Polio Vaccine (IPV)
Revision Date: October 10, 2023

Rationale for Update:
• Updated to clarify countries where polio is circulating.

Please consult the Product Monograph¹ for further information about the vaccine.

<table>
<thead>
<tr>
<th>IMOVAX® Polio (Vero Cell Origin)</th>
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<tbody>
<tr>
<td>Manufacturer</td>
</tr>
<tr>
<td>Sanofi Pasteur SA – Distributed by Sanofi Pasteur Limited</td>
</tr>
<tr>
<td>Licensed use</td>
</tr>
<tr>
<td>Individuals 6 weeks and older</td>
</tr>
<tr>
<td>Off-license use</td>
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<tr>
<td>None</td>
</tr>
</tbody>
</table>

Indications for use of provincially funded vaccine

**Children (2 months – 17 years of age):**
• Children previously unimmunized with polio vaccine who have already received diphtheria, pertussis and tetanus-containing vaccines.

**Note:** Combination vaccines containing diphtheria, pertussis, polio, tetanus and/or Hib should be used when indicated.
• For children travelling to countries where polio is known to be circulating (exporting and/or infected) and who are unimmunized or whose series is incomplete for age, an accelerated schedule can be considered.²
  Refer to the [World Health Organization (WHO) Global Polio Eradication Initiative](http://www.who.int) for current recommendations.³
• Children travelling to countries currently exporting and/or infected with polio and who have not completed their primary series may need to privately purchase polio vaccine through a local travel health professional (private travel clinic or pharmacy) if travel timelines do not allow scheduling through public health.

**Adults (18 years of age and older):**

**Low Risk**
• Students requiring polio vaccine are eligible until the end of grade 12 regardless of age.
• Due to the low risk of exposure to polio in Alberta and Canada, the recommendation for routine immunization of unimmunized low risk adults is suspended until further notice.

**Adults in Health Care Settings**
Due to the availability of and protocols for personal protective equipment, and due to the limited supply of vaccine, assessment of polio immunization (primary series and reinforcing doses) is not routinely recommended for the following individuals who work or study in environments with an increased risk of exposure to poliovirus compared to the general population:
• Laboratory workers handling specimens that may contain poliovirus.⁴
• Health care workers (HCW).⁴
• Health care students.

Exceptions can be made for adults in health care settings if they meet any of the other high-risk criteria below.
High Risk

Adults in the following groups are at increased risk of exposure to poliovirus and should receive a primary series and a single lifetime reinforcing dose:

- Members of communities or specific population groups with disease caused by polio (e.g., refugees from countries where polio is circulating such as Afghanistan, Pakistan, Dadaab (Kenya) and Ukraine evacuees).  
- Close contact with those who may be excreting poliovirus (e.g., people working with refugees or people on humanitarian missions in countries where polio is circulating exporting and/or infected). Refer to the World Health Organization, Polio Global Eradication Initiative, Polio Now.
- Family members or close contacts of internationally adopted infants who may have been immunized with oral polio vaccine (OPV) within the past 6 weeks.
- Individuals receiving travelers from areas where poliovirus is known to be circulating. Refer to the World Health Organization, Polio Global Eradication Initiative, Polio Now.
- Wastewater workers, working at wastewater treatment plants, who are exposed to sewage.

Note:

- Combination vaccines containing diphtheria, pertussis, polio and tetanus should be used when indicated.
- For adult recipients of Hematopoietic Stem Cell Transplant (HSCT) and Solid Organ Transplant (SOT), see:
  - Adult HSCT and
  - Adult SOT
- Adults travelling for 4 weeks or greater to countries currently exporting and/or infected with polio are not eligible for provincially funded vaccine and should be referred to local travel health professionals (e.g., private travel clinics or pharmacies).
- Refer to the World Health Organization (WHO) Global Polio Eradication Initiative for current recommendations.

