

READ. LEARN. UNDERSTAND.

A PARENT'S DECISION TO IMMUNIZE.

Every parent wants to know the potential risks and benefits of immunizing their child, especially when the benefits cannot be seen. Some parents choose not to immunize because they don't want to take any risks. But choosing not to immunize your child is not without risk. You may never know how many times your child will come into contact with a vaccine-preventable disease, and the choice not to immunize affects not only your child, but your family and community too.

Below are common questions and evidence-based answers about childhood immunization to assist you as you make the immunization decision.

■ IMMUNIZATION IN CANADA IS VOLUNTARY.

Immunization is not mandatory in Canada but there are provinces, like Ontario and New Brunswick, that require proof of immunization before your child goes to school. Experts recommend that children follow the childhood immunization schedule, which varies depending on where you reside in Canada. To view the schedule where you reside, the Public Health Agency of Canada offers an Immunization Schedule Tool: <https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information.html>

■ CANADIAN CHILDHOOD IMMUNIZATION SCHEDULES ARE CAREFULLY DESIGNED TO PROVIDE PROTECTION AT JUST THE RIGHT TIME.

Vaccines are given at an early age because young children are most vulnerable to diseases and need to be protected as early as possible. For example, children under the age of two are at high risk of serious complications from

pneumococcal disease, which can lead to three serious infections, including meningitis, pneumonia and bacteremia (blood infection). Your child needs to be immunized at the right age so that he or she is protected from serious diseases when most vulnerable. It's best to immunize your child before exposure to dangerous diseases. Thanks to combination vaccines, your child can get protection from many different diseases with one injection.

■ HOW ARE CHILDHOOD IMMUNIZATION SCHEDULES MADE?

Once a vaccine has been approved for use in Canada, the National Advisory Committee on Immunization (NACI) makes recommendations for who should receive certain vaccines. The health ministries of each province and territory then use these recommendations to develop their immunization schedules, taking into consideration the health priorities for their population.

■ HOW ARE THE TIMING AND SPACING OF IMMUNIZATIONS DETERMINED?

The timing of each vaccine is based on scientists determining the age at which the body's immune system will provide optimal protection following vaccination. Secondly, this information is balanced with the need to provide protection to children at the earliest possible time.

■ CHILDREN NOW ROUTINELY RECEIVE SEVERAL IMMUNIZATIONS AT A TIME. WILL MULTIPLE IMMUNIZATIONS OVERLOAD MY CHILD'S IMMUNE SYSTEM?

The administration of more than one immunization at the same time has been well studied in Canada. Vaccines provide such a tiny amount of bacteria or virus in an injection that there is no risk of overloading your child's immune system by giving more than one immunization at the same time.

■ WILL IMMUNIZATIONS STILL WORK IF MY CHILD DOESN'T GET THEM ON TIME?

Most childhood vaccines can be given at any age, and a child who misses an immunization in a course of injections does not have to start again. The vaccines given will still work and your child will still develop protection. But delaying vaccines could leave your child vulnerable to disease when he or she's most likely to experience complications.

Also, your child won't have the best protection from serious disease until he or she gets all the recommended doses of each vaccine. Each vaccine is developed to protect against a specific illness. Some require more than one dose to build strong enough immunity to protect your child, or to boost immunity, which may decrease over time. Other vaccines may require additional doses to ensure your child is protected in case the first dose didn't produce enough antibodies. Every recommended dose of each vaccine on the childhood immunization schedule is important.

■ WHAT'S WRONG WITH FOLLOWING AN ALTERNATIVE SCHEDULE, LIKE SPREADING OUT IMMUNIZATIONS?

Children who follow an alternative schedule where immunizations are spread out or left out are at risk of developing diseases during the time that immunizations are delayed. For example, some vaccine-preventable diseases like pneumococcal pneumonia, pertussis (whooping cough) and varicella (chickenpox) remain common in Canada. Delaying immunizations puts children at risk of becoming ill with diseases that can be prevented.

■ WHAT ABOUT ALTERNATIVE MEDICINES LIKE HOMEOPATHIC NOSODES? ARE THEY ALTERNATIVES TO VACCINES?

No, because nosodes do not prevent diseases. The Canadian Paediatric Society and Health Canada endorse this proven fact. Homeopathic nosodes are not substitutes for immunization.

■ I KNOW A CHILD WHO WAS IMMUNIZED BUT STILL BECAME ILL FROM THE DISEASE. DOESN'T THAT SHOW THAT IMMUNIZATION DOES NOT WORK?

