



NATIONAL IMMUNIZATION AWARENESS WEEK (APRIL 25–MAY 2, 2009)



National Immunization Awareness Week is held annually to help Canadians understand the importance of immunization for people of all ages.

The Canadian Coalition for Immunization Awareness and Promotion (CCIAP) will be communicating the immunization message on a national level. CCIAP also looks for community-based support to reach Canadians at the local level. CCIAP wants to encourage health care providers, parents, and caregivers to ensure that the immunization message reaches children and adults of all ages.

If you are a health care provider or a member of the public interested in helping with National Immunization Awareness Week, contact the CCIAP to find out what you can do in your community.

You can help community-based programs through contacting local media, government, businesses, schools, service agencies, service clubs, and faith communities. Developing and distributing education materials or organizing local events and media campaigns will also help raise immunization awareness.

Some ideas for activities include:

- ▶ putting up posters in high-traffic areas such as libraries and bus shelters
- ▶ setting up information booths at shopping malls or putting up posters in store windows
- ▶ having local health professionals make presentations at schools, churches, and other community groups
- ▶ health professionals working with businesses can promote immunization to employees (e.g., through a “lunch-and-learn”)
- ▶ visiting prenatal classes to provide parents-to-be with information on immunization
- ▶ working with service clubs and faith organizations to hold fundraisers or promotional events to raise immunization awareness

The CCIAP offers many resources to support community events for National Immunization Awareness Week. To learn more about how you can get involved, visit the CCIAP website at <http://www.immunize.cpha.ca/en/events/niaw.aspx>.

IEI NEWS

Interested in becoming a nurse speaker?

Contact the IEI for more information!

Don't forget to visit the IEI website at www.immunizationeducation.ca!

To stay informed on immunization news, bookmark or make www.immunizationeducation.ca your home page.

IEI Nurse Speakers are available to provide education sessions for your group or organization of health care professionals.

There are several presentations to choose from: *Administration Techniques, Communication Strategies, Immunology/Vaccinology, Immunization Overview, and Influenza.*

Each session takes about 1½ hours and light refreshments are provided. Best of all, there is no cost to your group!

For further information or to book a presentation, please visit our website at www.immunizationeducation.ca.



SPRING NEWSLETTER

THE HISTORY OF IMMUNIZATION



The World Health Organization (WHO) estimates that immunization saves 2 to 3 million lives worldwide every year. Strategies to make immunization available to even the most vulnerable and remote populations have made it one of the most cost-effective and successful public health initiatives. Adding to immunization's importance and success is the fact that vaccines can be given to people through outreach programs, they have clearly defined target groups, and they do not require any major lifestyle changes.

The idea of immunization began over 10 centuries ago, but it has only developed and gained widespread usage in the past century. In the 10th or 11th century, people in Central Asia created resistance to smallpox disease by introducing a small amount of smallpox virus into their body through nose inhalations or through small pricks made to the skin (this process of inoculation is called variolation).

Variolation reached England in 1721. At this time, smallpox killed a million people a year in Europe alone, most of them children. In England, physician Edward Jenner noticed that milkmaids who had a viral disease similar to smallpox called cowpox were rarely afflicted with smallpox. In 1796, Jenner conducted an experiment where he injected a healthy boy who never had cowpox or smallpox with a few drops of fluid he took from a pustule of a woman who had cowpox. After 6 weeks, Jenner injected the boy with fluid from a smallpox pustule—and the boy remained smallpox-free. From this success, Jenner began to carry out inoculations against smallpox in the first organized effort to control disease through immunization.

Over 200 years later, the practice of immunization in Canada effectively prevents disease, eases the pressures on our health care system, saves money in medical care costs, reduces hospital admissions, and improves the health of Canadians. Since Jenner's time, vaccines have been developed against more than 20 infectious diseases including influenza, pneumonia, whooping cough, rubella, rabies, meningitis, and hepatitis B. Immunization has been so successful that diseases such as diphtheria are rarely seen in Canada today.

The number of people being immunized in Canada is high, but concerns

about the safety of vaccines could lead to a fall in vaccine coverage rates. A drop in vaccine coverage rates would result in a rise in preventable infectious diseases such as hepatitis B, diphtheria, tetanus, meningitis, measles, mumps, rubella, pertussis, and polio. Though no vaccine is 100% safe or effective, serious adverse reactions are rare, and the risks of vaccine-preventable diseases are many times greater than the risks of vaccine-related serious adverse reactions. Serious adverse events following immunization is very low, with about 1 or 2 for every 100,000 vaccines given.

