

Unit 2: Lesson 3 – Discovery and Development of Vaccines

GLOSSARY

Cell culture adaptation

The process by which viruses are weakened in a laboratory, so that they can be used in a vaccine. In this process, viruses are grown in cell types that are not those in which the virus is used to growing, so that as it gets better at growing in the new cell type, it gets worse at growing in the type of cell it typically infects.

Conjugate vaccine

A vaccine made by attaching a helper protein to a disease-causing protein so that an immune response will be made against the disease-causing protein.

Herd immunity

When most members of a community are immune to a particular pathogen even those who are not immune are less likely to be infected. The pathogen has less opportunity to find susceptible hosts, such as individuals who may not be immune because they are too young to be immunized or because their immune systems are weakened by illness or treatments to illness. Studies have shown that it is better to be a susceptible person in a highly immune population than to be an immune person in a highly susceptible population.

Immunity

The ability to resist infection.

Inactivated vaccine

A vaccine made using a killed virus.

Live, weakened viral vaccine

A vaccine made using a live virus that has been weakened, so that it does not cause disease.

Passive immunity

Immunity generated by one person's immune system but used to protect another person. An example is the antibodies found in a baby from the mom's blood or breast milk.

Plasmid

A small, circular piece of DNA into which a gene for a protein of interest can be inserted. When the plasmid is translated to produce proteins, the protein of interest is also produced.

Recombinant vaccine

A vaccine made using genetic engineering technology.

Toxin

A harmful chemical produced by some bacteria that can cause disease.

Toxoid

An inactivated toxin.

Toxoid vaccine

A vaccine made using an inactivated toxin produced by bacteria.

Vaccine

A tool that introduces the immune system to potential pathogens in a controlled manner, so that it does not cause disease but it allows for the development of protective immunity.