

The three vaccines

The first shipment of Singapore's only approved vaccine, the Pfizer-BioNTech vaccine, arrived on Dec 21 last year. The nation has also signed agreements to secure at least two other vaccines. **Insight** looks at them.

	Pfizer-BioNTech (United States/Germany)	Moderna (United States)	Sinovac (China)
Vaccine type	<p>A messenger RNA (mRNA) vaccine which involves injecting snippets of the viral genetic code so a patient's body mounts a protective response without being actually exposed to the virus</p> <p>Pros:</p> <ul style="list-style-type: none"> • Strong cellular immunity • Relatively easy to manufacture <p>Cons:</p> <ul style="list-style-type: none"> • No RNA vaccines have been registered for commercial use • Booster shots may be required • Some require ultra-cold storage 		<p>Inactivated virus: Virus is treated with heat, chemicals or radiation to inactivate it and prevent it from replicating, but it can still trigger an immune response</p> <p>Pros:</p> <ul style="list-style-type: none"> • A known technology considered safe • Can be used in people with weakened immune systems <p>Cons:</p> <ul style="list-style-type: none"> • Low immunogenicity, the ability of a foreign substance to provoke an immune response in the body, thereby requiring multiple boosters
Arrival in Singapore	Dec 21, 2020	Over the course of 2021	
Vaccination regime	Two doses 21 days apart	Two doses 28 days apart	Two doses 14 to 21 days apart
Storage temperature	Minus 70 deg C	Minus 20 deg C up to six months	Regular refrigerator temperature
Efficacy rate <small>Vaccine efficacy is the extent to which a vaccine achieves its intended effect under ideal circumstances.</small>	95 per cent	94.1 per cent	78 per cent effective in a late-stage Brazilian trial with no severe Covid-19 cases, but there was a lack of detailed data provided
Price	Vaccination is free for all Singaporeans, and all long-term residents who are currently here		