

Table 1: Adult Immunization - Recommendations for Routine Immunization in Low Risk, Healthy Adults, 2018
The table below is for low risk, healthy adults. Please read accompanying footnotes for this table.

Legend:

	Publicly funded in British Columbia (BC)
	NACI recommended but not publicly funded in BC
	NACI recommended but publicly funded in BC for certain populations only

		Age (years)						
		18-24	25-26	27-45	46-49	50-59	60-64	>=65
Diphtheria, Tetanus, Pertussis	TdaP ADACEL® BOOSTRIX®	Primary series for previously unimmunized adults (with first of three doses as TdaP)	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults
	Td Td® ADSORBED	1 dose of TdaP as adult; Td booster every 10 years;	1 dose of TdaP as adult; Td booster every 10 years;	1 dose of TdaP as adult; Td booster every 10 years;	1 dose of TdaP as adult; Td booster every 10 years;	1 dose of TdaP as adult; Td booster every 10 years;	1 dose of TdaP as adult; Td booster every 10 years;	1 dose of TdaP as adult; Td booster every 10 years;
Hepatitis	Hepatitis A AVAXIM® VAQTA® HAVRIX® 1440	Aboriginal adults (up to 18 years of age) give 2 doses						
	Hepatitis B ENGERIX®-B RECOMBIVAX HB®	If born in or after 1980 give 3 doses	If born in or after 1980 give 3 doses	If born in or after 1980 give 3 doses				
Herpes zoster	Zoster vaccine, live ZOSTAVAX®II (ZVL)						1 dose	1 dose
	Zoster vaccine, recombinant, adjuvanted (RZV) SHINGRIX®					2 doses	2 doses	2 doses
HPV	HPV9 GARDASIL®9	3 doses	3 doses	3 doses for women				
Influenza	Inactivated influenza vaccine (IIV) FLUVIRAL®, AGRIFLU®, FLUZONE®, FLULAVAL® Live-attenuated intranasal influenza	1 dose annually of TIIV, QIIV, or LAIV-Q	1 dose annually of TIIV, QIIV, or LAIV-Q	1 dose annually of TIIV, QIIV, or LAIV-Q	1 dose annually of TIIV, QIIV, or LAIV-Q	1 dose annually of TIIV, QIIV, or LAIV-Q	1 dose annually of TIIV, QIIV	1 dose annually of TIIV, QIIV



	vaccine (LAIV) FLUMIST® QUADRIVALENT							
	High dose FLUZONE® HD Adjuvanted vaccine FLUAD®							HD-TIIV or MF59- adjuvanted TIIV
Meningococcal Conjugate	Serogroup C (Men-C-C) NEISVAC-C® MENJUGATE®	1 dose of Men-C-C vaccine						
	Quadrivalent (Men-C-ACYW) MENVEO® MENACTRA® NIMENRIX®	1 dose of Men-C- ACYW vaccine						
Measles, mumps, rubella	MMR MMR II® PRIORIX®	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses			
	Rubella MMR II® PRIORIX®	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults
Pneumococcal	Conjugate (PCV13) PREVNAR® 13							1 dose
	Polysaccharide (PPV23) PNEUMOVAX® 23							1 dose for ≥65 years or living in LTCF
Polio	IPV IMOVAR® POLIO	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults
	Tdap-IPV ADACEL®-POLIO BOOSTRIX®-POLIO Td-IPV Td POLIO® ADSORBED	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults
Varicella	VAR VARILRIX® VARIVAX® III	2 doses for susceptible adults	2 doses for susceptible adults	2 doses for susceptible adults	2 doses for susceptible adults			

Abbreviations:

Diphtheria and tetanus vaccine (available as Td – tetanus and diphtheria toxoid vaccine, Tdap – tetanus and diphtheria toxoid and acellular pertussis vaccine); HPV – human papilloma virus vaccine; Herpes zoster RZV – recombinant zoster vaccine ; Herpes zoster ZVL – zoster vaccine live; Influenza (available as TIIV – trivalent inactivated influenza vaccine, QIV – quadrivalent inactivated influenza vaccine, LAIVQ – live attenuated influenza quadrivalent vaccine, HD-TIIV – high dose trivalent inactivated influenza vaccine); IPV - Inactivated polio vaccine (available on its own or in combination format as DTaP- HB-IPV-Hib, DTaP-IPV-Hib, Td/IPV or Tdap-IPV vaccines); Men-C-C – meningococcal serogroup C conjugate vaccine; Men-C-ACYW – meningococcal conjugate quadrivalent vaccine; MMR – measles, mumps, rubella vaccine; PCV13 – 13-valent pneumococcal conjugate vaccine; PPV23 – 23-valent pneumococcal polysaccharide vaccine

