COVID-19 mRNA Vaccine
SPIKEVAX™                Supplier: Moderna
(6 years of age and older presentation: 0.2 mg/mL)                    Red Vial Cap

INDICATIONS:
• Individuals 6 years of age and older. See COVID-19 Vaccine Eligibility

The vaccine is not approved for use in those less than 6 years of age.

DOSES AND SCHEDULE:
• Primary series for individuals 6-11 years of age A: 2 doses given as 0.25 mL (50 mcg) IM, 8 weeks apart. B, C, D
• Primary series for individuals 12 years of age and older A: 2 doses given as 0.5 mL (100 mcg) IM, 8 weeks apart. B, C, D, E

For individuals who are moderately to severely immunosuppressed (see COVID-19 Vaccine Eligibility), a 3-dose primary series is recommended. F The 3rd dose should be provided at least 28 days after the 2nd dose. For those 12 years of age and older, Moderna COVID-19 vaccine is preferentially recommended for all doses in the primary series. If Moderna is unavailable, Pfizer-BioNTech can be given. For those aged 6-11 years, the Moderna COVID-19 vaccine may be considered.

• First booster dose:
  o Residents of long term care (LTC), assisted living and independent living facilities, alternate level of care clients awaiting placement in LTC and individuals 70 years of age and older: 1 dose given as 0.5 mL (100 mcg) IM, at least 6 months after completion of the primary series. C, G
  o All other individuals 12-69 years of age H: 1 dose given as 0.25 mL (50 mcg) IM, at least 6 months after completion of the primary series. C, G

• Second booster dose for individuals 18 years of age and older: 1 dose given as 0.25 mL (50 mcg) IM, at least 6 months after the first booster dose. C, I

See BOOSTER DOSES for more information.

A The minimum age for vaccine receipt is based on age at presentation (i.e., the vaccine may be offered to individuals on or after their 6th birthday). The Pfizer-BioNTech COVID-19 vaccine is preferred for those 5-29 years of age due to the lower risk of myocarditis/pericarditis observed in adolescents and young adults, but the Moderna COVID-19 vaccine may have advantages for those aged 6-29 years who are moderately to severely immunosuppressed because of the higher immune response induced by the Moderna vaccine in these populations. In those without immunosuppression aged 6-29 years, if the Pfizer-BioNTech vaccine is unavailable, or upon client request, the Moderna COVID-19 vaccine can be used provided informed consent includes the elevated risk of myocarditis/pericarditis associated with this product.

B While the Health Canada authorized schedule for this product is 28 days between dose 1 and 2, the recommended interval is 8 weeks and is associated with optimal vaccine effectiveness. If administration of the second dose is delayed beyond 8 weeks, the series does not need to be restarted.

C Clients requesting a shorter interval should be informed that this is not optimal for protection, but their request for an earlier dose should be granted without need for MHO approval, provided the minimum interval between doses has been observed.

D The minimum interval between doses is 21 days. For optimal response, immunizers should observe recommended intervals as much as possible, however, doses given earlier than recommended may still be considered valid and need not be repeated if minimum intervals are observed.

E NACI recommends that mRNA vaccine (Pfizer-BioNTech or Moderna) can be offered as a second dose to individuals who received a single dose of Janssen vaccine, one additional dose of Moderna COVID-19 vaccine is recommended at least 28 days later.

F For individuals who received a single dose of Janssen vaccine, the additional dose of Moderna COVID-19 vaccine is recommended at least 28 days later.

G The minimum interval between completion of the primary series and the booster dose is 8 weeks. This interval may be applied for a minority of individuals for practical reasons, including pregnant persons.

H The Pfizer-BioNTech COVID-19 vaccine is preferred for those 12-29 years of age due to the lower risk of myocarditis/pericarditis with this vaccine (with the exception of the booster dose for those 18-29 years of age who are moderately to severely immunosuppressed, see BOOSTER DOSES).

I The minimum interval between the booster doses is 4 months.
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ADMINISTRATION:
- No reconstitution required.
- Low dead-volume syringes and/or needles should be used if available to extract the maximum number of doses.
- Do not puncture the vial more than 20 times.

Storage and Handling:
- The vaccine can be stored at:
  - -50°C to -15°C) up to the end of its expiry date, kept in the original packaging and protected from light. Do not store on dry ice or below -50°C.
  - +2°C to +8°C for up to 30 days prior to first use, protected from light.
  - Room temperature (up to +25°C) for up to 24 hours (cumulative).
  - After first vial puncture, the vaccine must be used within 24 hours.
  - The vaccine can be pre-loaded into a syringe for up to 24 hours from first vial puncture.
  - Ensure that the vial/syringe is clearly labelled with the date and time of first vial entry.
- Product should be thawed/held prior to use, in one of the following ways:
  - From the freezer to room temperature:
    - 5 mL vial requires 1 hour to thaw
  - From the freezer to the refrigerator:
    - 5 mL vial requires 2 hours and 30 minutes to thaw
    - Allow at least 15 minutes at room temperature prior to administration.
  - Swirl the vial gently after thawing and between each withdrawal. Do not shake.
- Do not refreeze thawed vials.

