COVID-19 Vaccine – Moderna Spikevax mRNA Vaccine and Pfizer-BioNTech Comirnaty mRNA Vaccine



BIOLOGICAL PAGE

Section 7	Biological Product Information	Standard # 07	7.228
Created and approved by	Provincial Immunization Program Standards and Quality		
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	Moderna Spikevax Vaccine	Pfizer-BioNTech Comirnaty Vaccine
Manufacturer	Moderna Biopharma Canada Corp.	BioNtech Manufacturing GmbH
Classification	mRNA vaccine	
COVID-19 vaccine strain	LP.8.1	
Indications for use	Individuals 6 months of age and older	Individuals 12 years of age and older
Fall/Winter 2025 Eligibility for Provincially Funded COVID-19 vaccine	that individuals who are at an increased risk can access this vaccine first. The following individuals are at an increase or at an increased risk of exposure and tran 19 vaccine, free of charge: Phase 1 (October 1): Eligible healthcare workers Albertans who reside in continuing caccommodations Home care clients who are homebout individuals 6 months of age and olded immunocompromising conditions or experiencing houselessness, and incompact Alberta Seniors Benefit Phase 2 (October 20): All other individuals administrative fee will apply Eligible healthcare workers include the followork in patient-facing settings such as: Hospital staff (including students in health volunteers) Staff in community health settings (for example, Unamental staff (including students in health care aides on the provincial registered with one of the Disability support workers and staff works of Health care aides on the provincial registered with care aides on the provin	and ber who have certain moderate to severe underlying medical conditions, individuals dividuals 65 years of age and older receiving the als 6 months of age and older; an ring: Dur colleges. AUNP, AUPE, CUPE) as well as individuals who alth disciplines, contract workers and example, clinical labs, home care and shelters) Living tking in recovery settings extry pospitals, clinics, pharmacies, continuing care

	Moderna Spikevax Vaccine	Pfizer-BioNTech Comirnaty Vaccine
Dose	Moderna Spikevax vaccine 6 months to 11 years of age: 0.25mL (25 mcg) 12 years of age and older: 0.5mL (50 mcg)	Pfizer-BioNTech Comirnaty Vaccine 12 years of age and older: 0.3mL (30 mcg)
Recommendations for pediatric Moderna Spikevax COVID-19 vaccine doses	To minimize vaccine wastage, immunization sites are encouraged to follow the appointment booking guidelines below: Rural Immunization Sites: Schedule a minimum of 4 pediatric appointments Urban Immunization Sites: Schedule a minimum of 6 pediatric appointments If there are remaining doses of the COVID-19 vaccine after pediatric appointments: These doses may be offered to individuals 12 years of age and older	Not applicable
Route	Intramuscular injection	
Schedule for healthy immunocompetent individuals (See below for the schedule for individuals with certain immunocompromising conditions)	Individuals 6 months to 4 years of age: Previously unimmunized Dose 1: day 0 Dose 2: at least 8 weeks after dose 1 Previously immunized with one dose of COVID-19 vaccine, regardless of product type One dose, at least 8 weeks from the previous dose Previously received two or more COVID-19 vaccine doses, regardless of product type One dose, at least 3 months from the previous dose Note: Individuals 6 months to 4 years of age should complete a two-dose series of COVID-19 vaccine regardless of the product that was administered for the first dose. The series should not be restarted. Individuals 5 years of age and older:	Pfizer-BioNtech Comirnaty vaccine Individuals 12 years of age and older: One dose, at least 3 months from previous COVID-19 vaccine dose, regardless of the number of doses received in the past.
	 Individuals 5 years of age and older: One dose, at least 3 months from previous COVID-19 vaccine dose, regardless of the number of doses received in the past. 	

Schedule for individuals with certain moderate to severe immunocompromising conditions

Individuals 6 months of age and older:

Unimmunized/previously received fewer than 3 doses of non-LP.8.1 COVID-19 vaccine:

- Immunocompromised individuals should follow the schedule below and receive the
 appropriate number of COVID-19 vaccine doses to complete a three-dose COVID-19
 vaccine series. Regardless of whether they have received one or two non-LP.8.1 COVID-19
 vaccine doses, count the previous dose(s) and do not restart the series.
 - o Dose 1: day 0
 - Dose 2: at least 28 days after dose 1
 - o Dose 3: 8 weeks after dose 2
 - A minimum interval of 4 weeks may be considered.

