

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.

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.

About 10 per cent of people who get meningococcal disease will 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.

In Canada, on average, there are about 100 cases of meningococcal C disease every year. In Manitoba, there are between five and six cases a year, with the highest rates occurring among teens and persons with certain medical conditions. Outbreaks of the disease occurred in Manitoba in 1993 and 2001.

Group C meningococcal disease accounts for between 20 and 50 per cent of all meningococcal disease cases in Canada.

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 groups of meningococcal disease (A, B, Y, W-135) or other bacterial or viral causes of meningitis.

Are booster doses required?

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

Who should receive meningococcal C vaccine?

The National Advisory Committee on Immunization (NACI) recommends that the vaccine be given to infants; children one to four years of age; adolescents; young adults; contacts of persons with meningococcal C disease; certain laboratory workers; students living in residence or dormitory accommodation; certain travellers; during outbreaks; and to persons with high-risk conditions.

Who is eligible for this vaccine at no charge?

1. Anyone older than two months of age 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.
2. Grade 4 students born on or after Jan. 1, 1995, can get the vaccine when they receive other school-based immunizations. (This program started in October 2004.)

Who should not receive meningococcal C vaccine?

Anyone who:

- had a severe allergic reaction to a previous dose of meningococcal, diphtheria or tetanus vaccines;
- has a severe allergy to substances in the vaccine; or
- is pregnant. (There are times, however, when your doctor or public health nurse may recommend that you be immunized even if you are pregnant, based on the risks of disease and the benefits of the vaccine).

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).

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. Children two to four months of age require two or three doses, two months apart; children from four to 11 months require two doses, two months apart; children 12 months and older and adults require a single dose.

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 deltoid 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 clinic visit.

Are there any side effects?

Meningococcal C vaccine is very safe. It contains no living bacteria so a person cannot get the disease from the vaccine. But as with any medicine, side effects sometimes occur.

The following minor side effects are common and usually last for one to two days:

- redness, swelling and tenderness at the injection site;
- headache, chills, fever higher than 38°C;
- drowsiness, fussiness, diarrhea and vomiting (in young children).

Acetaminophen (Tylenol® or Tempra®) 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; and/or
- low blood pressure, loss of consciousness.

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 polysaccharide meningococcal vaccines provide protection against other kinds of meningococcal disease (A, C and A, C, Y, W-135). The meningococcal conjugate C vaccine differs from other meningococcal vaccines in the following ways:

- it is effective in children under two years of age;
- it is more effective in helping the immune system recognize and fight meningococcal C disease;

- the protection lasts longer; 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 meningococcal polysaccharide A, C, Y, W-135 vaccine at two years of age or older to protect against other kinds of meningococcal disease.

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.

Manitoba's Routine Immunization Schedule for Infants and Children

Age	DaPTP*	Hib	MMR**	HBV	Tdap	PCV7	PPV23	MC	MP	V	Flu****
2 months	X	X				X					
4 months	X	X				X					
6 months	X	X				X					X***
12 months			X							X or	
18 months	X	X				X					
4 to 6 years	X		X							X or	
10 years				XXX				X		X	
14 to 16 years					X						
High-risk individuals only						X***	X***	X***	X***	X***	X*** yearly

DaPTP* Diphtheria, acellular Pertussis, Tetanus, Polio (given as "one needle" with Hib)

Hib Haemophilus Influenzae B

MMR** Measles, Mumps, Rubella (given as "one needle" on or after the first birthday)

HBV Hepatitis B (3-dose series)

Tdap Tetanus, diphtheria, acellular pertussis (given as "one needle")

PCV7 Pneumococcal conjugate 7 valent

PPV23 Pneumococcal polysaccharide 23 valent

MC Meningococcal conjugate

MP Meningococcal polysaccharide A,C,Y,W-135

V Varicella

Flu Influenza

*** More than one dose may be required depending on age.

**** Given to healthy children (six to 23 months of age) (Program started in fall 2004).

High-risk individuals are those who are at risk of infection or complications. For more information, speak with your doctor or public health nurse.

Recommended Resources:

Available at local bookstores:

- *Your Child's Best Shot: A Parents' Guide to Vaccination* (2002). Canadian Paediatric Society
- *What Every Parent Should Know About Vaccines* (2002). Dr. Paul Offitt & Dr. Louis M. Bell

Available on the Internet:

- Government of Manitoba – Public Health Branch
www.gov.mb.ca/health/publichealth/cdc/index.html
- Division of Immunization and Respiratory Diseases – Public Health Agency of Canada
www.phac-aspc.gc.ca/dird-dimr/index.html
- Canadian Coalition for Immunization Awareness and Promotion – Canadian Public Health Association
www.immunize.cpha.ca/
- Canadian Paediatric Society
www.caringforkids.cps.ca/immunization/index.htm
- National Immunization Program – Centres for Disease Control and Prevention – USA
www.cdc.gov/nip/
- Immunization Action Coalition
www.immunize.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