People Who Are Pregnant or Planning a Pregnancy [A]

Recommended vaccines during pregnancy [B]	
All routine inactivated vaccines	May immunize according to routine schedule, taking into consideration risk of potential exposure during pregnancy (e.g., in an outbreak situation).
Tdap vaccine	Tdap vaccine is recommended for pregnant people in every pregnancy, ideally between 27-32 weeks of gestation, although it may be given from 13 weeks up to the time of delivery.[C] Tdap should be provided irrespective of previous Tdap immunization history.
Influenza vaccine	Inactivated influenza vaccine is recommended at any stage of pregnancy. Live attenuated influenza vaccine is **contraindicated during pregnancy**.
COVID-19 vaccine	COVID-19 vaccine may be administered at any stage of pregnancy. Refer to Part 4 – Biological Products, COVID-19 Vaccine Eligibility for recommendations.
MMR vaccine [D, E]	Contraindicated during pregnancy.
Varicella vaccine [D, F]	Contraindicated during pregnancy.

Pregnant people may have more contact with the medical system during pregnancy than at any other time. It is therefore an opportune time to assess immunization status and administer any appropriate vaccines that will provide protection for the pregnant person and the neonate.

[A] Recognizing that not all people giving birth will identify as women or mothers, this page uses gender-neutral terms to include trans and non-binary people. Pregnant people includes pregnant women.

[B] For more information regarding specific vaccines during pregnancy refer to the Canadian Immunization Guide, Part 3: Vaccination of Specific Populations, Immunization in Pregnancy and Breastfeeding or BC Communicable Disease Control Manual, Chapter 2: Immunization, Part 4 - Biological Products.

[C] Immunization between 13 and 26 weeks of gestation may be considered in situations where there may be an increased risk of preterm delivery. Although it is preferable that immunization is administered in sufficient time before birth (i.e., 4 weeks) to allow optimal transfer of maternal antibodies, if not given earlier it should be given at any time until delivery, to provide partial protection to the infant and prevent maternal pertussis infection and subsequent transmission to the newborn.

[D] MMR vaccine is recommended postpartum or preconception for susceptible individuals. Advise people who receive MMR vaccine, to avoid pregnancy for 1 month following immunization. Rubella infection during pregnancy may cause congenital rubella syndrome (CRS), which can cause miscarriage, stillbirth, and fetal malformations. The highest risk of damage to the fetus following maternal infection occurs during the first trimester.

[E] People who receive RhIg postpartum and are eligible for MMR and/or varicella vaccine should generally wait 3 months before being vaccinated with these vaccines. However, if there is a risk of exposure to measles, mumps, rubella, or varicella, a risk of pregnancy in the 3-month postpartum period, or a risk that vaccines may not be given later, MMR and/or varicella vaccines may be given prior to discharge with a 2nd dose at the recommended interval if indicated. If MMR or varicella vaccine is given within 3 months of receipt of RhIg, serologic testing for rubella or varicella should be done 3 months postpartum and at least 1 month after the final dose. People who have not mounted an antibody response should be revaccinated.

[F] Varicella vaccine is recommended postpartum or preconception for susceptible people. Advise people who receive varicella vaccine to avoid pregnancy for 1 month following immunization.

People Who Are Pregnant or Planning a Pregnancy

Although pregnancy is an immunologically altered state, there are no data to support an inadequate response to vaccines.

There are no data to indicate that any of the currently approved vaccines are teratogenic or embryotoxic, or have resulted in specific adverse pregnancy outcomes.

There are data to support the benefits of antenatal vaccines on the prevention of disease in the neonate. It is well documented that transplacental transfer of maternal antibodies (particularly IgG) occurs during pregnancy, mainly during the final trimester. Maternal IgG has a half-life of about 3-4 weeks in the newborn, waning during the first 6-12 months of life. Routine infant immunization schedules take into account the potential effect of circulating antibody in the infant.

Most inactivated viral and bacterial vaccines, including toxoids, are considered safe during pregnancy and should be administered when indicated. When vaccines are administered in pregnancy there does not appear to be any evidence of increased risk of adverse events following immunization.

Live attenuated vaccines pose a theoretical risk to the fetus. There are occasions when administration of non-routine live vaccine during pregnancy may be considered (e.g., pregnant traveler to a yellow fever endemic region). If a live vaccine is given inadvertently during pregnancy, termination of the pregnancy is not recommended. If a contraindicated vaccine is administered during pregnancy, this may be reported through pregnancy registers maintained by some vaccine manufacturers. Consult the product monograph or vaccine manufacturer's website for more information.