Previously received 3 or more doses of COVID-19 vaccine:

• 1 dose, at least 3 months from previous non-LP.8.1 COVID-19 vaccine dose, regardless of the number of doses received in the past.

Note:

- Specific immunocompromising conditions that make an individual eligible for provincially funded COVID-19 vaccine include:
 - Solid organ transplant recipients:
 - Immunization for Children Expecting Solid Organ Transplant Before 18 Months of Age
 - Immunization for Children Expecting Solid Organ Transplant After 18 Months of Age
 - Immunization for Adult Solid Organ Transplant (SOT) Candidates and Recipients
 - Hematopoietic stem cell transplants recipients pre-transplant and post-transplant while in immunosuppressed state and individuals receiving Chimeric Antigen Receptor (CAR) T-Cell therapy. See:
 - Standard for Immunization of Transplant Candidates and Recipients
 - Immunization for Child HSCT Transplant Recipients
 - Immunization for Adult HSCT Transplant Recipients
 - Individuals with malignant hematologic disorders and non-hematologic malignant solid tumors while receiving active treatment which includes chemotherapy, targeted therapies, and immunotherapy (does not include individuals receiving solely hormonal therapy, radiation therapy or a surgical intervention).
 - o Individuals with chronic kidney disease on peritoneal dialysis or hemodialysis.
 - Individuals on:
 - Long term high-dose systemic steroid treatment (prednisone equivalent of greater than or equal to 2 mg/kg/day or 20 mg/day if weight greater than 10 kg, for greater than or equal to 14 days)
 - Alkylating agents
 - Anti-B-cell therapies (including anti-CD19, anti-CD20, anti-CD22 and anti-CD52 monoclonal antibodies such as rituximab, ocrelizumab, and ofatumumab)
 - Antimetabolites such as methotrexate, azathioprine, mycophenolate
 - Tumor-necrosis factor (TNF) inhibitors such as adalimumab, certolizumab, etanercept, golimumab, infliximab.
 - Individuals with HIV without viral suppression or those with acquired immunodeficiency syndrome (AIDS).
 - Individuals with moderate to severe primary immunodeficiency (such as DiGeorge syndrome, Wiskott-Aldrich syndrome).

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Underlying medical	 Documentation of immunocompromising conditions is not required. Offer a COVID-19 vaccine series to individuals who identify themselves as meeting at least one of the criteria above should be offered COVID-19 vaccine. Consult physician on the timing of immunization (initiation and interval) based on the individual's treatment and unique circumstances. Immunize individuals who are immunocompromised at a time when the individual is most likely to mount an immune response. Individuals with the following underlying medical conditions will be eligible for COVID-19 	
conditions that would allow individuals to access provincially funded LP.8.1 COVID-19 vaccine	vaccine that is provincially funded: Cancer (currently receiving treatment) Cerebrovascular disease Chronic kidney disease and not on peritoneal dialysis or hemodialysis Chronic liver diseases Chronic lung diseases Cystic fibrosis Diabetes mellitus Disabilities (for example, down syndrome, learning, intellectual, or developmental disabilities; ADHD; cerebral palsy; congenital disabilities; spinal cord injuries) Heart conditions (for example, cardiomyopathies, coronary artery disease, heart failure) HIV infection Mental health disorders (limited to: mood disorders, including depression, schizophrenia spectrum disorders) Obesity Pregnancy Tuberculosis Primary immunodeficiency diseases that are not mentioned above Use of corticosteroids or other immunosuppressive medications that are not mentioned	
Interval between previous COVID-19 infection and COVID-19 immunization	 Individuals who have had a recent COVID-19 infection may receive COVID-19 vaccine after acute symptoms of COVID-19 have resolved and they are no longer infectious, unless there is a history of multisystem inflammatory syndrome in children or adults (MIS-C or MIS-A). Individuals with a history of multisystem inflammatory syndrome in children or adults (MIS-C or MIS-A), regardless of immunocompromised status, should receive the vaccine when clinical recovery has been achieved or at least 90 days since the onset of MIS-C or MIS-A, whichever is longer. 	
Contraindications/ Precautions	 Contraindications: Known severe hypersensitivity to any component of the vaccine. Two non-medicinal ingredients in the vaccine that have been associated with allergic reactions in other product:	

