

Immunity and Vaccination

Chapter 3: Health: The Ultimate Treasure · Topic 2

Key Concept

When a vaccinated person is later exposed to the real disease-causing pathogen, their immune system already 'remembers' it from the vaccine and can respond quickly and effectively, often preventing illness entirely or making it much milder. Vaccination programs have successfully eliminated or greatly reduced diseases like smallpox and polio worldwide. Herd immunity occurs when enough people in a community are vaccinated, making it harder for a disease to spread, indirectly protecting even those who cannot be vaccinated.

Quick Revision Notes

- Immunity is the body's natural ability to resist infections using antibodies and immune cells.
- Vaccines train the immune system using a weakened/inactive form of a pathogen.
- Vaccinated individuals respond faster and more effectively to real infections.
- Herd immunity occurs when widespread vaccination reduces disease spread in a community.

Practice Questions

- 1 Explain how a vaccine helps protect against disease.
- 2 What is herd immunity, and why is it important for community health?
- 3 Name one disease that has been greatly reduced worldwide due to vaccination.