Footnotes (from BC and NACI):

Diphtheria toxoid-, tetanus toxoid-, containing vaccine: NACI suggests all adults in Canada should be immunized against diphtheria, tetanus and polio. Adults who have not previously received a primary series (at least 3 doses) of diphtheria toxoid-containing vaccine should receive one dose of Tdap-IPV vaccine, followed by two doses of Td-IPV vaccine (In BC routine primary immunization of polio is not considered necessary, unless they are at high risk of exposure to wild-type polio virus). Give 3 doses at month 0, 1 month later and the last dose should be at least 6-12 months after the 2nd dose. For adults previously immunized with diphtheria-toxoid containing vaccine: administer one dose of Tdap vaccine if the patient has not previously received this vaccine in adulthood (18 years of age and older) and give a booster dose of Td vaccine every 10 years. Unimmunized adults or those born in 1989 or later qualify for free Tdap, if they missed their adolescent booster.

Hemophilus influenzae type b: For high risk adults (see table 2 and 3)

Hepatitis A vaccine: In BC, it is publicly available to aboriginals up to 18 years of age. Hepatitis A vaccine is given as 2 doses at 0 and 6 months.

Hepatitis B vaccine: For those born 1980 or later (and unimmunized in school). Hepatitis B vaccine is given as 3 doses at 0, 1 and 6 months.

Herpes zoster (shingles) vaccine: The adjuvanted zoster vaccine is recommended as 2 doses in adults aged 50 years and older. Adults aged 50 years and older who are known to be varicella zoster virus seronegative should receive univalent varicella (chickenpox) vaccine, rather than herpes zoster (shingles) vaccine. The live herpes zoster vaccine may be given to adults 50 to 59 years of age and is routinely recommended for adults 60 years of age and older, providing there are no contraindications; it should not be given to individuals with primary or acquired immune deficiency but may be administered to individuals on low dose immunosuppression.

Human papillomavirus vaccine: NACI recommends HPV vaccine for men and women up to and including 26 years of age and may be administered to those 27 years of age and older who are at ongoing risk of exposure. For BC, the vaccine is publicly funded available for women ≤26 years of age, men ≤26 years of age with lifestyle or other risks, HIV positive ≤26 years of age, transgender ≤26 years of age.

Influenza vaccine: NACI recommends seasonal influenza vaccine annually for all adults without contraindications, with particular focus on individuals who are at high risk of influenza-related complications or hospitalization, and those who are capable of transmitting influenza to those at high risk. For adults 18–59 years of age, any of TIIV, QIIV and LAIV-Q is acceptable for use, and for adults 60–64 years of age, with or without chronic health conditions, either TIV or QIV may be recommended. Four types of vaccine are available for use in adults ≥65 years of age: TIIV, QIIV, high-dose TIIV, MF59-adjuvanted TIIV. At an individual level, NACI recommends that high-dose TIIV should be offered over standard-dose TIIV to persons 65 years of age and older. There is insufficient evidence to make comparative recommendations on the use of MF59-adjuvanted TIIV and QIIV over standard-dose TIIV. TIIV and QIIV are available for use in pregnant women (LAIV-Q, which is a live attenuated vaccine, should not be administered to pregnant women, but it can be administered to breastfeeding women).

Measles-mumps-rubella vaccine (MMR): Measles and mumps protection is available as a publicly funded vaccine for adults born in or after 1970 (1957 for health care workers) who are unimmunized as a child or immunized with MR only during the 1996 catch up campaign, do not have a history of lab confirmed measles infection, lab evidence of immunity, or documentation of 2 doses of a live measles-containing vaccine at 12 months of age or older and given at least 4 weeks apart. Give 2 doses of MMR at least 4 weeks apart. Although adults born before 1970 are assumed to have acquired natural immunity, those at the greatest risk of measles or mumps exposure, such as travellers, health care workers, students in post-secondary educational settings, and military personnel, may require immunization. If MMR vaccine is indicated for a pregnant woman, it should be provided after delivery, preferably prior to discharge from hospital.

