

## **VACCINES FOR INFANTS AND CHILDREN IN BRITISH COLUMBIA**

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### **ROUTINE IMMUNIZATION SCHEDULE FOR INFANTS AND CHILDREN**

**Please refer to the BC Centre for Disease Control (BCCDC) Immunization Manual and Schedules for the most current immunization schedule**

<http://www.bccdc.ca/imm-vac/ImmunizationSchedules/default.htm>

<http://www.bccdc.ca/dis-cond/comm-manual/CDManualChap2.htm>

**Additional vaccine information may be obtained from:**

**The Canadian Immunization Guide:** <http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php#toc>

**American Academy of Pediatrics Red Book: Report of the Committee on Infectious Diseases or the Canadian Immunization Guide.**

COMMONLY USED PEDIATRIC VACCINE PRODUCTS

**NOTE: This list includes only products which are commonly used but it is not an all inclusive list. Although these vaccines can be obtained from Pharmacy, many of them are not routinely stocked and, as such, there may be a delay in obtaining them**

Vaccine	Dose	Comments
<b>DTaP-HB-IPV-Hib<sup>1</sup></b> (diphtheria, tetanus, pertussis, hepatitis B, inactivated polio vaccine, <i>Haemophilus influenzae</i> type B): <i>INFANRIX-hexa</i> ®	0.5 mL IM	- Not interchangeable with <i>Pediacel</i> ®, <i>Pentacel</i> ® as part of routine immunization schedule.
<b>DTaP-IPV-Hib<sup>1</sup></b> (diphtheria, tetanus, pertussis, inactivated polio vaccine, <i>Haemophilus influenzae</i> type B): <i>Pediacel</i> ®, <i>Pentacel</i> ®	0.5 mL IM	- Not interchangeable with <i>INFANRIX-hexa</i> ® as part of routine immunization schedule.
<b>DTaP-IPV<sup>1</sup></b> (diphtheria, tetanus, pertussis, inactivated polio vaccine): <i>Quadracel</i> ®	0.5 mL IM	- Used for preschool boosters.
<b>DTaP</b> (diphtheria, tetanus, pertussis)	-	- Not available in Canada
<b>DT Polio Adsorbed</b>	-	- Not available in Canada
<b>Haemophilus influenzae type b conjugate vaccine (Hib):</b> <i>Act-Hib</i> ®	0.5 mL IM	- Only used for catch-up immunization
<b>Hepatitis A vaccine (HA):</b> <i>Vaqta</i> ®, <i>Havrix</i> ®, <i>Avaxim</i> ®	Dosing is product specific. Refer to individual product monograph.	- Provided for patients with chronic liver disease in British Columbia
<b>Hepatitis B vaccine (HB):</b> <i>Recombivax HB</i> ® ( <i>thimerosal free</i> ), <i>Engerix B</i> ®	<b>Infants born to HBsAg-positive mothers:</b> 0.5 mL IM at birth	- Infants will receive Hepatitis B vaccine in <i>INFANRIX-hexa</i> ® as part of routine immunization starting at 2 mos. (please refer to BCCDC immunization manual or schedules) - For children who didn't receive Hepatitis B as part of routine immunization, please refer to BCCDC immunization manual or schedules.
<b>Hepatitis A and B (HA and HB):</b> <i>Twinrix</i> ®, <i>Twinrix Junior</i> ®	Refer to product monograph.	- Not stocked at BCCH.

<b>HPV</b> (human papillomavirus): <i>Gardasil</i> ®	0.5 mL IM	- Part of routine immunization of girls in grade 6 beginning September 2008.
<b>Influenza virus vaccine:</b> <i>Fluviral S/F</i> ®, <i>Vaxigrip</i> ® (low thimerosal content, for infants > 6 months)	6 – 35 mos: 0.25 mL IM ≥36 mos: 0.5 mL IM	- Influenza virus vaccines are formulated annually based on specifications of the World Health Organization and contain antigens representative of the strains of influenza virus expected to be prevalent in the forthcoming year.
<b>Meningococcal conjugate vaccine Group C:</b> <i>Menjugate</i> ®, <i>NeisVac-C</i> ®, <i>Meningitec</i> ®	0.5 mL IM	- Part of routine immunization in British Columbia as of Aug 2010
<b>Meningococcal conjugate vaccine Group A, C, Y, W-135:</b> <i>Menactra</i> ®	0.5 mL IM	- Not part of routine immunization as of Aug 2010. Please see BCCDC immunization schedules for updates.
<b>Meningococcal polysaccharide vaccine (Groups A, C, Y and W-135):</b> <i>Menomune-A/C/Y/W-135</i> ®	0.5 mL IM	- Not effective in children < 2 yrs.
<b>MMR</b> (Measles, Mumps, Rubella Vaccine): <i>MMR-II</i> ®, <i>Priorix</i> ®	0.5 mL SC (live vaccine) (may be given IM)	- Live, attenuated vaccine. - Measles, mumps, rubella only available in Canada as combination product (MMR). - The MMR vaccine can be given at the same time as varicella. Use separate sites, syringe and needle for each injection. If they are not given at the same time then there needs to be 4 weeks between administration of the two vaccines.
<b>MMR-varicella</b> <i>Priorix-Tetra</i> ®	0.5 mL SC (may be given IM)	- Live, attenuated vaccine. - Not stocked at BCCH.
<b>Pneumococcal Heptavalent conjugate vaccine:</b> <i>Prevnar 13</i> ®	0.5 mL IM	- Active against the following serotypes: 1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, 23F - <i>Prevnar 13</i> ® has replaced <i>Prevnar</i> ® for routine immunization starting June 2010.
<b>Pneumococcal 23 capsular polysaccharide Vaccine:</b> <i>Pneumovax-23</i> ®, <i>Pneumo-23</i> ®, <i>Pnu-immune-23</i> ®	0.5 mL IM or SC	- Not effective in children < 2 yrs. - Active against the following serotypes: 1, 2, 3, 4, 5, 6B, 7F, 8, 9N, 9V, 10A, 11A, 12F, 14, 15B, 17F, 18C, 19F, 19A, 20, 22F, 23F, 33F.