Canada's immunization program ensures public safety through several interventions:

- ▶ The quality, safety, and efficacy of a vaccine undergo a rigorous scientific review and testing process before they are approved for use.
- ▶ Manufacturers of vaccines are required to provide very detailed information—more detailed chemistry and manufacturing information than other drugs.
- ▶ The quality, safety, and efficacy are continually monitored after the approval for use by a lot release program, which ensures that new lots of vaccines retain the same characteristics as those lots that were first approved.
- ▶ The Public Health Agency of Canada maintains an adverse reaction reporting system that health care professionals can use to report side effects they believe may be caused by immunization. IMPact (immunization program active) is an active paediatric surveillance system for admitted patients. It has been around since 1991 and covers 90% of Canada's tertiary care paediatric beds. Careful analysis and scientific study of any alleged associations between vaccines and serious adverse events are done.
- ▶ Scientific studies are examined through independent expert review.

These steps ensure that immunization in Canada is highly effective and safe. By following the immunization recommendations, Canadians and people around the world can continue to live free of vaccine-preventable diseases. And as vaccines continue to evolve and develop, more diseases and deaths can be prevented.



SPRING NEWSLETTER

VACCINE TRUTHS

- ▶ Vaccines containing thimerosal are considered safe to use, even by pregnant women.
- ▶ Most vaccine-preventable diseases are still common in other parts of the world, especially in developing countries (e.g., diphtheria, tetanus, pertussis, measles, polio). That's why even though Canada does not have high rates of these diseases, there is still the possibility that small outbreaks can lead to large epidemics if people are not immunized.
- ▶ Receiving several immunizations will not cause your immune system to overload. Considering your body comes into contact with millions of germs every day, your immune system can easily handle the antigens in vaccines.

IMMUNIZATION BY THE NUMBERS

- ▶ In Canada, the last major outbreak of measles affected about 200 people, most of whom were not immunized against the disease.
- ▶ Between 1999 and 2003, the world saw a 40% decrease in death due to measles because of immunization.
- ▶ 39% of Canadians 65 years and older have received the polysaccharide pneumococcal vaccine.

THIMEROSAL SAFETY IN THE NEWS

The ongoing concern about the safety of thimerosal made news headlines again earlier this year when a United States court ruled that the measles vaccine given to children did not cause their autism.

The court said the evidence backed many years of research and science that found no risk between vaccines and autism, contrary to the parents' claims. More than 5,500 claims have been filed by families in the United States, seeking compensation through the government's Vaccine Injury Compensation Program.

Thimerosal is a mercury-based preservative used in some vaccines. Brain and kidney damage can occur if there are large concentrations of mercury in the blood or if exposed to it over long periods of time.

Methylmercury, which is the organic form of mercury, is the primary culprit of neurological damage. One thing to keep in mind here is that thimerosal contains ethylmercury, not methylmercury. The controversy surrounding thimerosal in vaccines was originally based on the assumption that the human body processes methylmercury and ethylmercury in similar ways, which studies have now shown to be incorrect. In fact, ethylmercury is less likely to reach toxic concentrations in the body compared to methylmercury because it is eliminated from the body much more quickly.

Parents are concerned that thimerosal directly causes autism in children. However, medical researchers and scientists worldwide have not found any evidence of a link between the two. The finding that there is no association between thimerosal and autism is endorsed by Canada's National Advisory Committee on Immunization after thorough scientific review.

Research and new studies that reject the link continue to surface. A recently published study conducted in Italy added to the evidence that thimerosal does not cause autism. Over 15,000 healthy children were randomized to be given vaccines for whooping cough containing two different amounts of thimerosal from 1992 to 1993. Ten years later, 1,403 children were analyzed by taking a series of neuropsychological assessments. Of the 24 neuropsychological outcomes evaluated, only 2 were significantly associated with thimerosal exposure and these "might be attributable to chance," according to the study authors. One case of autism was found, and it was in the group who received the vaccine with less thimerosal.

The levels of thimerosal in vaccine are very low and have not been shown to cause any harm. Though there is no safety reason to avoid vaccines containing thimerosal, vaccination coverage rates may be reduced because of lingering concern from the public. For this reason, thimerosal is not used in most vaccines routinely given in Canada.