<table>
<thead>
<tr>
<th>Dose</th>
<th>0.5 mL</th>
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<tbody>
<tr>
<td>Route</td>
<td>Subcutaneous</td>
</tr>
<tr>
<td>Schedule</td>
<td></td>
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<tr>
<td><strong>Primary Series:</strong></td>
<td></td>
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<tr>
<td>- Dose 1: day 0</td>
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<tr>
<td>- Dose 2: 8 weeks after dose 1 (interval between doses may be shortened to four weeks)</td>
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<tr>
<td>- Dose 3: 6 – 12 months after dose 2</td>
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<td><strong>Reinforcing dose:</strong></td>
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<tr>
<td><strong>Children:</strong></td>
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<tr>
<td>- A booster dose of polio-containing vaccine is recommended for children 4 years of age and older, usually as combined vaccine (dTap-IPV).</td>
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<tr>
<td><strong>Note:</strong></td>
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<tr>
<td>- Single antigen polio vaccine is rarely recommended for children and only if they are assessed as up-to-date for diphtheria, tetanus and pertussis immunization but not up-to-date for polio.</td>
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<tr>
<td>- The reinforcing dose of polio is not required if the third dose was given on or after 4 years of age.</td>
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</table>
• **Oral Polio Vaccine (OPV)**
  o As of April 1, 2016, trivalent OPV was replaced with either bivalent or monovalent OPV.
  o Any OPV doses received on or after April 1, 2016, are not considered as valid doses within the routine Alberta Immunization Schedule.
  o To ensure protection against all 3 poliovirus types, individuals presenting with a record of OPV received on or after April 1, 2016, will require re-immunization with IPV or an IPV-containing vaccine to be considered fully immunized.\(^6\)

**Adults (18 years of age and older):**

- One adult lifetime booster dose of polio-containing vaccine (at least 10 years after the primary series) is recommended only for adults who are at increased risk of exposure to polioviruses who completed the primary series.\(^1,4,7,8\) Refer to high risk indications noted above.

## Contraindications
- Known severe hypersensitivity to any component of the vaccine or its container.\(^1\)
- Anaphylaxis or other allergic reaction to a previous dose of vaccine containing polio antigen.

## Precautions
Each dose of vaccine may contain undetectable traces of neomycin, streptomycin and polymyxin B.

## Possible reactions

### Common:
- Redness and pain at the injection site\(^1\)
- Fever\(^1\)

### Uncommon:
- Injection site mass\(^1\)

The following additional adverse events have been reported from post-marketing surveillance: lymphadenopathy, transient mild fever, allergic reactions, arthralgia, myalgia, convulsions, febrile convulsions, headache transient and mild paresthesia, agitation, somnolence, irritability, rash and urticarial.\(^1\) Whatever the adverse event reported during post-marketing experience, its frequency remained very rare (less than 0.01%).\(^1\)

## Pregnancy
May be considered for pregnant women who require immediate protection and are at increased risk of exposure to wild poliovirus.\(^1\) Limited data have not revealed an increased risk of adverse events associated with polio vaccine administered to pregnant women.\(^1\)

## Lactation
May be administered to breastfeeding mothers when indicated.\(^1\) It is not known if Imovax® Polio is excreted in human milk.\(^1\)

## Program Notes
- 1956 - IPV introduced into the routine childhood immunization program.
- 1962 - Oral polio vaccine (OPV) administered in AB.
- 1994 July - IPV replaced OPV in routine immunization in combination with Diphtheria, Tetanus and Pertussis vaccine.
- 2016 November
- Unimmunized adults at low risk of exposure not eligible for provincially funded vaccine.
- HCWs that might be exposed to patients excreting polio eligible for primary series and single lifetime reinforcement.
- Travellers to countries exporting and/or infected with polio and staying 4 weeks or longer eligible for primary series and reinforcing dose for adults.
  - 2018 December - OPV doses given on or after April 1, 2016, are not considered valid in the routine AB immunization schedule and should be repeated.
  - 2022 April 20 - Added indication for polio vaccine for individuals identified as Ukrainian evacuees.
- Due to the limited supply of IPV vaccine, dTap-IPV is the vaccine of choice for adults who require polio immunization only.
  - 2022 May 18 - Addition of examples of communities and specific population groups with polio.
  - 2023 September 25
    - Updated to offer a primary series and reinforcing dose to wastewater workers who handle sewage at wastewater treatment plants.
    - Updated to indicate that adults receiving polio vaccine for the purpose of travel or health care students receiving it prior to placement are not eligible for provincially funded vaccine and must purchase vaccine through a local travel health professional.
    - Clarification that current practice is not to assess and immunize all health care workers, including lab workers, for polio immunization due to the generally low risk of exposure to polio in Alberta and Canada, availability of PPE and the limited supply of vaccine.
  - 2023 October 2, 2023
    - Updated to clarify countries where polio is circulating
References


2 Public Health Agency of Canada. (2023, Aug 31). Travel health notices (Polio advice for travelers)