<b>Poliomyelitis (Inactivated) Vaccine (IPV): IMOVAX Polio®</b>	0.5 mL SC	
<b>Tetanus Toxoid</b>	-	- Tetanus toxoid is no longer available in Canada as a single entity vaccine. - For secondary prophylaxis (ie. wound prophylaxis), use Td, Tdap or DTap-IPV. Please refer to the Canadian Immunization Guide ( <a href="http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-tet-eng.php#sched">http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-tet-eng.php#sched</a> )
<b>Td Adsorbed®</b> (tetanus and diphtheria toxoids):	0.5 ml IM	- Reduced diphtheria for children and adolescents ≥ 7 yrs. - Tdap is preferred to Td for adolescents who have never received Tdap.
<b>Tdap</b> (tetanus toxoid, reduced diphtheria toxoid, acellular pertussis)	0.5 mL IM	- Reduced diphtheria for children and adolescents ≥ 7 yrs. - Tdap is preferred to Td for adolescents who have never received Tdap.
<b>Td-Polio Adsorbed®:</b> (tetanus toxoid, diphtheria toxoid, inactivated poliomyelitis vaccine)	0.5 mL IM	- Not stocked at BCCH.
<b>Varicella Virus Vaccine:</b> <i>Varivax III®</i> , <i>Varilrix®</i>	0.5 mL SC	- Live, attenuated vaccine. - The varicella vaccine can be given at the same time as MMR. Use separate sites, syringe and needle for each injection. If they are not given at the same time then there needs to be 4 weeks between administration of the two vaccines.

See footnotes on next page

<sup>1</sup>The acellular pertussis in the Infanrix®, Pediacel®, and Quadracel® vaccine has been shown to be more effective against pertussis and cause fewer adverse reactions than the previous whole cell pertussis vaccine. Due to the lower reactogenicity of the acellular pertussis vaccines, recommendations regarding the use of the pertussis vaccine have changed:

- the only absolute contraindication to receiving pertussis vaccine is an anaphylactic reaction to a previous dose
- hypotonic – hyporesponsive episodes within 48 hours of a prior dose of Quadracel® are not considered a contraindication to the use of acellular pertussis vaccine. Continued immunization with all antigens is recommended
- deferral of pertussis immunization for children with evolving neurological conditions is no longer necessary. The risks of fever and possible febrile seizures are no greater after acellular pertussis-containing vaccines than after DT vaccines alone.



OCCASIONALLY USED VACCINE PRODUCTS

**NOTE: This list is not all inclusive.**

Vaccine	Dose
<p><b>Tetanus Immune Globulin (TIG):</b> for tetanus prophylaxis following injury when immunization is incomplete or uncertain. (However, in an unimmunized child, active immunization (e.g., Pentacel) should be used for more certain long term protection): <i>Baytet®</i>                      ** available from the Pharmacy **</p>	<p>&lt; 7 years old: 4 units/kg IM                      ≥ 7 years old: 250 units IM</p>
<p><b>Varicella Zoster Immune Globulin:</b> (VZIG): for passive immunization after exposure to chickenpox or zoster in susceptible patients: <i>Varizig®</i>                      ** available from Transfusion Medicine **</p>	<p>&lt; 10 kg: 125 units IM                      10.1-20 kg: 250 units IM                      20.1-30 kg: 375 units IM                      30.1-40 kg: 500 units IM                      &gt; 40 kg: 625 units IM                      (May be given IV)</p>