

Meningococcal Conjugate C Vaccine

COMMUNICABLE DISEASE CONTROL

What are vaccines?

Vaccines are also called needles, baby shots or immunizations. Vaccines help your immune system learn how to recognize the germs that cause diseases and fight them. Vaccines not only protect the people who are immunized but may also protect those who cannot be immunized for medical reasons. This is because someone who is immunized is less likely to spread infection to others. For some vaccines, booster (extra) needles are needed to continue protection against certain diseases.

Before vaccines were available, little could be done to prevent serious diseases such as tetanus, diphtheria, pertussis (whooping cough), polio, measles and rubella (german measles). Now, very few Canadians get sick or die from these diseases because people are protected by immunization. However, in countries where vaccines are not routinely used, experience shows that these diseases could again become a concern in Canada if we do not continue to immunize against them.

What is meningococcal C disease?

Meningococcal C disease is caused by bacteria (germs). Most people who come in contact with the bacteria do not have symptoms and do not become sick. But these people can pass on the infection to others without knowing it.

Meningococcal C disease is spread by fluids in the nose, mouth and throat. These fluids are transmitted to others through close, direct contact such as sneezing, coughing, kissing; or sharing food, drinks or cigarettes. When the body's natural defences do not work to fight the bacteria, meningococcal infection can cause the following:

- meningococcal meningitis, which affects the lining around the spinal cord and brain. Symptoms include fever, headache, stiff neck, nausea, vomiting and irritability.

- meningococcal blood infections, which cause high fever, headache, nausea, vomiting, weakness, drowsiness and tiny, reddish-purple spots or a bruise-like skin rash.

Many people who get meningococcal disease die, even with prompt medical treatment. Those who survive may suffer from complications such as permanent brain damage, hearing loss, or loss of limbs or other body parts.

Is this disease in Canada today?

Yes, there are about 84 cases of meningococcal C disease every year. According to some public health experts, this type of infection is the most common cause of meningitis in Canada. In Manitoba, there are approximately one to three cases a year, with most cases occurring among teens and persons with certain medical conditions. The last outbreak of meningococcal C infection in Manitoba occurred in 2001.

How effective is the vaccine?

The vaccine is 90 to 95 per cent effective in preventing meningococcal C disease in children and young adults. The vaccine does not work against other types of meningitis caused by bacteria (A, B, Y, W-135) or by viruses.

If an individual who has received the meningococcal C vaccine gets infected, the disease may be milder. This means the individual may not get as sick as he or she would have without the immunization.

What is the vaccine made of?

The vaccine is made from inactivated (killed) germs and contains small amounts of other ingredients to make the vaccine safe and effective in preventing disease. These ingredients can include antibiotics, preservatives and adjuvants (ingredient included in the vaccine for better and longer protection). Vaccine content varies by manufacturer. Please check with

your doctor or your public health nurse if you are not sure your child should be getting the vaccine.

Who should receive the meningococcal C vaccine?

The National Advisory Committee on Immunization (NACI) recommends that the vaccine be given to infants and young children; adolescents and young adults; contacts of persons with meningococcal C disease; certain laboratory workers; and persons with certain high-risk medical conditions.

Who is eligible for the meningococcal C vaccine at no charge in Manitoba?

- Starting Jan. 1, 2009:
 - Children who are 12 months of age (born on or after January 1, 2008) are eligible to receive the meningococcal C vaccine at the same time as the other recommended immunizations: MMR and varicella vaccines.
- Anyone who is two months of age or older with the following high-risk medical conditions:
 - no spleen;
 - a spleen that may not be working properly due to illness such as sickle cell disease, lupus, celiac disease, inflammatory bowel disease or low platelet counts of unknown cause;
 - complement, properdin or factor D deficiency, bone marrow (stem cell) or solid organ transplant.
- Grade 4 students can get the vaccine when they receive other school-based immunizations. (This program started in October 2004 for children born on or after Jan. 1, 1995.)

How many doses are required?

The number of doses depends on the age when immunization is started and the type (brand name) of vaccine used.

Are booster doses (extra needles) required?

It is not known at this time. The vaccine is expected to provide long-term protection.

How is the vaccine given?

The vaccine is given to infants in the muscle of the thigh; for older children and adults, it is given in the muscle of the upper arm.