Vaccines are effective at stimulating an immune response up to 98% of the time. However, it can happen that a child will not develop a proper immune response to a vaccine. In this case, immunization will reduce the health impact of disease so that the child will become only mildly ill. This is especially true with influenza (flu) and varicella (chickenpox) immunizations.

■ ARE THERE SIDE EFFECTS TO IMMUNIZATION?

Immunization is a public health intervention, and no intervention is completely risk free. Vaccines are designed to prevent diseases, but they can also cause side effects, and they can vary in severity. The most common side effects are considered to be mild, such as fever, pain or

redness at the injection site. The less common and rare side effects are considered serious and may be life-threatening, such as an allergic reaction to an ingredient in the vaccine, and seizures.

The safety of vaccines is a priority and there are laws and regulations that set high standards for vaccine development, safety, and testing. Canada also has strong health systems to oversee and monitor vaccines as they arrive on the market and are sold to the public. For example, all side effects are monitored in Canada by the Canadian Adverse Events Following Immunization Surveillance System (CAEFISS). Canada also has a pediatric hospital-based surveillance network known as the Immunization Monitoring Program ACTive (or IMPACT). For more information on these surveillance networks, please visit the Public Health Agency of Canada web site <https://www.canada.ca/en/public-health/services/immunization/canadian-adverse-events-following-immunization-surveillance-system-caefiss.html>

■ IMMUNIZATIONS CAN BE PAINFUL AND STRESSFUL. IS THERE ANYTHING THAT I CAN DO TO REDUCE PAIN AND FEAR?

Yes, there are ways you can reduce your child's pain and anxiety before, during and after immunization. Parents play an important role in supporting their children during immunizations. To learn how you can improve the immunization experience for your child, visit <https://immunize.ca/pain-management-children>

■ WHAT WILL HAPPEN IF MY CHILD IS NOT IMMUNIZED?

If your child were to go through life without ever being exposed to vaccine-preventable diseases, nothing would happen. However, should exposure occur, there is a good chance that your child will get the disease. Also, not vaccinating your child on time can make someone else sick. For example, your child could also spread diseases to others who are not protected, such as other children too young to be immunized.

■ WHAT ARE MY CHILD'S CHANCES OF BEING EXPOSED TO A VACCINE-PREVENTABLE DISEASE?

Some diseases are now rare in Canada, so the chances of exposure are small, but other diseases are still fairly common elsewhere in the world. Your child could get those diseases while traveling abroad. For example, diphtheria still occurs in some Asian countries and polio still occurs in Pakistan, Nigeria and Afghanistan. Measles, pneumococcal pneumonia and influenza still occur globally. With increased international travel, it is possible that these diseases will become more common, particularly if not enough people are immunized.

■ WHY IMMUNIZING YOUR CHILD MATTERS.

All parents want to make the right choices for their children and to protect them from harm. This task is more challenging than ever with so much information at our fingertips. Both science and history have shown that immunization works to protect us from disease, and we all have a public health commitment to protect our children and our communities.



THIS RESOURCE IS BASED ON THE LIST OF REFERENCES BELOW.

This list offers a range of web sites and research articles that are evidence-based, and offer a balanced perspective on the science behind childhood immunizations, why they are important and how they have improved the health of children.

Web Sites

American Academy of Pediatrics. <https://www.healthychildren.org/English/Pages/default.aspx>

Canadian Immunization Guide. Vaccine Safety. <https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-2-vaccine-safety/page-2-vaccine-safety.html>

Canadian Paediatric Society. https://www.caringforkids.cps.ca/handouts/vaccine_safety

Institute for Vaccine Safety. <http://www.vaccinesafety.edu/>

Public Health Agency of Canada. <https://www.canada.ca/en/public-health/services/publications/healthy-living/parent-guide-vaccination.html>

Research Articles and Position Statements

Canadian Paediatric Society. (2015.) Nosodes are no substitute for vaccines. Rieder MJ, Robinson JL, Canadian Paediatric Society Drug Therapy and Hazardous Substances Committee, Infectious Diseases and Immunization Committee. *Paediatr Child Health* 2015; 20(4):219-20. Available at: <https://academic.oup.com/pch/article/20/4/219/2648896>

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Saini V, MacDonald SE, McNeil DA, et al. Timeliness and completeness of routine childhood vaccinations in children by two years of age in Alberta, Canada. *Can J Public Health* (2017) 108: e124. Available at: <https://link.springer.com/article/10.17269%2FCJPH.108.5885>