Meningococcal vaccine: In BC healthy adults up to and including 24 years of age should receive meningococcal C vaccine as a publicly funded vaccine and it is recommended in adults with occupational risk (but not free). The Meningococcal quadrivalent vaccine is recommended by NACI for those at high risk (publicly available in BC for this indication), adults with occupational risk and travelers (not publicly funded in BC). In addition, NACI suggests to consider meningococcal B vaccine (4CMenB) on an individual basis.

Pertussis vaccine: In BC this vaccine is publicly funded for adults who have never been immunized against pertussis or whose immunization history is unknown. It is recommended by NACI (not funded in BC) for all pregnant women.

Pneumococcal vaccine: Pneumococcal polysaccharide 23-valent (PPV23) vaccine is recommended for 65 years of age and older, regardless of risk factors or previous pneumococcal vaccination, and those 2 years of age or older at high risk of IPD due to lifestyle factors: smokers, persons with alcoholism, persons who are homeless, underlying medical condition or who are residents of long-term care facilities. People at highest risk of IPD should also receive 1 booster dose of PPV23 vaccine (ie 2 doses total). Adults with immunocompromising conditions resulting in high risk of IPD, should receive 1 dose of PCV13 vaccine (at least 1 year after any previous dose of PPV23). Recipients of hematopoietic stem cell transplant [HSCT]: 3 doses of Pneu-C-13 vaccine administered at least 4 weeks apart should be administered starting 3 to 9 months after HSCT.

Poliomyelitis vaccine: NACI suggests all adults in Canada should be immune to polio. For previously unimmunized adults, a primary series of inactivated poliomyelitis vaccine (IPV) should be provided at the time of immunization with a tetanus and diphtheria toxoid-containing vaccine. Of note, in BC routine primary immunization of polio is not considered necessary, unless they are at high risk of exposure to wild-type polio virus due to occupation or travel). Give 3 doses at month 0, and 1 month and the last dose should be 6-12 months after the 2nd dose. For adults that have previously received a primary series of tetanus and diphtheria toxoid-



containing vaccine, IPV-containing vaccine can be provided at the time of routine tetanus and diphtheria toxoid-containing vaccine booster immunization. Unimmunized or incompletely immunized adults at increased risk of exposure should complete a primary series of IPV-containing vaccine; previously immunized adults at increased risk of exposure should receive a single lifetime booster dose of IPV-containing vaccine.

Rubella vaccine: In BC, for rubella protection, 1 dose of MMR is publicly available for all individuals born on or after January 1, 1957 who have not received 1 dose of a rubella-containing vaccine, or immunized with MR only during the 1996 catch up campaign, or who do not have serologic evidence of rubella immunity.

Varicella vaccine: recommended for susceptible adults 18 to 49 years of age. Give 2 doses of vaccine, 6 weeks apart. A varicella susceptible person is one without a history of lab confirmed varicella or herpes zoster after 12 months of age and without a history of age appropriate varicella immunization. Individuals with a documented exemption in the immunization registry prior to this date due to previous disease are considered immune. A self-reported history of varicella or physician diagnosed varicella is adequate only if disease occurred before 2004.

Table 2: Adult Immunization - Recommendations for Immunization in Immunocompromised Adults, 2018
The table below is for immunocompromised individuals. Please read accompanying footnotes for this table.

Legend:

	Publicly funded in British Columbia (BC)
	NACI recommended but not publicly funded in BC
	Contraindicated

