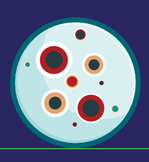
What are the types of vaccines?

Types of vaccines	mRNA	Viral vector	Inactivated virus
Primary content and how it reacts 	mRNA sequence which enters the individual cell to produce the specific virus protein	Contains modified (vector) virus to transport the antigen genetic code. The human cell will produce the targeted protein	Virus that have been killed using high heat, chemical or radiation
Function 	Uses the mRNA molecule to stimulate the immunity in order to recognise the targeted virus protein	A safe viral vector is used to deliver the genetic material of the targeted virus and stimulating the human immune response	Virus that has been killed and used to stimulate the human immune response
Advantages 	• Simple and quick to produce • Does not require living component and synthetically produced. • Triggers an adaptive immune response	• Proven technology • Triggers an adaptive reaction for a more effective immune response	• Proven technology • Suitable for those who have a weak immune system • Easy to produce
Challenges 	• Some mRNA vaccines require extremely cold storage conditions • Used as a vaccine for the first time in medical history	• Complex manufacturing process • Important to ensure the virus vector is safe to be used	• High manufacturing cost
Example	None	Ebola, Vaccines for livestock	Polio, Japanese Encephalitis & Rabies
Vaccine candidate 	• Moderna • Pfizer/BioNTech	• AstraZeneca • CanSino Biologics • Johnson & Johnson • Sputnik V	• Sinovac

Analysis & compilation: The Academy of Sciences Malaysia

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LINDUNG DIRI,
LINDUNG SEMUA.

SPECIAL COMMITTEE ON ENSURING ACCESS TO COVID-19 VACCINE SUPPLY (JKJAV)