Moderna Spikevax Vaco	cine
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Pfizer-BioNTech Comirnaty Vaccine

Precautions:

- The safety and effectiveness of Moderna Spikevax and Pfizer-BioNTech is inferred from studies and based on safety data from clinical trials which evaluated primary and booster vaccination and post marketing safety data; safety data accrued are relevant to the subsequent variant updated vaccines because these vaccines are manufactured using the same process.
- There are no known serious warnings or precautions associated with this product at the time of authorization.
- Individuals who have had a serious allergic reaction to another vaccine, drug or food should talk to their health care provider before receiving the vaccine.
- Individuals receiving anticoagulant therapy or those with a bleeding disorder that would contraindicate intramuscular injection should not be given the vaccine unless the potential benefit clearly outweighs the risk of administration.
- Administration should be postponed in individuals suffering from acute severe febrile illness.

Myocarditis/Pericarditis

- Very rare cases of myocarditis and/or pericarditis following immunization with COVID-19 vaccines have been reported during post-authorization use.
 - Compared to the original monovalent primary series, the risk of myocarditis and/or pericarditis is now expected to be lower due to the use of a 1-dose schedule in most individuals.
 - Current data do not show a product-specific difference in the risks of myocarditis and/or pericarditis after a booster dose of an mRNA COVID-19 vaccine.
- Inform individuals receiving an mRNA COVID-19 vaccine of the risk of myocarditis and pericarditis and advised to seek medical attention if they develop related symptoms including shortness of breath, chest pain, or the feeling of a rapid or abnormal heart rhythm.
- Generally, deferral of COVID-19 immunization is not required for those with a prior history of myocarditis or pericarditis that is unrelated to COVID-19 mRNA vaccines.
 - If these individuals have questions or concerns about their prior history of myocarditis or pericarditis and immunization, it is recommended they consult with their clinician.
 However, consultation with a clinician is not required to receive COVID-19 vaccines.
- In most circumstances, defer further doses of mRNA COVID-19 vaccines for individual who experienced myocarditis and/or pericarditis within 6 weeks of receiving a previous dose of an mRNA COVID-19 vaccine.
 - However, further doses may be offered if individuals with confirmed myocarditis or pericarditis with abnormal cardiac investigation choose to receive another dose of vaccine after discussing the risks and benefits with their clinician.
 - Individuals with a history compatible with pericarditis within 6 weeks of receiving a
 dose of an mRNA COVID-19 vaccine, who either had no cardiac workup or who had
 normal cardiac investigations, can be re-immunized when they are symptom free and at
 least 90 days have passed since previous immunization
 - Informed consent should discuss the low risk of recurrence of myocarditis and/or pericarditis following additional doses of COVID-19 vaccine in individuals with a history of confirmed myocarditis and/or pericarditis after a previous dose of mRNA COVID-19 vaccine.

Possible Reactions

Common:

- Pain, swelling/induration, erythema at the injection site
- Axillary swelling/tenderness

	Moderna Spikevax Vaccine	Pfizer-BioNTech Comirnaty Vaccine
	 Fatigue, Headache, chills, fever Myalgia, arthralgia Diarrhea, nausea, vomiting, loss of appetite Irritability, crying Hypoaesthesia (decreased sense of touch of Paraesthesia (tingling, itching or pricking set Uncommon: Lymphadenopathy Asthenia Hyperhidrosis, night sweats Rare: Allergic reaction Anaphylaxis Erythema multiforme Myocarditis/Pericarditis Facial paralysis/Bell's palsy Unexpected or unusual side effects can occur. Federal detailed information. 	ensation)
Pregnancy		
Lactation	Pregnancy May use for individuals who are lactating and fe It is unknown whether this vaccine is excrete powherse/infants cannot be evaluded.	
	 newborns/infants cannot be excluded. Recent reports have shown that breastfeedi COVID-19 vaccines have antibodies in their babies. More data is needed to determine the provide to the baby. 	oreastmilk, which could help protect their