		Asplenia (anatomic or functional), including sickle cell disease	Congenital immunodeficiency (e.g., complement, properdin, or factor D deficiency)	Hematopoietic Stem Cell Transplant (HSCT) recipient (allogeneic)	HIV	Immunosuppressive therapy	Chronic kidney disease (pre-dialysis and dialysis)	Chronic liver disease (including Hep B/C)	Malignant neoplasm	Solid organ or islet cell transplant candidate or recipient
Diphtheria, Tetanus, Pertussis	Tdap ADACEL® BOOSTRIX®	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults
	Td Td® ADSORBED	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;
Hemophilus b conjugate	Hib Act-HIB® HIBERIX®	1 dose	1 dose	1 dose	1 dose	1 dose			1 dose	1 dose
Hepatitis A	Hepatitis A AVAXIM® VAQTA® HAVRIX® 1440			2 doses	3 doses over 6 months			2 doses		Liver transplant candidates and recipients – 2 doses
Hepatitis B	Hepatitis B ENGERIX®-B RECOMBIVAX HB®		3 doses (need higher dose)	3 doses (need higher dose)	3 doses (need higher dose)	3 doses	3 doses	3 doses		3 doses (need higher dose)
Herpes zoster	Zoster vaccine, live ZVL ZOSTAVAX®II		Contraindicated	Contraindicated	Contraindicated	Contraindicated			Contraindicated	Contraindicated
	Zoster vaccine, recombinant, adjuvanted RZV SHINGRIX®									
HPV	HPV9 GARDASIL®9			3 doses	3 doses					

		Asplenia (anatomic or functional), including sickle cell disease	Congenital immunodeficiency (e.g., complement, properdin, or factor D deficiency)	Hematopoietic Stem Cell Transplant (HSCT) recipient (allogeneic)	HIV	Immunosuppressive therapy	Chronic kidney disease (pre-dialysis and dialysis)	Chronic liver disease (including Hep B/C)	Malignant neoplasm	Solid organ or islet cell transplant candidate or recipient
Influenza	Inactivated influenza vaccine (IIV)	1 dose annually	1 dose annually	1 dose annually	1 dose annually	1 dose annually	1 dose annually	1 dose annually	1 dose annually	1 dose annually
Meningococcal Conjugate	Serogroup B BEXSERO®	2 doses	2 doses							
	Quadrivalent (Men-C-ACYW) MENVEO® MENACTRA® NIMENRIX®	1 dose	1 dose	2 doses	1 dose					1 dose
Measles, mumps, rubella*	MMR MMR II® PRIORIX®	SC, 2 doses	Contraindicated	SC, 2 doses	SC, 2 doses	Contraindicated	SC, 2 doses	SC, 2 doses	Contraindicated	SC, 2 doses Contraindicated post-tx
Pneumococcal	Conjugate (PCV13) PREVNAR® 13	1 dose	1 dose	3 doses	1 dose	1 dose			1 dose	1 dose
	Polysaccharide (PPV23) PNEUMOVAX® 23	2 doses	2 doses	1 dose	1 dose	2 doses	2 doses	2 doses	2 doses	2 doses
Polio	Tdap-IPV ADACEL®-POLIO BOOSTRIX®-POLIO Td-IPV Td POLIO® ADSORBED			1 dose for previously immunized adults	1 dose for previously immunized adults		1 dose for previously immunized adults		1 dose for previously immunized adults	1 dose for previously immunized adults
Varicella*	VAR VARILRIX® VARIVAX® III	SC, 2 doses	Contraindicated	SC, 1 dose	SC, 2 doses	Contraindicated	SC, 2 doses	SC, 2 doses	Contraindicated	SC, 2 doses Contraindicated post-tx

Abbreviations:

Diphtheria and tetanus vaccine (available as Td – tetanus and diphtheria toxoid vaccine, Tdap – tetanus and diphtheria toxoid and acellular pertussis vaccine); HPV – human papilloma virus vaccine; Herpes zoster RZV – recombinant zoster vaccine; Herpes zoster ZVL – zoster vaccine live; Influenza (available as TIIV – trivalent inactivated influenza vaccine, QIIV – quadrivalent inactivated influenza vaccine, LAIVQ – live attenuated influenza quadrivalent vaccine, HD-TIIV – high dose trivalent inactivated influenza vaccine); IPV - Inactivated polio vaccine (available on its own or in combination format as DTaP- HB-IPV-Hib, DTaP-IPV-Hib, Td/IPV or Tdap-IPV vaccines); Men-C-C – meningococcal serogroup C conjugate vaccine; Men-C-ACYW – meningococcal conjugate quadrivalent vaccine; MMR – measles, mumps, rubella vaccine; PCV13 – 13-valent pneumococcal conjugate vaccine; PPV23 – 23-valent pneumococcal polysaccharide vaccine; SC – special considerations exist for live vaccines, check BCCDC manual; C-contraindicated live vaccine

Footnotes (from BC and NACI):

Hepatitis A vaccine: Both NACI and BC recommend providing this vaccine to adults with medical or lifestyle risks.

