

## Leading vaccines

As of Feb 18, 2021, The New York Times Coronavirus Vaccine Tracker listed 70 vaccines in human trials, and 89 in preclinical trials. Here are the top 10 leading vaccines

| DEVELOPER              | HOW IT WORKS | PHASE | EFFICACY   | DOSE                         | TYPE                | STORAGE  | AUTHORISATION/APPROVAL   |
|------------------------|--------------|-------|--|------------------------------|---------------------|--|--|
| Pfizer<br>-BioNTech    | mRNA         | 3     | 95%  | 2 doses,<br>3 weeks<br>apart | Muscle<br>injection | Freezer storage<br>only at $-70^{\circ}\text{C}$   | Albania, Argentina, Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, Ecuador, EU, Faroe Islands, Greenland, Iceland, Iraq, Israel, Japan, Jordan, Kuwait, Malaysia, Mexico, New Zealand, Norway, Oman, Panama, Philippines, Qatar, Saint Vincent and the Grenadines, Saudi Arabia, Serbia, Singapore, Switzerland, UAE, UK, US, Vatican City |
| Moderna                | mRNA         | 3     | 94.5%  | 2 doses,<br>4 weeks<br>apart | Muscle<br>injection | 30 days with<br>refrigeration,<br>6 months at $-20^{\circ}\text{C}$  | Canada, EU, Faroe Islands, Greenland, Iceland, Israel, Norway, Qatar, Saint Vincent and the Grenadines, Singapore, Switzerland, UK, US   |
| Gamaleya               | Ad26, Ad5    | 3     | 91.6%  | 2 doses,<br>3 weeks<br>apart | Muscle<br>injection | Freezer storage;<br>developing an<br>alternative<br>formulation that<br>can be refrigerated                                | Algeria, Argentina, Armenia, Bahrain, Belarus, Bolivia, Gabon, Guinea, Hungary, Iran, Kazakhstan, Laos, Lebanon, Mexico, Mongolia, Montenegro, Myanmar, Nicaragua, Pakistan, Palestine, Paraguay, Republika Srpska, Russia, Saint Vincent and the Grenadines, Serbia, Tunisia, Turkmenistan, UAE, Uzbekistan, Venezuela                              |
| Oxford<br>-AstraZeneca | ChAdOx1      | 3     | 82.4%  | 2 doses                      | Muscle<br>injection | Stable in refrigerator<br>for at least 6 months  | Argentina, Bahrain, Bangladesh, Brazil, Chile, Dominican Republic, Ecuador, El Salvador, EU, Hungary, India, Iraq, Mexico, Morocco, Myanmar, Nepal, Pakistan, Philippines, Saint Vincent and the Grenadines, South Africa, South Korea, Sri Lanka, Thailand, UK, Vietnam   |
| CanSino<br>Biologics   | Ad5          | 3     | 65.7%  | Single dose                  | Muscle<br>injection | Refrigerated   | Mexico, China (military use), Pakistan   |
| Johnson<br>& Johnson   | Ad26         | 3     | 72% in US,<br>66% in Latin<br>America,<br>57% in South<br>Africa | Single dose                  | Muscle<br>injection | Up to two years<br>frozen at $-20^{\circ}\text{C}$ , and<br>up to three months<br>refrigerated at<br>$2-8^{\circ}\text{C}$ | Saint Vincent and the Grenadines   |
| Vector<br>Institute    | Protein      | 3     | Unknown  | 2 doses, 3<br>weeks apart    | Muscle<br>injection | Stable in refrigerator<br>for up to two years  | Russia, Turkmenistan   |
| Novavax                | Protein      | 3     | 89.3%  | 2 doses,<br>3 weeks apart    | Muscle<br>injection | Stable in refrigerator   | -  |
| Sinopharm              | Inactivated  | 3     | 79.3%  | 2 doses,<br>3 weeks apart    | Muscle<br>injection | Unknown  | Bahrain, Cambodia, China, Egypt, Hungary, Iraq, Jordan, Laos, Macau, Morocco, Pakistan, Peru, Serbia, Seychelles, UAE  |
| Sinovac                | Inactivated  | 3     | 50.4%  | 2 doses, 2<br>weeks apart    | Muscle<br>injection | Refrigerated   | Azerbaijan, Bolivia, Brazil, Cambodia, China, Chile, Colombia, Indonesia, Laos, Turkey, Uruguay  |