	 Moderna Spikevax Vaccine COVID-19 vaccine is indicated for individuals who are breastfeeding. It is recommended that individuals consult their primary health care provider or medical specialist for any vaccine related questions or concerns. Consultations with a primary health care provider or medical specialist is not required to 	
Composition	Moderna Spikevax Vaccine Each 0.25 ml dose of Spikevax contains 25 micrograms of mRNA encoding SARS-CoV-2 spike protein. The mRNA encoding spike protein is derived from the omicron variant LP.8.1. Each 0.5 ml dose of Spikevax contains 50 micrograms of mRNA encoding SARS-CoV-2 spike protein. The mRNA encoding spike protein is derived from the omicron variant LP.8.1. Non-medicinal ingredients: Acetic acid Cholesterol SM-102 (Heptadecan-9-yl 8-((2hydroxyethyl) (6-oxo-6-(undecyloxy) hexyl) amino) octanoate) PEG2000-DMG (1,2-dimyristoyl-racglycero-3-methoxypolyethylene glycol2000) Sodium acetate trihydrate DSPC (1,2-distearoyl-sn-glycero-3-phosphocholine) Sucrose Trometamol tromethamine hydrochloride water for injection. Does not contain any preservatives.	Pfizer-BioNtech Comirnaty Vaccine Each 0.3 ml dose of Comirnaty contains 30 mcg of mRNA encoding the viral spike (S) glycoprotein of SARS-CoV-2. The mRNA encoding spike protein is derived from Omicron variant LP.8.1. Non-medicinal ingredients: ALC-0315 = ((4-hydroxybutyl) azanediyl)bis (hexane-6,1-diyl)bis(2hexyldecanoate) ALC-0159 = 2-[(polyethylene glycol)2000]-N,N-ditetradecylacetamide cholesterol DSPC = 1,2-distearoyl-sn-glycero-3phosphocholine sodium chloride sucrose tromethamine tromethamine tromethamine hydrochloride water for injection Does not contain any preservatives
Blood/Blood Products	Does not contain blood/blood products.	
Bovine/Porcine Products	Does not contain bovine/porcine products.	
Administration with Other Products	 COVID-19 vaccines may be co-administered with, or at any time before or after other vaccines (including, live, inactivated, adjuvanted, or unadjuvanted vaccines), tuberculin skin tests or IGRA (QFT) tests to individuals 6 months of age and older. TST and COVID-19 vaccines: Currently there is no data on the impact of the COVID-19 mRNA vaccines on tuberculin skin testing or IGRA (QFT) test results. There is a theoretical risk that COVID-19 vaccines may temporarily affect cell-mediated immunity, resulting in false-negative tuberculin skin testing or IGRA (QFT) test results. In the absence of data and acknowledging the importance of both timely tuberculosis testing and immunization, immunization with COVID-19 vaccines can take place at any time before, after or at the same visit as the TST or IGRA test. 	

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	 However, re-testing (at least 28 days after a dose of COVID-19 vaccine) of individuals with negative TST or IGRA results for whom there is high suspicion of latent tuberculosis may be prudent in order to avoid missing cases due to potentially falsenegative results. Consult with TB services. Deferral of COVID-19 immunization is not recommended for individuals who have received anti-SARS-CoV-2 monoclonal antibodies or convalescent plasma provided for treatment or prophylaxis of COVID-19. Note: Consult the primary health care provider or medical specialist as timing of administration and potential interference between COVID-19 vaccine and monoclonal products not used for treatment or prophylaxis of COVID-19 infection are currently unknown and the primary health care provider should be consulted on ca case-by-case basis. Give mRNA COVID-19 vaccines any time before or after an immunoglobulin preparation (including RhIg) or blood product has been administered. There is no recommended minimum interval between these products and COVID-19 vaccine. 	
Preparation	 Moderna Spikevax Vaccine Multi-dose vials: Multi-dose vials are supplied as a frozen dispersion and do not contain preservatives. Must not be reconstituted, mixed with other medicinal products or diluted. Swirl the vial gently after thawing and between each withdrawal. Do not shake vial. Thaw vaccine before use: From the freezer to room temperature (between +15°C to +25°C): Thaw for 45 minutes from frozen state. From the freezer to a vaccine fridge (+2°C to +8°C): Thaw for 2 hours from the frozen state. Pre-filled syringe: Individual syringe Thaw time between +2° to +8°C is 1 hour 	 Pfizer-BioNtech Comirnaty Vaccine Pre-filled syringe: Prior to use, the pre-filled syringes can be stored for up to 12 hours at temperatures between +8°C to +25°C and can be handled in room light conditions. If the pre-filled syringe has been frozen, discard. Do not shake Remove the tip cap slowly turning the cap counterclockwise while holding the luer lock. Attach a needle appropriate for intramuscular injection and administer the entire volume to deliver a 0.3 mL dose.
Appearance	 and 40 minutes. Thaw time at room temperature between +15° to +25°C is 40 minutes. Carton of 10 syringes Thaw time between +2° to +8°C is 2 hours and 40 minutes. Thaw time at room temperature between +15° to +25°C is 1 hours and 20 minutes. Do not shake syringe. The liquid is white to off-white dispersion. It 	The liquid is a clear to slightly opalescent
Арреаниное	may contain white or translucent product- related particulates.	suspension and may contain white to off- white opaque amorphous particles.

