

Polio Vaccine (IPV)

Revision Date: October 19, 2018

Rationale for Update: Updated recommendations from WHO for OPV doses given on or after April 1, 2016.

Please consult the Product Monograph ¹ for further information about the vaccine.	
	IMOVAX® Polio (Vero Cell Origin)
Manufacturer	Sanofi Pasteur SA – Distributed by Sanofi Pasteur Limited
Licensed use	Individuals 6 weeks and older
Off-license use	None
Indications for use of provincially funded vaccine	<p>Children (2 months – 17 years of age):</p> <ul style="list-style-type: none">Children previously unimmunized with polio vaccine but 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.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.^{2,3} <p>Refer to World Health Organization (WHO) Global Polio Eradication Initiative see www://polioeradication.org/polio-today/polio-now/public-health-emergency-status for current recommendations.⁴</p> <p>Adults (18 years of age and older):</p> <p>➤ Primary Immunization – Low Risk:</p> <ul style="list-style-type: none">Students requiring polio vaccine are eligible until the end of grade 12 regardless of age. <p>Due to the limited supply of polio vaccine and the low risk of exposure to polio in Alberta and Canada – the recommendation for the routine immunization of unimmunized adults is suspended until further notice.</p> <p>Adults at increased risk of exposure as outlined below should continue to receive a primary series.</p> <p>➤ Primary Immunization – High Risk:</p> <p>Adults in the following groups are at increased risk of exposure to poliovirus and should receive a primary series:</p> <ul style="list-style-type: none">Health care workers (HCW) providing direct patient care who may be exposed to patients excreting the wild or vaccine strains of polio virus (contact with stool, fecal matter, or pharyngeal secretions).⁵Laboratory workers handling specimens that may contain poliovirus.⁵Members of communities or specific population groups with disease caused by polio.⁵

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	<ul style="list-style-type: none"> • 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).⁵ • Family members or close contacts of internationally adopted infants who may have been immunized with OPV vaccine.⁵ • Individuals receiving travellers from areas where poliovirus is known to be circulating.^{2,5} • Adults travelling for 4 weeks or greater to countries currently exporting and/or infected with polio.^{2,5} <ul style="list-style-type: none"> ➢ Refer to World Health Organization (WHO) Global Polio Eradication Initiative see www://polioeradication.org/polio-today/polio-now/public-health-emergency-status for current recommendations.⁴ <p>Note: Provincially funded polio vaccine may be used for these adult travellers going to countries where polio is circulating and is only available through Alberta Health Services.</p> <p>Reinforcing vaccine dose:</p> <ul style="list-style-type: none"> • Adults as indicated above who are at increased risk of exposure to poliovirus should receive a single life time reinforcing dose: <p>Notes:</p> <ul style="list-style-type: none"> • For adult recipients of HSCT and SOT. See: <ul style="list-style-type: none"> ▪ Immunization for Adult Hematopoietic Stem Cell Transplant Recipients and ▪ Immunization for Adult Solid Organ Transplant Candidates and Recipients. • Due to the low risk of exposure to polio in Alberta and Canada for post-secondary student placements, post-secondary institutions are not expected to assess healthcare students for polio immunization. Once these students enter the workforce they will be assessed by Workplace Health and Safety staff for risk of exposure to polio at the clinical site where they will be employed and offered appropriate vaccine at that time. • Children and adults intending to stay longer than four weeks in countries where polio is circulating should be referred to a Travel Clinic for assessment.
Dose	0.5 mL
Route	Subcutaneous
Schedule	<p>Primary Series:</p> <ul style="list-style-type: none"> ❖ Dose 1: day 0 ❖ Dose 2: 8 weeks after dose 1 (interval between doses may be shortened to four weeks) ❖ Dose 3: 6 – 12 months after dose 2 <p>Reinforcing dose:</p> <p>Children:</p> <ul style="list-style-type: none"> ❖ Booster dose of polio-containing vaccine is recommended for children 4 – 6 years of age usually as combined vaccine (dTap-IPV or DaPT-IPV). <p>Notes:</p> <ul style="list-style-type: none"> • 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.