BOOSTER DOSES:
A first booster dose of a COVID-19 mRNA vaccine is recommended for individuals 12 years of age and older at least 6 months after the primary series has been completed.

A second booster dose of a COVID-19 mRNA vaccine is recommended for the following individuals at least 6 months after the first booster dose:
- Residents of LTC and alternate level of care clients awaiting placement in LTC
- Residents of assisted living facilities 70 years of age and older (Indigenous persons 55 years of age and older)
- Individuals 70 years of age and older in the community
- Indigenous persons 55 years of age and older in the community

For more information on storage and handling and temperature monitoring refer to Appendix E: Management of Biologicals and Guidance for Receiving and Handling the Moderna COVID-19 mRNA Vaccine.

On Dec 23, 2021, Health Canada authorized a 2 month shelf life extension, from 7 months to 9 months, for 5 mL vials of Moderna’s COVID-19 mRNA vaccine with printed expiry dates of February 15, 2022 through August 31, 2022, as long as the approved storage conditions have been maintained. Refer to the Health Canada alert for the updated expiry dates.

The recommendation to allow the vaccine to sit for at least 15 minutes at room temperature prior to administration is intended for patient comfort only, and is not a requirement.

All other individuals 18 years of age and older may receive a second booster dose now should they wish to, however it is preferable to delay their second booster dose until the fall.
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BOOSTER DOSES (continued):

<table>
<thead>
<tr>
<th>Preferred vaccine for booster dose</th>
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<tbody>
<tr>
<td>12-29 years of age – immunocompetent individuals</td>
<td>Pfizer-BioNTech (^A)</td>
</tr>
<tr>
<td>Individuals 12-17 years of age who are moderately to severely immunosuppressed</td>
<td>Pfizer-BioNTech (^A)</td>
</tr>
<tr>
<td>Individuals 18 years of age and older who are moderately to severely immunosuppressed</td>
<td>Moderna (^B)</td>
</tr>
<tr>
<td>30 years of age and older – immunocompetent individuals</td>
<td>Pfizer-BioNTech or Moderna</td>
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SEROLOGICAL TESTING:
Serological testing is not recommended before or after immunization.

CONTRAINDICATIONS:
1. History of anaphylactic reaction to any component of the vaccine is generally considered a contraindication, however for more details on the administration of COVID-19 vaccines to individuals with allergies to components of the COVID-19 vaccines, please see the PRECAUTIONS section.\(^C\)

PRODUCT COMPONENTS:
Other components: cholesterol; 1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC); acetic acid; lipid SM-102; sodium acetate trihydrate; sucrose; tromethamine (trometamol); tromethamine hydrochloride (trometamol hydrochloride).

PRECAUTIONS:
• For individuals with a history of anaphylactic reaction to a previous dose of an mRNA COVID-19 vaccine, re-vaccination (i.e., administration of a subsequent dose in the series when indicated) may be offered with the same vaccine or the same mRNA platform if a risk assessment deems that the benefits outweigh the potential risks for the individual and if informed consent is provided. Prior to re-vaccination, consultation with an allergist or another appropriate physician (e.g., Medical Health Officer) is advised. If re-vaccinated, vaccine administration should be done in a controlled setting with expertise and equipment.

\(^A\) Preferred due to the lower risk of myocarditis/pericarditis with this vaccine. However, if the Pfizer-BioNTech vaccine is unavailable, or upon client request, the Moderna COVID-19 vaccine can be used provided informed consent includes the elevated risk of myocarditis/pericarditis associated with this product.
\(^B\) Age-based booster dosing recommendations apply to Moderna COVID-19 booster doses for moderately to severely immunosuppressed clients (See DOSES and SCHEDULE). However, a 0.5 mL (100 mcg) dose may be provided upon request for those 18-69 years of age.
\(^C\) Alternatively, such individuals may be offered Novavax COVID-19 vaccine. A viral vector COVID-19 vaccine should only be considered when all other authorized COVID-19 vaccines are contraindicated or refused, due to the reduced effectiveness and the possible adverse effects specifically associated with viral vector vaccines (e.g., Thrombosis with Thrombocytopenia Syndrome [TTS]).
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PRECAUTIONS (continued):

to manage anaphylaxis, with an extended period of observation of at least 30 minutes after re-vaccination. A

• For individuals with suspected hypersensitivity or non-anaphylactic allergy to COVID-19 vaccine components, the vaccine should be administered in a controlled setting with expertise and equipment to manage anaphylaxis, with an extended period of observation post-vaccination of at least 30 minutes.