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Previously unimmunized anti-HCV positive individuals who are anti-HAV IgG negative.
- Previously unimmunized individuals chronically infected with hepatitis B virus who are anti-HAV IgG negative.
- Individuals with other chronic liver disease (e.g., cirrhosis, liver damage from hemochromatosis) who are anti-HAV IgG negative.
- Candidates or recipients of a liver transplant.
- Users of illicit injection drugs; persons sharing illicit drug snorting, smoking or injecting equipment.
- Inmates of provincial correctional facilities.
- Contacts of a case of hepatitis A

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Travellers, military personnel, and others who will work or live in countries with intermediate or high endemic rates of HAV infection, specifically when travel or work will involve rural or basic living conditions.
- Household or close contacts of adopted children from hepatitis A endemic countries.
- Immigrants from hepatitis A endemic areas.
- Food handlers.
- Persons with multiple sex partners.
- Residents and staff of institutions for developmentally challenged clients where there is an ongoing problem with HAV transmission.
- Zookeepers, veterinarians and researchers who handle non-human primates.
- Certain workers involved in research on hepatitis A virus or the production of hepatitis A vaccine.

Hepatitis B vaccine: Both NACI and BC recommend providing this vaccine to adults with medical or lifestyle risks.

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Household contacts of internationally adopted children.
- Students of selected health care professions.
- People who use illicit drugs (via snorting, smoking or injection equipment) and their sexual partners.
- Persons with multiple sexual partners or recent history of a sexually transmitted infection.
- Anti-HCV positive individuals who do not have past or current evidence of hepatitis B infection.
- Inmates of provincial correctional facilities.
- Previously unimmunized teachers and classroom contacts of developmentally challenged known hepatitis B carriers whose behaviour or medical condition increases risk to others.
- Previously unimmunized children and staff in childcare settings in which there is a child infected with hepatitis B.
- Staff and residents in community group homes for the developmentally disabled.
- Hepatitis B vaccine is provided by employers (i.e., there is no charge to the employee) for Health Care Workers and others at occupational risk of exposure to blood or body fluids (e.g., dentists, dental hygienists, pharmacists, assistants and technicians, etc.).

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Persons visiting countries with high HBV endemicity areas and staying > 6 months and/or having sexual or blood contact with local residents regardless of length of stay.
- Population or communities in which HBV is highly endemic.

Human Papillomavirus vaccine:**IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:**

- Males 9-26 years of age (inclusive) at the time of series commencement
- Males 9-18 years of age (inclusive) in the care of the Ministry of Children and Family Development (MCFD)
- Males in youth custody services centres
- Transgender individuals 9-26 years of age (inclusive)



RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Women 45 years of age and younger born prior to 1994
- Males 9-26 years of age (who are not indicated above)
- Males 27 years of age and older who are men who have sex with men

Influenza vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- People of any age who are residents of long-term care facilities
- Adults who are morbidly obese (adult BMI \geq 40)
- Aboriginal peoples (on and off reserve)
- Pregnant women at any stage of pregnancy during the influenza season
- Inmates of provincial correctional institutions
- People working with live poultry
- All health care workers (including volunteers, students, contractors, and vendors) who come into contact with patients at health care facilities including long-term care facilities. This includes independent health care practitioners and their staff in community settings.
- Visitors to health care facilities and other patient care locations
- Household contacts (including children) of people at high risk whether or not those high risk people have been immunized
- Those who provide care and/or service in potential outbreak settings housing high risk persons (e.g., crew on ships)
- Household contacts of healthy children 0 to 59 months of age
- Those providing regular child care to children 0 to 59 months of age, whether in or out of the home
- First responders: police, fire fighters, ambulance
- Corrections workers

Meningococcal B Conjugate vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Individuals 2 months of age and older who are close contacts of a case of serogroup B invasive meningococcal disease who meet the public health criteria for immunoprophylaxis.
- In consultation with BCCDC, individuals 2 months of age and older who are at risk during IMD outbreaks caused by N. meningitidis serogroup B or the emergence of hyperendemic and/or hypervirulent N. meningitidis strains that are predicted to be susceptible to vaccine.