Can the meningococcal conjugate C vaccine be given at the same time as other vaccines?

Yes. It is safe to give more than one vaccine at a visit.

Who should NOT receive the meningococcal C vaccine?

Anyone who:

- has a severe allergy to any of the vaccine ingredients or packaging or had a severe allergic reaction to a previous meningococcal, diphtheria or tetanus shot;
- is pregnant.

Note: Immunization recommended during pregnancy is based on the risks of disease and the benefits of the vaccine. Consult your doctor or public health nurse for more information.

A doctor or public health nurse may decide to delay vaccination of someone with a high fever or infection worse than a cold (the vaccine can be given later).

Are there any side effects?

The meningococcal C vaccine is safe. It contains no living bacteria so a person cannot get the disease from the vaccine. As with any medicine, side effects sometimes occur.

Common side effects can occur within the first few days of the immunization and usually go away on their own. These include:

- redness, swelling and tenderness where the needle was given
- headache, chills, fever of 38°C or higher
- drowsiness, fussiness, feeling generally unwell and sore
- diarrhea and vomiting (in young children)

Acetaminophen (i.e. Tylenol® or Tempra®) or ibuprofen (i.e. Advil® or Motrin®) can be given for fever. Never give acetylsalicylic acid (ASA or aspirin) to children. A cold damp cloth may help ease minor pain where the needle was given.

Rarely, severe allergic (anaphylactic) reactions can occur, including:

- hives
- wheezing
- shortness of breath

- swelling of the face, mouth or throat
- low blood pressure, loss of consciousness

If you have questions about rare side effects, consult your doctor or public health nurse for more information.

Report any serious or unusual side effects to your doctor or public health nurse. Vaccine reactions are recorded and monitored in Manitoba and across Canada.

How is it different from other meningococcal vaccines?

Other meningococcal vaccines provide protection against other kinds of meningococcal disease. The meningococcal conjugate C vaccine differs from other meningococcal vaccines in the following ways:

- it is effective in children under two years of age; and
- it only protects against group C disease.

Persons who receive the meningococcal conjugate C vaccine due to a high-risk medical condition should also be immunized with the recommended meningococcal A, C, Y, W-135 vaccine at two years of age or older to protect against other kinds of meningococcal disease. A doctor or public health nurse can provide additional information about the immunization schedule for the high-risk group.

Your record of protection

Make sure your doctor or public health nurse updates your or your child's Immunization Record card after you receive an immunization. Keep the card in a safe place!

In Manitoba, vaccination is voluntary.

Recommended Resources:

Available at local bookstores:

- *Your Child's Best Shot: A Parents' Guide to Vaccination* (2006). Canadian Paediatric Society. 3rd Edition.
- *Vaccines: What You Should Know*, 3rd Edition (2003). Dr. Paul Offitt & Dr. Louis M. Bell

Available on the Internet:

Government of Manitoba – Public Health Division
www.gov.mb.ca/health/publichealth/index.html

Centre for Immunization and Respiratory Infectious Diseases-Public Health Agency of Canada
www.phac-aspc.gc.ca/irid-diir/index-eng.php

Canadian Coalition for Immunization Awareness and Promotion – Canadian Public Health Association www.immunize.cpha.ca/

Caring for Kid-Canadian Paediatric Society
www.caringforkids.cps.ca/immunization/index.htm

Vaccines and Immunizations – Centers for Disease Control and Prevention – USA
www.cdc.gov/vaccines/

Immunization Action Coalition
www.vaccineinformation.org/

Information about the shots that you or your children receive may be recorded in the Manitoba Immunization Monitoring System (MIMS). This computerized database allows your doctor, your child's doctor or your public health nurse to find out what shots you or your child have had or need to have. Information collected in MIMS may be used to produce vaccination records, or notify you or your doctor if someone has missed a particular shot. Manitoba Health may use the information to monitor how well different vaccines work in preventing disease. If you need information on the shots that you or your child has received, contact your local public health unit or nursing station.

For more information

Talk to your doctor or public health nurse; or call Health Links-Info Santé in Winnipeg at 788-8200; toll-free elsewhere in Manitoba 1-888-315-9257.

Local Public Health Unit Stamp