There are no known risks to the fetus if a pregnant person is given immune globulin preparations.

Influenza vaccine

- Immunize pregnant people at any stage of pregnancy during the influenza season (typically spanning November to April). Serious maternal morbidity (namely hospitalization) from influenza infection supports a recommendation for the immunization of healthy pregnant people, since rates of influenza-associated hospitalization increase with increasing length of gestation after the first trimester.

Tdap vaccine

- Immunization with Tdap in pregnancy has been shown to be safe and effective in preventing neonatal and infant pertussis infection. High levels of antibody are transferred to the fetus, protecting the newborn from pertussis during the first two months of life when the morbidity and mortality from pertussis infection is highest.

COVID-19 vaccine

- SARS-CoV-2 infection in pregnancy is associated with increased risk of hospitalization and admission to an intensive care unit (ICU). SARS-CoV-2 infection during pregnancy is also associated with an increased risk in the neonate of preterm birth, low birth weight and admission to a neonatal intensive care unit (NICU). Immunization during pregnancy helps to protect the pregnant person and lowers the risk of hospitalization for their newborn.

People Who are Pregnant or Planning a Pregnancy

RSV vaccine

- Respiratory syncytial virus (RSV) vaccine may be considered by a pregnant person and their care provider, in advance of or during the RSV season, to protect the infant through the passive transfer of maternal antibodies. Administration of RSV vaccine during pregnancy may be considered between 32- and 36-weeks gestation. RSV vaccine during pregnancy is optimally administered at least 2 weeks before birth to allow for the transplacental transfer of protective antibodies. At this time, no data are available on the efficacy or safety of additional doses of RSV vaccine given during subsequent pregnancies. Although this vaccine is not provided free in BC, it may be purchased without a prescription at most pharmacies and travel clinics.
- For more information on RSV vaccine in pregnancy or RSV monoclonal antibodies for infants, see Part 4 – Biological Products, Abrysvo™ and the BC Infant Respiratory Syncytial Virus (RSV) Immunoprophylaxis Program Questions and Answers for Immunization Providers.

Serological testing

All pregnant people should be evaluated for immunity to rubella and varicella, and in every pregnancy be tested for the presence of HBsAg.

Rubella

Serological screening for rubella antibodies is only recommended for pregnant people without documented laboratory evidence of rubella **or** one documented dose of a rubella-containing vaccine on or after 12 months of age. Those found to be susceptible should receive one dose of MMR vaccine in the immediate post-partum period (unless they have received RhIg – see Part 4 – Biological Products, Immune Globulin Preparations or Blood: Timing Intervals for Vaccines Containing Live Measles, Mumps, Rubella or Varicella Virus). Post-vaccination testing is not required, and serological screening for rubella antibodies in subsequent pregnancies is not required. People who have been found to be serologically immune in one pregnancy do not need to be screened in subsequent pregnancies.

If a pregnant person has received one dose of rubella-containing vaccine on or after 12 months of age and subsequent rubella titres indicate that they are non-immune, a second dose of MMR can be provided. Serological testing following this dose is not required, and no further doses are recommended regardless of serological test results.

Varicella

Serological screening for varicella antibodies is only recommended for pregnant people without documented laboratory evidence of varicella immunity **or** two documented doses of varicella vaccine. Those found to be susceptible should receive one dose of varicella vaccine in the immediate post-partum period (unless they have received RhIg – see Part 4 – Biological Products, Immune Globulin Preparations or Blood: Timing Intervals for Vaccines Containing Live Measles, Mumps, Rubella or Varicella Virus). A second dose should be provided at least 4 weeks after the first dose.

People Who are Pregnant or Planning a Pregnancy

Hepatitis B

Serological screening for HBsAg is recommended for all pregnant people during the first trimester of every pregnancy, even if a complete hepatitis B vaccine series has previously been documented. For HBsAg positive result follow-up recommendations, see Part 2 – Immunization of Special Populations, Infants at High Risk for Hepatitis B and Communicable Disease Control Manual, Chapter 1: Hepatitis B.

In the absence of a documented hepatitis B vaccine series, pre-vaccination serological screening for HBsAg, anti-HBc and anti-HBs is recommended if there are ongoing high-risk behaviours throughout pregnancy (e.g., multiple sex partners, intravenous drug use, recent history of STI). If susceptible, a complete hepatitis B vaccine series and follow-up post-vaccine serology (1 month after the last dose of vaccine) is recommended. Refer to Communicable Disease Control Manual, Chapter 1: Hepatitis B, 4.5 Post-vaccination Serology.