

How Vaccines Work

Body & health

The mechanism, the main types, and what herd immunity means.

Different technologies, the same goal: memory without disease.

Type	Contains	Example
Live attenuated	Weakened pathogen	MMR
Inactivated	Killed pathogen	Polio (injected)
Subunit	A fragment, often a protein	Hepatitis B
Toxoid	Inactivated toxin	Tetanus
mRNA	Instructions to make a protein	Some COVID-19
Viral vector	A harmless virus carrying instructions	Some COVID-19

Herd immunity protects those who cannot be vaccinated. The threshold rises with how contagious the disease is.