No. 357, April 2018 (Replaces No. 236, November 2009)

No. 357-Immunization in Pregnancy

This Clinical Practice Guideline supersedes the original that was published in November 2009.
This clinical practice guideline has been prepared by the Infectious Diseases Committee, reviewed by the Guideline Management and Oversight Committee, and approved by the Board of the Society of Obstetricians and Gynaecologists of Canada.

Eliana Castillo, MD, Calgary AB

Vanessa Poliquin, MD, Winnipeg MB

Infectious Diseases Committee: Céline Bouchard, MD, Québec City, QC; Marc Boucher, MD, Montréal, QC; Isabelle Boucoiran, MD, Montréal, QC; Sheila Caddy, MD, Calgary, AB; Eliana Castillo, MD, Calgary, AB; V. Logan Kennedy, RN, Toronto, ON; Deborah M. Money, MD, Vancouver, BC; Kellie Murphy, MD, Toronto, ON; Gina Ogilvie, MD, Vancouver, BC; Caroline Paquet, RM, Trois-Rivières, QC; Vanessa Poliquin, MD, Winnipeg, MB; Julie van Schalkwyk, MD (co-chair), Vancouver, BC; Mark H. Yudin, MD (co-chair), Toronto, ON. **Special Contributor:** Noni MacDonald, MD, Halifax, NS.

Disclosure statements have been received from all authors.

Key Words: Pregnancy, immunization, vaccine, vaccination, contraindications

Abstract

Objective: To review the evidence and provide recommendations on immunization in pregnancy.

Outcomes: Outcomes evaluated include effectiveness of immunization and risks and benefits for mother and fetus.

Evidence: The Medline and Cochrane databases were searched for articles published up to January 2017 on the topic of immunization in pregnancy.

Values: The evidence obtained was reviewed and evaluated by the Infectious Diseases Committee of the SOGC under the leadership of the principal authors, and recommendations were made according to guidelines developed by the Canadian Task Force on Preventive Health Care (Table 1).

Benefits, Harms, and Costs: Implementation of the recommendations in this guideline should result in more appropriate immunization of pregnant and breastfeeding women, decreased risk of contraindicated immunization, and better disease prevention.

Recommendations:

1. Health care providers should obtain a relevant immunization history from all women accessing prenatal care and offer vaccinations as indicated (III-A).
2. In general, live and/or live-attenuated virus vaccines should not be administered during pregnancy because there is a largely theoretical risk to the fetus (II-3B).
3. Women who have inadvertently received vaccination with a live or live-attenuated vaccine during pregnancy should not be counselled to terminate the pregnancy for the reason of a teratogenic risk (II-2A).
4. Non-pregnant women receiving a live or live-attenuated vaccine should be counselled to delay pregnancy for at least 4 weeks (III-B).
5. Inactivated viral vaccines, bacterial vaccines, and toxoids can be used safely in pregnancy (II-1A).
6. Breastfeeding is not a contraindication to vaccination (passive-active immunization, live, with the exception of yellow fever, or killed vaccines) (II-1A).
7. All pregnant women should be offered the diphtheria and tetanus toxoids and acellular pertussis vaccine during the second or third trimester, preferably between 21 and 32 weeks gestation, during every pregnancy, irrespective of their immunization history (II-2A).
8. All pregnant women, at any stage in pregnancy, or women who might be pregnant in the upcoming influenza season, should be offered the inactivated influenza vaccine for the prevention of

J Obstet Gynaecol Can 2018;■■(■■):■■–■■

https://doi.org/10.1016/j.jogc.2017.11.010

Table 1. Key to evidence statements and grading of recommendations, using the ranking of the Canadian Task Force on Preventive Health Care

Quality of evidence assessment[a]	Classification of recommendations[b]
I: Evidence obtained from at least one properly randomized controlled trial	A. There is good evidence to recommend the clinical preventive action
II-1: Evidence from well-designed controlled trials without randomization	B. There is fair evidence to recommend the clinical preventive action
II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group	C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision making
II-3: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in the category	D. There is fair evidence to recommend against the clinical preventive action
III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees	E. There is good evidence to recommend against the clinical preventive action
	L. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision making

[a]The quality of evidence reported in these guidelines has been adapted from The Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.

[b]Recommendations included in these guidelines have been adapted from the Classification of recommendations criteria described in The Canadian Task Force on Preventive Health Care.

maternal and infant influenza-related morbidity and mortality (I-1A).

9. Pregnant women with suspected or documented influenza infection, regardless of immunization history, should be treated with oseltamivir (Tamiflu, 75 mg po twice daily) (III-B).
10. Some pregnant women should be offered the hepatitis B, hepatitis A, meningococcal, and/or pneumococcal vaccines for the prevention of maternal morbidity if they have specific risk factors by means of their medical comorbidities or specific exposures (III-A).