

Vaccinology

Discussion Points

- What is a vaccine, and how does it differ from other forms of treatment or prevention?
- Why do some diseases still not have effective vaccines?
- What are the different types of vaccines (e.g., mRNA, vector-based, inactivated) and how do they work?
- How do scientists test vaccines for safety and efficacy? What stages are involved in clinical trials?
- What role does global cooperation play in vaccine development and distribution?
- What ethical challenges arise when distributing vaccines during a global health emergency?

Have You Considered...?

- Investigating how mRNA technology has changed the field of vaccinology?
- Looking into how social and political factors influence vaccine uptake and public trust?
- Thinking about why vaccine misinformation spreads and how it can be countered?
- Exploring the role of the World Health Organisation and initiatives like COVAX?
- Reading about “vaccine nationalism” and how it shaped global COVID-19 responses?
- Writing a short briefing: “Why don’t we yet have an effective vaccine for HIV or malaria?”

Further Reading & Exploration

- ☐ **Peter J. Hotez – *Vaccines Did Not Cause Rachel’s Autism***
A mix of science and public communication by a leading vaccinologist.
- ☐ **Siddhartha Mukherjee – *The Gene or The Emperor of All Maladies***
Narrative science writing that places immunology in a broader context.
- ☐ **Heidi Larson – *Stuck: How Vaccine Rumors Start – and Why They Don’t Go Away***
Explores the social dimensions of vaccine hesitancy.
- ☐ **David Quammen – *Spillover: Animal Infections and the Next Human Pandemic***
Examines the ecology of viruses and how pandemics begin.
- ☐ **The British Society for Immunology** – immunology.org
Clear explainers, career insights, and updates from UK researchers.
- ☐ **Wellcome Collection articles** – wellcomecollection.org
Accessible and thoughtful essays on science, ethics, and the body.
- ☐ *Kurzgesagt – In a Nutshell* (watch: “How Vaccines Work”)
- ☐ *Science Vs* podcast – episodes on vaccines, virus origins, and public health
- ☐ *The Vaccine Confidence Project* (talks and interviews on global health attitudes)
- ☐ **Sarah Gilbert and Dr Catherine Green – *Vaxxers***
One of the better ‘inside’ accounts of the Covid-19 vaccine development.
- ☐ **David M Oshinsky – *Polio: An American Story***