines immunization as *“the process whereby a person is made immune or resistant to an infectious disease.”*^{[1](#)}

One can become immune to an infectious agent by 2 ways:

- Active immunity
- Passive immunity

Both mentioned ways a person could become immune to an infectious agent are gained either naturally or artificially.

Vaccine Mechanism

Vaccines are an example of active immunity that are gained artificially.

Vaccines work by introducing inactive parts of an antigen to the body so that an immune response is produced.





Benefits

- Protection against dangerous diseases
- Protects future generations by eradicating diseases
- Herd immunity prevents mild diseases from spreading
- Vaccines have reduced the spreadness of Polio, Measles, Chickenpox, etc....
- Studies show that vaccines are *“one of the most cost-effective means of advancing global welfare”*
- Economically beneficial

How are Diseases Eradicated?

For a disease to be eradicated, 2 stipulations are required:

1. The disease must be an infectious disease
2. There must be a way of prevention or treatment

Other aspects are also to be observed such as:

- Identification
- Number of disease-causing pathogens
- Number of hosts
- Symptoms
- Support

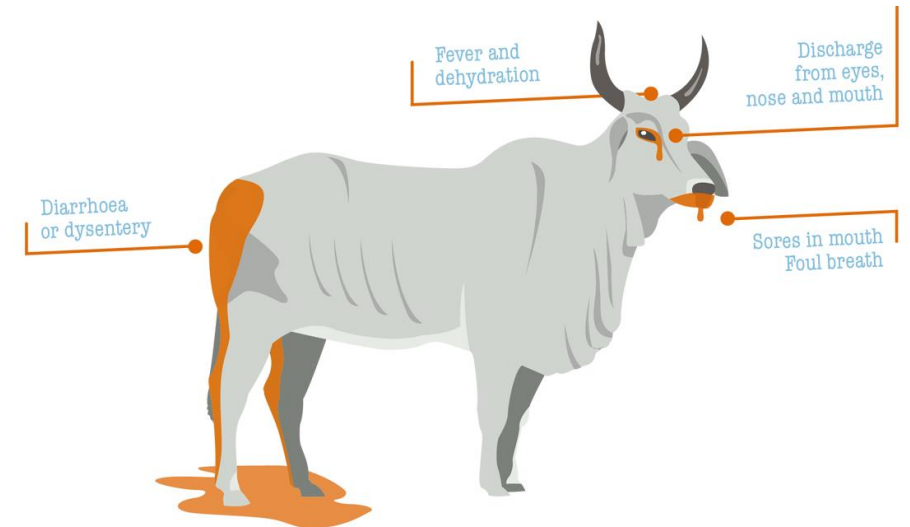
Eradicated Diseases

The only eradicated diseases worldwide are:

- Smallpox: Human disease
- Rinderpest: Cattle disease causing discharge



SOURCE: CDC / JEAN ROY | ID#10657 | BANGLADESH 1974



Eliminated Diseases

Polio

Measles

Tetanus

Hepatitis B

Mumps

Malaria

The Difference Between Eradicated & Eliminated Diseases

- For a disease to be eradicated, it must be eliminated first.
- A disease is said to be eliminated if its transmission has stopped only in a specific area.
- Eradication on the other hand, is when a disease has been permanently removed by vaccines or other measures.

Myths & Misinformation

- Cause diseases
- May lead to death
- Cause Autism
- Infants shouldn't receive multiple vaccines
- Natural immunity > artificial immunity
- Contain unsafe toxins
- Risks outweigh benefits
- May cause infertility
- Microchips

GET
VACCINATED...



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