

Last Updated : September, 2023

Influenza Vaccine in Pregnancy and Lactation

Authored by Dr. Tali Bogler and reviewed by First Exposure Medical Review Team.

This information is current as of the “Last Updated” date above. Readers are advised to verify whether more recent updates have been made and published onto the website.

For more information and links to other resources, visit firstexposure.ca/influenza-vaccine-in-pregnancy-and-lactation/ or scan the QR code.



Clinical Scenario

It's the flu season. I am pregnant with my second child. Can I receive the flu vaccine while pregnant? What about when I'm nursing?

Q. What is influenza (the flu)?

A. Seasonal influenza infection, commonly referred to as “the flu,” is caused by the Influenza virus and mainly targets the respiratory (breathing) system, leading to symptoms such as fever, headache, cough, sore throat, muscle aches, nasal congestion (stuffy nose), weakness and loss of appetite, and sometimes severe complications like pneumonia and hospitalization.

Q. Why is influenza a concern in pregnancy?

A. Pregnant individuals are at higher risk of severe illness from the flu especially in the later part of pregnancy. Complications may include pneumonia, respiratory distress (severe breathing problems), hospitalization, and there is a higher risk of death compared to those who are not pregnant and of the same age group. Being sick from the flu may also lead to harmful effects on the developing baby, such as low birth weight and preterm birth (delivery before 37 weeks of pregnancy). Pregnant individuals with suspected or confirmed influenza are recommended to be treated with antiviral medications (medications that are used to treat diseases caused by viruses). To learn more about antiviral medications in pregnancy and while nursing, please speak with your healthcare provider.

Q. What is the seasonal influenza vaccine (flu shot)?

A. The influenza virus that causes seasonal flu can change year to year. As a result, the seasonal influenza vaccine is changed most years to protect against the types of virus that research shows will be the most prevalent during the upcoming flu season. There are several different types of influenza vaccines, including inactivated influenza vaccines (made of killed influenza viruses or parts of the viruses), recombinant vaccines (parts of the virus that are created by scientists and not parts of the real viruses) and live attenuated influenza vaccines (made from weakened influenza viruses).

Q. What are the recommendations for pregnant individuals?

A. In Canada, as per the National Advisory Council on Immunization (NACI), pregnant individuals, at any stage of pregnancy, are considered a priority group to receive the inactivated or recombinant influenza vaccines due to the increased risk of severe disease during pregnancy. There have been many studies (including thousands of pregnancies) supporting the safety and effectiveness of the inactivated influenza vaccine in pregnancy. Although there is little data on the safety of recombinant vaccines in pregnancy, based on the available information, it is not expected to be a concern. The live vaccine is not recommended for pregnant individuals. No concerns were identified in those who were exposed before realizing they were pregnant.

Society of Obstetricians and Gynecologists of Canada (SOGC) also recommends that all pregnant individuals, at any stage in pregnancy, or those who might be pregnant in the upcoming influenza season, should be offered the inactivated influenza vaccine for the prevention of maternal and infant influenza-related morbidity and mortality.

Q. Can you receive the influenza vaccine while trying to conceive?

A. Yes – you can receive the influenza vaccine while trying to conceive. Studies have found no link between the influenza vaccine and current/future fertility, including male fertility.

Q. Does receiving the influenza vaccine in pregnancy increase the chance of miscarriage?

A. Based on the available information it is not expected that getting the Influenza vaccine during pregnancy will increase the risk of miscarriage.

Q. Does receiving the influenza vaccine in pregnancy increase the chance of a birth defect?

A. The baseline risk of major birth defects in Canada is 3-5%. This means that 3-5 out of 100 babies born in the general population in Canada will be born with a major birth defect. Studies have found that receiving the inactivated flu vaccine in pregnancy does not increase the risk of birth defects above the baseline risk.

Q. Does receiving the influenza vaccine in pregnancy increase the risk of any other harmful pregnancy outcomes?

A. Studies have not identified any safety issues with receiving the inactivated influenza vaccine during pregnancy, including any harmful pregnancy outcomes such as stillbirth (loss of a baby before or during delivery), preterm birth, or low birth weight. In fact, some studies show lower rates of preterm birth, being smaller at birth and having a lower birth weight in the infants of individuals vaccinated with the influenza vaccine during pregnancy compared to those who did not get the vaccine.

Q. Does receiving the flu shot impact the baby's health at birth?

A. Receiving the inactivated flu shot at any stage of pregnancy has not been found to negatively affect the baby's health at birth. In fact, due to antibodies (proteins from your immune system that help fight against infection) crossing through the placenta to the fetus, the newborn is protected against influenza during the first few months of life. This is especially important as newborns are at high risk of complications from influenza infection and cannot be vaccinated until 6 months of age.

Q. Does receiving the flu shot in pregnancy affect future health or behavior of the child later in life?

A. Current evidence suggests that the inactivated seasonal influenza vaccine given in pregnancy is not associated with harmful early childhood outcomes. One study in Canada followed the babies of mothers who received the inactivated influenza vaccine during pregnancy for an average of 3.6 years and no harmful health outcomes were found (e.g., asthma, sensory disability, emergency department visits).

Q. Can you receive the flu shot while nursing?

A. The annual influenza vaccine is recommended while nursing. There are no known or suggested safety concerns. Furthermore, receiving the flu shot postpartum or while nursing (as well as other members of the family getting it) will help further protect the baby from influenza.

Q. In addition to the flu vaccine, are there ways to prevent getting the flu?

A. The best ways for preventing the flu, in addition to the influenza vaccine, include handwashing, avoiding others who are sick, and avoiding touching one's face.

Q. Advice for specific populations?

A. Despite pregnant individuals being prioritized for the influenza vaccine, many do not get vaccinated. Furthermore, the negative effects of influenza infection and the low vaccination rates are seen more often in those who are pregnant and racialized, Indigenous, younger, have a lower household income or live in remote areas. Access to healthcare and treatment can vary widely among different populations, leading to differences and gaps in the management of influenza infection in pregnancy. Addressing equity issues requires efforts at multiple levels to ensure all pregnant individuals have access to appropriate care and treatment.

About the First Exposure Medical Advisors

Dr. Tali Bogler, MD, CCFP, MScCH, is a Medical Advisor at First Exposure, a Family physician, and Chair of Family Medicine Obstetrics at St. Michael's Hospital, an assistant Professor, Department of Family and Community Medicine and Investigator at Li Ka Shing Knowledge Institute.

Key References

For a complete list of references, please visit our website at firstexposure.ca/influenza-vaccine-in-pregnancy-and-lactation/

Disclaimer

The information provided is the expert opinion of the First Exposure Medical Advisors. It is for informational purposes only and does not replace medical care and advice from a healthcare provider. Please, contact your healthcare provider if you have any concerns or wish to discuss any questions that you believe may be relevant to you or your baby. In case of emergency, please go to the emergency room or call 911.

If you do not have a healthcare provider, please go to: firstexposure.ca/how-to