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Medically high risk individuals 2 months of age and older with:
 - o Functional or anatomical asplenia, including sickle cell disease
 - o Congenital or acquired complement, properdin, factor D or primary antibody deficiencies
- Research, industrial and clinical laboratory personnel who are routinely exposed to N. meningitidis serogroup
- Military personnel during recruit training and on certain deployments
- Travelers to an area with a hyperendemic strain or an outbreak that is known to be caused by N. meningitidis serotype B that can be prevented by vaccine.

Meningococcal C Conjugate vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Close contacts (2 months of age and older) of a case of invasive meningococcal disease (serogroup C) who meet the public health criteria for immunoprophylaxis.

Meningococcal Quadrivalent vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Close contacts (2 months of age and older) of a case of invasive meningococcal disease (serogroups A, Y, W-135) who meet the public health criteria for immunoprophylaxis.



RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Travelers for whom meningococcal vaccine is indicated
- Military personnel
- Research, industrial and laboratory personnel who are routinely exposed to *N. meningitidis*.

Pneumococcal Conjugate vaccine:

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Sickle cell disease or other hemoglobinopathies
- Asplenia (anatomical or functional)
- Congenital immunodeficiencies involving any part of the immune system
- Immunosuppressive therapy including use of long term corticosteroids, chemotherapy, radiation therapy, post-organ-transplant therapy, biologic and non- biologic immunosuppressive therapies for rheumatologic and other inflammatory diseases.
- Malignant neoplasms including leukemia and lymphoma
- Military Solid organ or islet cell transplant (candidate or recipient)

Pneumococcal polysaccharide vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Homelessness (as defined by local jurisdiction) C and/or illicit drug use

Polio vaccine

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Health care workers who may be exposed to feces
- Travellers to areas of countries where wild polio viruses are circulating
- Workers in refugee camps in polio endemic areas
- Residents of communities in which a visitor or refugee may be excreting polio viruses
- Laboratory workers handling specimens that may contain polio viruses
- Military personnel
- Previously unimmunized solid organ transplant (SOT) candidates and recipients who do not require diphtheria or tetanus vaccine

Table 3: Adult Immunization - Recommendations for Immunization in Individuals with Special Conditions or Special Populations, 2018
 The table below is for individuals with special conditions and/or special populations. Please read accompanying footnotes for this table.

Legend:

	Publicly funded in British Columbia (BC)
	NACI recommended but not publicly funded in BC
	Contraindicated

		Bleeding disorders	Chronic heart or lung disease	CSF leak (chronic)	Cochlear implant candidate or recipient	Cystic fibrosis	Diabetes	Neurological disorders	Men-sex-men (MSM)	Pregnancy
Diphtheria, Tetanus, Pertussis	Tdap ADACEL® BOOSTRIX® Td Td® ADSORBED	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults
		1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;	1 dose of Tdap as adult; Td booster every 10 years;
Hemophilus b conjugate	Hib Act-HIB® HIBERIX®				1 dose					
Hepatitis A	Hepatitis A AVAXIM® VAQTA® HAVRIX® 1440	2 doses							2 doses	
Hepatitis B	Hepatitis B ENGERIX®-B RECOMBIVAX HB®	3 doses							3 doses	
Herpes zoster	Zoster vaccine, live ZOSTAVAX®II									Contraindicated
	Zoster vaccine, recombinant, adjuvanted SHINGRIX®									
HPV	HPV9 GARDASIL®9								3 doses	

		Bleeding disorders	Chronic heart or lung disease	CSF leak (chronic)	Cochlear implant candidate or recipient	Cystic fibrosis	Diabetes	Neurological disorders	Men-sex-men (MSM)	Pregnancy
Influenza	Inactivated influenza vaccine (IIV)		1 dose annually			1 dose annually	1 dose annually	1 dose annually	1 dose annually	1 dose annually LAIV – Contraindicated
Meningococcal Conjugate	Serogroup C (Men-C-C) NEISVAC-C® MENJUGATE®									
	Quadrivalent (Men-C-ACYW) MENVEO® MENACTRA® NIMENRIX®									
Measles, mumps, rubella*	MMR MMR II® PRIORIX®	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	If born in or after 1970 give 2 doses	Contraindicated
	Rubella	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	1 dose for susceptible adults	Contraindicated
Pneumococcal	Conjugate (PCV13) PREVNAR® 13									
	Polysaccharide (PPV23) PNEUMOVAX® 23		1 dose	1 dose	1 dose	1 dose	1 dose			
Polio	IPV IMOVAX® POLIO	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults	Primary series for previously unimmunized adults
	Tdap-IPV ADACEL®-POLIO BOOSTRIX®-POLIO Td-IPV Td POLIO® ADSORBED	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults	1 dose for previously immunized adults
Varicella*	VAR VARILIX® VARIVAX® III	2 doses for susceptible adults	2 doses for susceptible adults	2 doses for susceptible adults	2 doses for susceptible adults	2 doses for susceptible adults	2 doses for susceptible adults	2 doses for susceptible adults	2 doses for susceptible adults	Contraindicated