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	<ul style="list-style-type: none"> The reinforcing dose of polio is not required if the third dose was given on or after 4 years of age. Oral Polio Vaccine (OPV) <ul style="list-style-type: none"> Any doses OPV received on or after April 1, 2016 are not considered a valid dose within the routine Alberta Immunization Schedule. As of April 2016, trivalent polio vaccine (OPV) was replaced with either bivalent or monovalent OPV. In order to ensure protection against all 3 poliovirus types, individuals presenting with a record of OPV received on or after this date will require re-immunization with IPV or an IPV-containing vaccine for any of these doses.⁶ <p>Adults (18 years of age and older):</p> <ul style="list-style-type: none"> ❖ One adult lifetime booster dose of polio-containing vaccine (at least 10 years after the primary series) is recommended for adults who are at increased risk of exposure to wild polioviruses (see INDICATIONS) and who completed the primary series in childhood.^{1,7,8} <p>Note: Unless at increased risk of exposure to polio (see Indications), reinforcing doses of polio-containing vaccine are not routinely recommended for adults living in Canada.⁵</p>
Contraindications	<ul style="list-style-type: none"> 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	<p>Common:</p> <ul style="list-style-type: none"> Redness and pain at the injection site ¹ Fever ¹ <p>Uncommon:</p> <ul style="list-style-type: none"> Injection site mass ¹ <p>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 paraesthesia, 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</p> <p>Refer to: <i>Adverse Events Following Immunization (AEFI), Policy for Alberta Immunization Providers.</i>⁹</p>
Pregnancy	May be considered for pregnant women who require immediate protection and are at increased risk of exposure to wild poliovirus. ² Limited data have not revealed an increased risk of adverse events associated with polio vaccine administered to pregnant women. ²
Lactation	May be administered to breastfeeding mothers when indicated. ² It is not known if Imovax® Polio is excreted in human milk. ¹
Program Notes	<ul style="list-style-type: none"> 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.

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	<ul style="list-style-type: none"> • 2016 November <ul style="list-style-type: none"> – 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 life time 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.
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References

- ¹ Sanofi Pasteur Limited. (2011, April 14). IMOVAX® Polio: Inactivated poliomyelitis vaccine (Vero cell origin). *Product Monograph*.
- ² Alberta Health, Deputy Chief Medical Officer of Health. (2016, November). Poliomyelitis (polio) Vaccine for Residents of Alberta Planning to Travel.
- ³ Public Health Agency of Canada. (2017, May 26). Polio: vaccine advice. <https://travel.gc.ca/travelling/health-safety/travel-health-notices/171>
- ⁴ World Health Organization. Polio Global Eradication Initiative. [www://polioeradication.org/polio-today/polio-now/public-health-emergency-status](http://polioeradication.org/polio-today/polio-now/public-health-emergency-status).
- ⁵ National Advisory Committee on Immunization. (2015). *Canadian Immunization Guide* (Evergreen ed.). Ottawa, ON: Public Health Agency of Canada. www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php.
- ⁶ Centers for Disease Control and Prevention (2017) Guidance for Assessment of Poliovirus Vaccination Status and Vaccination of Children Who Have Received Polio Vaccine Outside of the United States. *Morbidity and Mortality Weekly Report* (MMWR), 66(01);23-25. DOI: <http://dx.doi.org/10.15585/mmwr.mm6601a6>.
- ⁷ Centers for Disease Control and Prevention. (2014) Morbidity and Mortality Weekly Report (MMWR). Interim CDC Guidance for Polio Vaccination for Travel to and from Countries Affected by Wild Poliovirus. www.cdc.gov/mmwr/preview/mmwrhtml/mm6327a4.htm.
- ⁸ Centers for Disease Control and Prevention. (2018). Health Information for International Travel. Yellow Book. <https://wwwnc.cdc.gov/travel/yellowbook/2018/infectious-diseases-related-to-travel/poliomyelitis>.
- ⁹ Alberta Health. (2018, December). *Adverse Events Following Immunization (AEFI), Policy for Alberta Immunization Providers*. <https://open.alberta.ca/dataset/d86b52a9-45f4-4948-8a06-53b2c045135e/resource/f2da2a7a-e350-4bab-b2c2-77677beeb22b/download/aip-adverse-events-following-immunization-policy.pdf>.