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IMMUNIZATION

Before and during pregnancy

What is immunization?

Immunization is the process through which your body becomes protected from disease. When your immune system is exposed to something unfamiliar – such as bacteria or viruses – it produces antibodies to fight those potential threats. These antibodies can also help your body recognize and fight those threats if you are ever exposed again. Vaccines are a safe way to develop the immunity which will keep you safe from disease.

How do vaccines work?

Active vaccines

In active immunization, vaccines contain agents which mimic bacteria or viruses and cause your immune system to produce antibodies.

Some active vaccines, called **live-attenuated vaccines**, contain weakened forms of bacteria or viruses: the agents are alive, but their harmful parts have been removed.

Passive vaccines

In passive immunization, vaccines contain the antibodies that fight bacteria or viruses. Passive immunization doesn't last very long, but can be useful for someone who has recently been exposed to a disease or who may be exposed to a disease for only a short time (for example, while travelling).

Why is immunization important before and during pregnancy?

Some diseases are particularly harmful for pregnant women and their babies. Many of these can be prevented through immunization. A mother's immunity can protect her baby during pregnancy and often for the baby's first six to 12 months of life.

When planning and experiencing pregnancies, women often have more contact with health-care professionals than at other times in their lives. This makes it a good opportunity for you to have your immunization status evaluated and to consider which vaccines might be beneficial to you and your baby.

Are vaccines safe?

The most common side effects of vaccines are tenderness and swelling where the injection was given. Rarely, vaccines result in a minor fever. These effects are usually mild and have no long-term consequences. Serious adverse reactions to vaccines are very rare. The Public Health Agency of Canada closely monitors vaccine safety, and has a reporting system to track serious side effects that may be related to vaccines.

For every 100,000 doses of vaccines given, only one to two will result in serious adverse reactions. The dangers of vaccine-preventable diseases are many times greater than the risks of a serious adverse reaction to vaccines.

In the last century, immunization programs have saved more lives than any other health intervention. Many diseases that could affect you or your baby are preventable through immunization. This keeps you and your baby safe, and also protects the rest of the population — particularly people who cannot receive vaccines or who do not develop full immunity.



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Immunization safety in pregnancy

Scientific evidence shows that most types of vaccines are safe during pregnancy. These include passive vaccines and some active vaccines. Live-attenuated vaccines are not given if a patient knows she is pregnant, because there is a potential risk to her baby. However, in cases where live-attenuated vaccines have been given to women who did not know they were pregnant, there has been no evidence of adverse outcomes.

It is safe for a person who lives with a pregnant woman to be vaccinated with any type of vaccine.

What about vaccination during breastfeeding?

All types of vaccines are safe for women who are breastfeeding.

Common vaccines to consider before and during pregnancy

If you are planning to or could become pregnant, it's important to speak with your health-care professional to ensure that your immunizations are up to date. If you are already pregnant, immunization with some vaccines, or planning for immunization with live-attenuated vaccines after your baby is born, is still possible.

Rubella

Rubella (German measles) can be very dangerous for your unborn baby, and is most dangerous early in your pregnancy. If you are infected in your first trimester, there is an 85 per cent chance that your baby will also be infected. Infection in an unborn baby can lead to deafness, cataracts, cardiac defects, mental retardation, bone damage, and enlargement of the liver and spleen.

Before you conceive, your health-care professional should test your immunity to rubella. You may have received a rubella vaccine in childhood, but you may no longer have immunity and may need to get it again. It is often given as a combined measles-mumps-rubella (MMR) vaccine. Because this is a live-attenuated vaccine, it is not given during pregnancy and you should wait at least four weeks after getting the vaccine before trying to conceive.

Hepatitis B

Your job, lifestyle or health history may put you at increased risk to become infected with hepatitis B. In this case, your health-care professional may recommend that you be immunized against hepatitis B, if you have not been before. Not only does the hepatitis B virus pose a risk for you, but you could pass the virus on to your baby. Carriers of the hepatitis B virus are at risk for cirrhosis of the liver and liver cancer. The hepatitis B vaccine is safe for use in pregnancy.

Seasonal and H1N1 influenza vaccines

Influenza, or flu, is a highly-contagious acute respiratory infection. The seasonal flu vaccine is safe for pregnant women and is recommended for those who will be pregnant during flu season. Being immunized will also help protect your baby through his or her first few months of life.

Pregnant women are at increased risk of hospitalization and serious complications from H1N1 influenza. This increased risk is believed to be related to the changes that occur during pregnancy in the cardiovascular, respiratory and immune systems, and is greatest in the second and third trimesters. The H1N1 influenza vaccine is safe for pregnant women, and you should get it if you will be pregnant during flu season.

Tetanus, diphtheria and pertussis

Tetanus and tetanus-diphtheria (Td) vaccines are well-established as being safe for pregnant women. Recently, the Td vaccine has been combined with a pertussis vaccine, known as the Tdap vaccine. Administration of the Tdap vaccine during pregnancy has not yet been studied, so the decision to use Tdap during pregnancy should be made on a case-by-case basis, depending on your risk of getting pertussis while you are pregnant.

You may have an immunization record from childhood. If possible, find this card or booklet and have it with you when you see your health-care professional.



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Other vaccines

Special circumstances might arise during pregnancy where you should speak to your health-care professional to discuss additional vaccines that may be necessary. For example, if you need to travel abroad during pregnancy, you may need to consider other vaccines. In some parts of the world, vaccine-preventable diseases such as polio and tuberculosis are a serious concern.

To learn more about immunization in pregnancy

The Society of Obstetricians and Gynaecologists of Canada's (SOGC) book, "**Healthy beginnings: Giving your baby the best start from preconception to birth**"

www.sogc.org/healthybeginnings

The Society of Obstetricians and Gynaecologists of Canada's (SOGC) guideline, "**Immunization in pregnancy**"

www.sogc.org/guidelines

The Society of Obstetricians and Gynaecologists of Canada's (SOGC) "**H1N1 in pregnancy**" resources

www.sogc.org

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