Abbreviations:

Diphtheria and tetanus vaccine (available as Td – tetanus and diphtheria toxoid vaccine, Tdap – tetanus and diphtheria toxoid and acellular pertussis vaccine); HPV – human papilloma virus vaccine; Herpes zoster RZV – recombinant zoster vaccine ; Herpes zoster ZVL – zoster vaccine live; Influenza (available as TIIV – trivalent inactivated influenza vaccine, QIIV – quadrivalent inactivated influenza vaccine, LAIVQ – live attenuated influenza quadrivalent vaccine, HD-TIIV – high dose trivalent inactivated influenza vaccine); IPV - Inactivated polio vaccine (available on its own or in combination format as DTaP- HB-IPV-Hib, DTaP-IPV-Hib, Td/IPV or Tdap-IPV vaccines); Men-C-C – meningococcal serogroup C conjugate vaccine; Men-C-ACYW – meningococcal conjugate quadrivalent vaccine; MMR – measles, mumps, rubella vaccine; PCV13 – 13-valent pneumococcal conjugate vaccine; PPV23 – 23-valent pneumococcal polysaccharide vaccine; SC – special considerations exist for live vaccines, check BCCDC manual; C-contraindicated live vaccine

Footnotes (from BC and NACI):

Hepatitis A vaccine: Both NACI and BC recommend providing this vaccine to adults with medical or lifestyle risks.

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Previously unimmunized anti-HCV positive individuals who are anti-HAV IgG negative.
- Previously unimmunized individuals chronically infected with hepatitis B virus who are anti-HAV IgG negative.
- Individuals with other chronic liver disease (e.g., cirrhosis, liver damage from hemochromatosis) who are anti-HAV IgG negative.
- Candidates or recipients of a liver transplant.
- Users of illicit injections drugs; persons sharing illicit drug snorting, smoking or injecting equipment.
- Inmates of provincial correctional facilities.
- Contacts of a case of hepatitis A

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Travellers, military personnel, and others who will work or live in countries with intermediate or high endemic rates of HAV infection, specifically when travel or work will involve rural or basic living conditions.
- Household or close contacts of adopted children from hepatitis A endemic countries.
- Immigrants from hepatitis A endemic areas.
- Food handlers.
- Persons with multiple sex partners.
- Residents and staff of institutions for developmentally challenged clients where there is an ongoing problem with HAV transmission.
- Zookeepers, veterinarians and researchers who handle non-human primates.
- Certain workers involved in research on hepatitis A virus or the production of hepatitis A vaccine.

Hepatitis B vaccine: Both NACI and BC recommend providing this vaccine to adults with medical or lifestyle risks.

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Household contacts of internationally adopted children.
- Students of selected health care professions.
- People who use illicit drugs (via snorting, smoking or injection equipment) and their sexual partners.
- Persons with multiple sexual partners or recent history of a sexually transmitted infection.
- Anti-HCV positive individuals who do not have past or current evidence of hepatitis B infection.
- Inmates of provincial correctional facilities.
- Previously unimmunized teachers and classroom contacts of developmentally challenged known hepatitis B carriers whose behaviour or medical condition increases risk to others.
- Previously unimmunized children and staff in childcare settings in which there is a child infected with hepatitis B.
- Staff and residents in community group homes for the developmentally disabled.
- Hepatitis B vaccine is provided by employers (i.e., there is no charge to the employee) for Health Care Workers and others at occupational risk of exposure to blood or body fluids (e.g., dentists, dental hygienists, pharmacists, assistants and technicians, etc.).

