

# Immunization: Your Best Protection

---

This fact sheet provides basic information only. It must not take the place of medical advice, diagnosis or treatment. Always talk to a health care professional about any health concerns you have, and before you make any changes to your diet, lifestyle or treatment.

## What is a vaccine?

A vaccine is a substance that promotes the body's immune system to make antibodies, T-cells and memory cells which are the body's defense against infection. If a person is exposed to the actual disease, the body's immune system will respond quickly to destroy the infection.

**What is vaccination?** Vaccination means having the vaccine – actually getting the injection.

**What is immunization?** Immunization means both receiving the vaccine and becoming immune to ward off a disease as a result of immunization.

Immunizations, also called injections or shots, help save lives, prevent serious illnesses, and are recognized as one of the most effective public health interventions. Immunizations help the body make its own protection (or antibodies) against certain diseases. Immunizations are given against diphtheria, pertussis (whooping cough), tetanus, polio, haemophilus influenzae type b (Hib), measles, mumps and rubella (German measles). Immunizations may also be given against hepatitis, influenza, chicken pox, meningococcal disease, pneumococcal disease and human papillomavirus. There are also a number of vaccines for other circumstances, for example, people traveling to a country with diseases that are not common in Canada, such as typhoid fever.

## Why is immunization important?

When children are immunized, their bodies make antibodies that fight specific infections. If they are not protected and come in contact with one of these infections, they may get very sick and potentially experience complications, or even die.

## How effective are vaccines?

Vaccines are very effective in preventing disease when given as recommended. However, no vaccine will work for 100 per cent of the children who receive it. Studies of disease outbreaks show that although some immunized children can develop the infection, the illness is often less severe.

## How safe are vaccines?

All vaccines have to be tested to make sure they are both safe and effective. The most common side effects are mild pain, swelling and redness where the shot was given.

Some infant vaccines may cause a low-grade fever (approximately 38°C) or fussiness for a day or two after the injection. Physicians may recommend acetaminophen to prevent fever and pain. Serious side effects from immunizations are rare. Please report any side effects or severe vaccine reactions to your doctor, nurse practitioner or local public health unit. You should always discuss the benefits and risks of any vaccine with your doctor or nurse practitioner.

## Is immunization required for attendance at school or day care in Ontario?

For children attending school in Ontario, a written immunization record or proof of immunization is required, by law, for diphtheria, tetanus, polio, measles, mumps and rubella unless there is a valid written exemption. Parents/guardians are required to provide this information to their local public health unit, and to update the information as necessary.

Children attending licensed childcare centres should be immunized according to their age and as recommended in the Publicly Funded Immunization Schedules for Ontario - 2009 or as current. You may contact your local public health unit for more information.

You may decide because of medical, religious or philosophical reasons not to immunize your child. In this case, you will need to provide a valid written exemption to your local public health unit. If the disease appears in your child's school or childcare centre, your child may have to stay out of school/childcare until the disease is no longer present.

### Where to get immunized:

Call your doctor or nurse practitioner to make an appointment. If you don't have a physician, nurse practitioner or health card, call your local public health unit to find out where you or your child can get immunized.

### When to get immunized:

Recommended routine immunizations begin at two months of age to protect infants from illnesses that can be very serious for them. The following chart outlines the schedule for publicly funded vaccines in Ontario available for children beginning their routine immunization in early infancy.

## Publicly Funded Routine Immunization Schedule for Children Beginning Immunization in Early Infancy

Download the Publicly Funded Immunization Schedules for Ontario (January 2009) at:  
<http://www.health.gov.on.ca/english/providers/program/immun/pdf/schedule.pdf>

Vaccines that protect against the following diseases are available free of charge, and are required for attendance at school:

**DIPHTHERIA** is a very serious bacterial infection. It can cause breathing problems, heart failure, nerve damage and death in about 10% of cases.

**TETANUS (Lockjaw)** causes painful muscle spasms, breathing failure and can lead to death. It is caused by bacteria and spores in the soil that can infect wounds.

**POLIO** can cause paralysis (loss of control over muscles in the body), inflammation of the brain and death. People get polio from drinking water or eating food with the polio virus in it. It is no longer common in Canada because of high immunization rates, but cases do occur elsewhere in the world and polio may be acquired when traveling if you are not fully immunized.

**MEASLES** causes rash, high fever, cough, runny nose and watery eyes. It can cause middle ear infection, pneumonia (lung infection), inflammation of the brain, hearing loss, brain damage and death.