Moderna Spikevax Vaccine Pfizer-BioNTech Comirnaty Vaccine Pfizer-BioNtech Comirnaty Vaccine Moderna Spikevax Vaccine **Storage** Pre-filled syringe Multi-dose vials • Store frozen in freezer between -50°C Store in a refrigerated suspension and do not freeze. to -15°C. Protect from light until thawed. • Can be stored between +2°C to +8°C until the expiration date printed on the carton • Do not refreeze after thawing. • Thawed, unpunctured vials: and syringe label. Pre-filled syringes may be transported Can be stored between +2°C to +8°C between +2°C to +8°C. for up to 50 days prior to first use. Minimize exposure to room light, and Can be stored between +8°C to +25°C avoid exposure to direct sunlight and for up to 12 hours. Discard after 12 ultraviolet light. hours. Pre-filled syringes can be handled in room • Thawed, punctured vials: light conditions. Can be stored at +2°C to +8°C for 24 Do not use vaccine after the expiration hours. Discard after 24 hours. date printed on the syringes and cartons o Can be stored at +8°C to +25°C for 12 regardless of storage condition. hours. Discard after 12 hours. Pre-filled syringe • Store frozen between -50°C to -15°C. Store in the original carton to protect from light. · Syringes can be stored refrigerated between +2° to +8°C for up to 50 days prior to first use. · Pre-filled syringes may be stored between +8°C to +25°C for up to 12 hours after removal from refrigerated conditions. Discard thawed pre-filled syringe if not used within this time. • Syringes **should not** be returned to the refrigerator after being thawed at room temperature Do not refreeze once thawed. **General Considerations:** • Do not use vaccine after the expiration date printed on the vials/syringes and cartons regardless of storage condition. Do not refreeze once thawed. • Store in the original carton to protect from light. Thawed vials and pre-filled syringes can be handled in room light conditions. Moderna Spikevax Vaccine **Pfizer-BioNtech Comirnaty Vaccine Packaging** 6 months to 11 years 12 years and older Multi-dose vial: 10 pediatric doses per vial • Pre-filled syringe: 10 doses per package. Low dead-volume syringes and/or needles can be used to extract 10 doses from a single vial.

	Moderna Spikevax Vaccine	Pfizer-BioNTech Comirnaty Vaccine
	 If standard syringes and needles are used, there may not be sufficient volume to extract a 10th dose from a single vial. 12 years and older Pre-filled syringe: 10 doses per package. 	
Vaccine Codes	COVMODmRNALP	COVPBmRNALP
Antigen Code	COVID-19	
Licensed for	Individuals 6 months of age and older, at least 6 months from previous COVID-19 vaccine dose.	Individuals 12 years of age and older, at least 3 to 6 months from previous COVID-19 vaccine dose.
Off-license use	 An interval of less than 6 months from previous COVID-19 vaccine dose. An interval of less than 4 moths from previous COVID-19 vaccine dose for immunocompromised individuals who previously completed a COVID-19 vaccine series. Three-dose series for individuals who are moderately to severely immunocompromised. 	Three-dose series for individuals who are moderately to severely immunocompromised.
Notes	 2024 September 24: Licensed for use in Canada. 2024 October: Implemented in Alberta. 2025 March 14: Indications for an additional (biannual) COVID-19 KP.2 vaccine dose for eligible individuals as of April 28, 2025. 2025 August 19: Pfizer BioNTech LP.8.1 COVID-19 vaccine licensed for use in Canada. 2025 August 22: Moderna Spikevax LP.8.1 COVID-19 vaccine licensed for use in Canada. 2025 October 1: Implemented in Alberta. 	
Related Resources	 Alberta Health Services Website: COVID-19 mRNA Vaccine Information COVID-19 mRNA Vaccine Information Sheet (105240) 	

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