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Persons visiting countries with high HBV endemicity areas and staying > 6 months and/or having sexual or blood contact with local residents regardless of length of stay.
- Population or communities in which HBV is highly endemic.

Human Papillomavirus vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Males 9-26 years of age (inclusive) at the time of series commencement
- Males 9-18 years of age (inclusive) in the care of the Ministry of Children and Family Development (MCFD)
- Males in youth custody services centres



- Transgender individuals 9-26 years of age (inclusive)

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Women 45 years of age and younger born prior to 1994
- Males 9-26 years of age (who are not indicated above)
- Males 27 years of age and older who are men who have sex with men

Influenza vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- People of any age who are residents of long-term care facilities
- Adults who are morbidly obese (adult BMI \geq 40)
- Aboriginal peoples (on and off reserve)
- Pregnant women at any stage of pregnancy during the influenza season
- Inmates of provincial correctional institutions
- People working with live poultry
- All health care workers (including volunteers, students, contractors, and vendors) who come into contact with patients at health care facilities including long-term care facilities. This includes independent health care practitioners and their staff in community settings.
- Visitors to health care facilities and other patient care locations
- Household contacts (including children) of people at high risk whether or not those high risk people have been immunized
- Those who provide care and/or service in potential outbreak settings housing high risk persons (e.g., crew on ships)
- Household contacts of healthy children 0 to 59 months of age
- Those providing regular child care to children 0 to 59 months of age, whether in or out of the home
- First responders: police, fire fighters, ambulance
- Corrections workers

Meningococcal B Conjugate vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Individuals 2 months of age and older who are close contacts of a case of serogroup B invasive meningococcal disease who meet the public health criteria for immunoprophylaxis.
- In consultation with BCCDC, individuals 2 months of age and older who are at risk during IMD outbreaks caused by N. meningitidis serogroup B or the emergence of hyperendemic and/or hypervirulent N. meningitidis strains that are predicted to be susceptible to vaccine.

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Medically high risk individuals 2 months of age and older with:
 - o Functional or anatomical asplenia, including sickle cell disease
 - o Congenital or acquired complement, properdin, factor D or primary antibody deficiencies
- Research, industrial and clinical laboratory personnel who are routinely exposed to N. meningitidis serogroup
- Military personnel during recruit training and on certain deployments
- Travelers to an area with a hyperendemic strain or an outbreak that is known to be caused by N. meningitidis serotype B that can be prevented by vaccine.

Meningococcal C Conjugate vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Close contacts (2 months of age and older) of a case of invasive meningococcal disease (serogroup C) who meet the public health criteria for immunoprophylaxis.

Meningococcal Quadrivalent vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Close contacts (2 months of age and older) of a case of invasive meningococcal disease (serogroups A, Y, W-135) who meet the public health criteria for immunoprophylaxis.



RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Travelers for whom meningococcal vaccine is indicated
- Military personnel
- Research, industrial and laboratory personnel who are routinely exposed to *N. meningitidis*.

Pneumococcal Conjugate vaccine:

RECOMMENDED BY THE NATIONAL ADVISORY COMMITTEE ON IMMUNIZATION BUT NOT PROVIDED FREE IN BC FOR:

- Sickle cell disease or other hemoglobinopathies
- Asplenia (anatomical or functional)
- Congenital immunodeficiencies involving any part of the immune system
- Immunosuppressive therapy including use of long term corticosteroids, chemotherapy, radiation therapy, post-organ-transplant therapy, biologic and non- biologic immunosuppressive therapies for rheumatologic and other inflammatory diseases.
- Malignant neoplasms including leukemia and lymphoma
- Military Solid organ or islet cell transplant (candidate or recipient)

Pneumococcal polysaccharide vaccine:

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Homelessness (as defined by local jurisdiction) C and/or illicit drug use

Polio vaccine

IN ADDITION TO ABOVE, ALSO PROVIDED FREE IN BC FOR:

- Health care workers who may be exposed to feces
- Travellers to areas of countries where wild polio viruses are circulating
- Workers in refugee camps in polio endemic areas
- Residents of communities in which a visitor or refugee may be excreting polio viruses
- Laboratory workers handling specimens that may contain polio viruses
- Military personnel
- Previously unimmunized solid organ transplant (SOT) candidates and recipients who do not require diphtheria or tetanus vaccine