**MUMPS** causes fever, headache, painful swelling of the glands in the mouth and neck, earache and can cause inflammation of the brain. It can cause temporary or permanent deafness and swelling of the ovaries in women and testes in men, possibly leading to sterility.

**RUBELLA (German Measles)** causes fever, rash, swelling of the neck glands and swelling and pain in the joints. It can cause bruising and bleeding. If a pregnant woman gets rubella, it can be very dangerous for the unborn baby.

Vaccines against the following diseases are recommended but not required for attendance at school. These vaccines are available free of charge:

**PERTUSSIS (Whooping Cough)** causes severe coughing spells for weeks or months. It can also cause pneumonia (lung infection), middle ear infection, convulsions (seizures), inflammation of the brain and death. The risk of complications is greatest in children younger than one year of age.

HEPATITIS B is a virus that can cause serious liver problems that can be fatal, such as liver failure and liver cancer. The vaccine is free for grade 7 students and certain high-risk groups (including infants born to mothers who are infected with hepatitis B and can pass the disease on to their babies).

INFLUENZA is a viral infection that causes cough, high fever, chills, headache and muscle pain. It can cause pneumonia (infection of the lungs), middle ear infections, heart failure and death. The danger of this infection varies from year to year depending on the strain and can be mild to life-threatening. Any one six months of age and older who lives, works or attends school in Ontario can get the vaccine each year free of charge.

VARICELLA (Chicken pox) is a highly contagious viral infection. It can cause fever, headache, chills, muscle or joint aches a day or two before the itchy, red rash appears. A pregnant woman with chicken pox can pass it on to her unborn baby. Mothers with chicken pox can also give it to their newborn baby after birth. Chicken pox can be very severe or even life-threatening to newborn babies.

MENINGOCOCCAL DISEASE-GROUP C is a very serious bacterial infection and a common cause of meningitis (infection of the lining of the brain and spinal cord) and meningococcaemia (severe infection of the blood) that can cause severe complications and death.

HUMAN PAPILLOMAVIRUS (HPV) is a very common virus transmitted through sexual activity. HPV has been found to cause cervical cancer, some other rare cancers and genital warts. (About 75 per cent of adults will have at least one HPV infection in their lifetime.) The vaccine is free for grade 8 females.

Vaccines against the following diseases are recommended for younger children. These vaccines are available free of charge:

HAEMOPHILUS INFLUENZAE B (HIB) is a bacteria that can infect any part of the body. It can cause middle ear infections, breathing problems, damage to joints, pneumonia (lung infection), inflammation of the brain leading to brain damage and death. This vaccine recommended for children less than 5 years of age.

PNEUMOCOCCAL DISEASE is a bacterial infection that can cause serious illnesses such as pneumonia, blood infection and meningitis. The pneumococcal conjugate vaccine is now available free of charge in Ontario for the routine immunization of children less than 2 years old as well as high-risk children 2 to 59 months of age.

Talk to your doctor or nurse practitioner for more information on these vaccines and the diseases they prevent.

It is important to keep an immunization record. Get a yellow immunization card from your doctor, nurse practitioner or local public health unit to keep a record of the shots you and your child have received. An up-to-date immunization record will prevent unnecessary extra shots. Written immunization records are needed when:

- starting child care or school,
- transferring to a school in another area,
- going to camp,
- starting university, college or a job,
- receiving emergency health care,
- traveling to other countries.

It is the parent/guardian's responsibility to provide immunization records for all school children to the local public health unit. Don't forget to update the health unit when/if your child gets another shot.

**Always remember:**

Because of changes in the influenza strains, adults also need an influenza shot each year. As well as a tetanus and diphtheria shot every 10 years throughout life, to be protected against these diseases.

**Thinking about getting pregnant?**

Be sure you are protected against rubella before pregnancy to protect your future baby from serious problems during its development.

**For further information** about immunization, or any other health topics, please contact your local public health unit or doctor/nurse practitioner.

**Additional Immunization Links**

The Canadian Paediatric Society. Available at: <http://www.cps.ca/english/index.htm>

Canadian Coalition for Immunization Awareness  
& Promotion. Available at:  
<http://immunize.cpha.ca/en/default.aspx>

### **Recommended Resources**

To learn more about immunization, visit your local bookstores or library for the following books:

*Your Child's Best Shot : A Parent's Guide to Vaccination*. 3rd edition (2006). Dr. Ronald Gold.

*What Every Parent Should Know About Vaccines* (2002). Dr. Paul Offit and Dr. Louis M. Bell.