

Update on COVID-19 Vaccines

Two COVID-19 vaccines have been approved by Health Canada. Both are gene-based, mRNA (messenger RNA) vaccines that provide “genetic instructions” to host cells to make the SARS-CoV-2 (COVID-19 virus) protein and then develop an antibody response to it. The initial doses of vaccines are being distributed to high priority/risk groups first: residents and staff of shared living settings, individuals caring for older adults, adults 70+ years of age, healthcare workers in direct contact with patients, and adults in Indigenous communities.¹ These two vaccine products are outlined in the table below.

	Pfizer-BioNTech COVID-19 Vaccine (COVID-19 mRNA Vaccine)	Moderna COVID-19 Vaccine (mRNA-1273 SARS-CoV-2 Vaccine)
Efficacy	Demonstrated 95% efficacy against COVID-19 28 days after first dose, with over 94% efficacy in people over 65 years of age, in phase 3 study of over 43,000 people	Demonstrated 94.1% efficacy against COVID-19 and 100% efficacy against severe COVID-19 in a phase 3 study of over 30,000 people (including those 65 years of age and older)
Authorized Ages for Use	16 years of age and older	18 years of age and older
Vaccination series (dose)	<ul style="list-style-type: none"> 0.3 mL by intramuscular (IM) injection (preferably into the deltoid muscle of the upper arm) Two doses, 21 days apart 	<ul style="list-style-type: none"> 0.5 mL by intramuscular (IM) injection (preferably into the deltoid muscle of the upper arm) Two doses, one month apart
Adverse events following immunization (AEFI)	Injection site pain, fatigue, headache, fever	Injection site pain, fatigue, headache, myalgia, chills
Doses per vial	5	10
Storage/Stability	<ul style="list-style-type: none"> Store at -70 degrees Celsius in dry ice (must be thawed prior to use). Can be stored at 2 to 8 degrees Celsius for up to 5 days before use and prior to dilution. Discard diluted vaccine or open (punctured) vial after 6 hours. 	<ul style="list-style-type: none"> Store at -25 to -15 degrees Celsius, thaw before use. Can be stored at 2 to 8 degrees Celsius for up to 30 days before first use. Discard open (punctured) vial after 6 hours.
Handling instructions	<ul style="list-style-type: none"> Thaw the vial in refrigerator (2 to 8 degrees Celsius) for 30 minutes or at room temperature (up to 25 degrees Celsius). May store thawed vial at room temperature for 2 hours prior to dilution. Do not refreeze. Bring thawed vial to room temperature, then invert 10 times (do not shake) to mix. Dilute with 1.8 mL 0.9% NaCl, USP — will become an off-white suspension. 	<ul style="list-style-type: none"> Thaw in refrigerator (2 to 8 degrees Celsius) for 2 hours and 30 minutes; let stand at room temperature for 15 minutes before administering. May also thaw at room temperature (up to 25 degrees Celsius) for 1 hour. Do not refreeze. No dilution/reconstitution required. Swirl the vial gently after thawing and between each withdrawal. Do not shake.

References for table: 2-6 mRNA = messenger RNA