• Wait until symptoms of an acute illness are resolved before vaccinating with COVID-19 vaccine to differentiate symptoms of illness from vaccine side effects.

• Individuals diagnosed with Multisystem Inflammatory Syndrome in Children (MIS-C) or Adults (MIS-A) should delay COVID-19 vaccination until they have recovered from illness and for 90 days after the date of diagnosis of MIS-C or MIS-A.

• Additional doses of a COVID-19 vaccine should be deferred in individuals who experienced a physician-diagnosed myocarditis or pericarditis event following a previous dose of a COVID-19 mRNA vaccine. However those with a history compatible with pericarditis who had no cardiac workup or had normal investigations may proceed to further vaccination once symptoms have resolved and 90 days have passed since receipt of the dose associated with the event. For those with confirmed myocarditis (with or without pericarditis), an individual risk/benefit discussion between the patient and their healthcare provider should occur so that the patient (with their parent/guardian as applicable) can make an informed decision about proceeding with a subsequent dose. If another dose is offered, the Pfizer-BioNTech COVID-19 vaccine should be offered because of the lower rate of myocarditis/pericarditis compared to the Moderna vaccine. Informed consent should include the unknown rates of recurrence of myocarditis and/or pericarditis following receipt of additional doses of the Pfizer-BioNTech COVID-19 vaccine, as well as the need to seek immediate medical assessment and care should symptoms develop. Deferral is not required for those with a prior history of myocarditis or pericarditis that is unrelated to COVID-19 mRNA vaccines and are no longer being followed by a medical professional for heart issues. For more information refer to the NACI summary.

SPECIAL CONSIDERATIONS:

• COVID-19 vaccines can be administered concomitantly or at any time before or after the administration of another inactivated or live vaccine.

• Deferral of COVID-19 vaccination is no longer recommended for individuals who have received anti-SARS-CoV-2 monoclonal antibodies or convalescent plasma for treatment or prevention of COVID-19.

• COVID-19 vaccine may be offered to individuals without contraindications who have recovered from SARS-CoV-2 infection.

• COVID-19 booster doses may be deferred in those who have tested positive for COVID-19 (by PCR or rapid antigen test) until 3 months from symptom onset or, for asymptomatic cases, from the time of the positive test. For more information refer to the NACI statement.

A Alternatively, such individuals may be offered Novavax COVID-19 vaccine. A viral vector COVID-19 vaccine should only be considered when all other authorized COVID-19 vaccines are contraindicated or refused, due to the reduced effectiveness and the possible adverse effects specifically associated with viral vector vaccines (e.g., Thrombosis with Thrombocytopenia Syndrome [TTS]).
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SPECIAL CONSIDERATIONS (continued):
• Recipients should practice public health measures for prevention of SARS-CoV-2 infection and transmission regardless of vaccination with COVID-19 vaccine.

ADVERSE EVENTS:
Local: pain, swelling, redness, axillary lymphadenopathy. Delayed injection site reactions, with onset on or after day 8 following vaccination, may occur in a small percentage of vaccine recipients, mostly after the first dose.
Systemic: fatigue, headache, myalgia, chills, arthralgia, fever, nausea and vomiting.

Rare cases of facial paralysis/Bell’s palsy have been reported.

Pericarditis and myocarditis in association with the mRNA vaccines have been observed internationally and in Canada (see Public Health Agency of Canada reports). These events have been reported in Canada at a rate of 3.0 per 100,000 doses administered following any dose of the Moderna 100 mcg vaccine, and 1.9 per 100,000 doses administered following any dose of the Pfizer-BioNTech 30 mcg vaccine. It is seen more often after the second dose, and in males 12-29 years of age. The reported rates among males 18-29 years of age after the second vaccine dose are 15.9 per 100,000 for the Moderna vaccine and 2.6 per 100,000 for the Pfizer-BioNTech vaccine. In US data reported to VAERS, the reported rates of myocarditis occurring within 7 days of vaccination among 5-11 year old males in association with the 2nd dose of Pfizer-BioNTech vaccine (10 mcg formulation) are one-eighteenth the rate reported in 12-15 year old males (30 mcg formulation) with a rate of 2.7 cases per million doses. Most cases recover fully. In BC, information to support health care provider recognition and reporting of this event in association with the mRNA vaccines has been issued. The exact cause of these events is not known but is thought to be related to the immune response to the spike protein which is also important in immunity against COVID-19 virus.

REFERENCES:
1. Moderna vaccine product monograph
2. National Advisory Committee on Immunization: Recommendations on the use of COVID-19 Vaccine(s)
3. National Advisory Committee on Immunization: Recommendations on the use of Moderna Spikevax COVID-19 vaccine in children 6 to 11 years of age