

Measles, Mumps and Rubella (MMR) Vaccine

Public Health - Factsheet

Immunization has saved more lives in Canada in the last 50 years than any other medical intervention¹. Vaccines help your immune system to recognize and fight bacteria and viruses that cause disease.

Measles, mumps and rubella viruses can all be spread easily through the air, or through contact with fluids in the nose or throat. The viruses can pass from person to person by coughing, sneezing, or sharing food or drinks. Children may become infected by sharing infected soothers, bottles or toys from other children.

What is measles?

Symptoms of measles generally appear 7-18 days after infection. Initial symptoms are fever, runny nose, drowsiness, irritability and red eyes. Small white spots may also develop on the inside of the mouth or throat. Three to seven days after the initial symptoms appear, a red blotchy rash appears on the face and progresses down the body. An infected person is able to spread the virus from five days before the rash appears to four days after. Measles infection can lead to complications such as ear infections, diarrhea, pneumonia and swelling of the brain. Although rare, serious complications due to measles virus can cause death in children and adults. There is no specific treatment for measles. Treatment focuses on relieving the symptoms.

What is mumps?

Mumps occurs mostly in children but can happen in adults. Symptoms appear 12 to 25 days after exposure to the virus. The common symptoms are fever, headache, swollen and painful salivary glands and swollen cheeks. Of those infected with the virus, 1 of 5 show no symptoms. Infection can lead to serious illness and complications including swelling of the brain, infection of the lining of the brain, hearing loss, and increased risk of miscarriage if contracted in the early stages of pregnancy, male sterility and death. There is no treatment for mumps. Treatment focuses on relieving the symptoms.

What is Rubella?

Rubella is also called German measles. The symptoms are low-grade fever, sore throat, headache, swollen glands and a red or pink rash. Infection during early

stages of pregnancy can cause miscarriage, stillbirth and severe birth defects such as deafness, blindness, heart defects or liver, spleen and brain damage. Symptoms appear 14 to 21 days after infection with the virus. A person remains infectious for at least seven days after the rash appears. There is no specific treatment for rubella. Treatment focuses on relieving the symptoms.

What is MMR vaccine?

MMR vaccines are approved by Health Canada and provide protection against measles, mumps and rubella diseases. This vaccine gets administered by a needle. In order to be fully protected against these diseases, multiple doses may be required over a period of time.

Why should I get MMR vaccine?

Immunization is the best way to protect you and your child(ren) against measles, mumps and rubella that can often be serious and sometimes fatal. Vaccines help prepare the person getting the vaccine's body to fight potential future exposure to the mumps, measles and rubella viruses by getting their immune system ready. The vaccine helps to protect you, your family, and other people in your community. As protection from the vaccine can lessen over time it is important to follow Manitoba's Immunization Schedule.

Possible side-effects of MMR vaccine

It is much safer to get the vaccine than to get measles, mumps, or rubella. Health Canada approves vaccines based on a review of quality and safety. Common reactions to the vaccine include pain, soreness, redness or swelling where the vaccine was given. Other side-effects are fever, headache, and tiredness. Acetaminophen (Tylenol®) can be given for fever or soreness.

Adverse events following immunization with MMR vaccine occur less frequently and are less severe than

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those associated with natural disease. Adverse reactions are less frequent after the second dose of vaccine and tend to occur only in individuals not protected by the first dose.

More serious reactions may include encephalitis, an inflammation of the brain (about 1 child in 1 million). The possibility of getting encephalitis from measles disease (about 1 in 1,000) is much higher than from the vaccine.

ASA (Aspirin®) should NEVER be given to children because it can cause a severe liver and brain disease called Reye's Syndrome.

It is important to stay in the clinic for 15 minutes after getting any vaccine because there is a rare possibility of a severe allergic reaction. This can include hives, difficulty in breathing or swelling of the throat, tongue or lips. **Call 911 or go to the nearest emergency department for immediate attention should any reaction occur after leaving the clinic.**

Report any serious or unexpected side-effects to a health care provider.

Who should get the MMR vaccine?

The MMR vaccine is provided free of charge as part of Manitoba's Immunization Program when Manitoba's Eligibility criteria is met.

Children in Manitoba get immunized against measles, mumps and rubella as part of Manitoba's infant routine immunization schedule at 12 months of age and a booster at 4-6 years of age using a vaccine that combines MMR and varicella (see the MMRV factsheet).

Members of the following groups of people should talk to their health care provider about obtaining the MMR vaccine as part of Manitoba's Immunization Program:

- Non-immune health care workers, regardless of age should receive 2 doses
- Non-immune students born before 1970 receive 1 dose; and those born in 1970 or later receive 2 doses.
- Those born in 1970-1984 who have not received a vaccine containing measles or mumps or have not had natural measles or mumps infection are eligible for 1 dose.

- Those born during or after 1985 receive 2 doses

For those not immunized as part of Manitoba's routine infant immunization schedule who require MMR vaccine, please refer to the Not Previously Immunized Schedules (<http://www.gov.mb.ca/health/publichealth/cdc/div/not.html>) to identify the number of doses required to be fully protected against measles, mumps and rubella.

The immune response may be affected if a live vaccine is given at the same time or shortly before or after receiving blood products or immunoglobulins. Let your immunization provider know if you have received blood products or immunoglobulins in the last 12 months.

Who should NOT get MMR vaccine?

If the person receiving the vaccine has any of the following, they should talk to their health care provider:

- Has had a severe allergic reaction after receiving a previous dose of this vaccine or any contents of the vaccine.
- Is pregnant
- Has a congenital or acquired immunodeficiency disorder (such as HIV, stem cell transplant)
- Is being treated with drugs that affect the immune system, such as steroids
- Has any kind of cancer or are being treated for cancer with radiation or drugs

Anyone with a high fever should not be immunized. The vaccine can still be given if the illness is mild, like a cold.

Your record of protection

Make sure your immunization provider updates your immunization record card or that of your child(ren), after you receive an immunization. Keep the card in a safe place! Your child(ren)'s immunizations will be recorded in Manitoba's immunization registry. This registry:

- allows the health care provider to find out which immunizations you or your child(ren) have had or need to have;
- may be used to produce immunization records, or notify you or your health care provider if a particular immunization has been missed;

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- allows Manitoba Health, Seniors and Active Living and public health officials to monitor how well vaccines work in preventing disease.

If you need information on the immunizations that you or your child(ren) have received, contact your immunization provider.

The Personal Health Information Act protects your information and/or that of your child(ren). You can have your personal health information and/or that of your child(ren) hidden from view from health care providers. For additional information, please contact your local public health office to speak with a public health nurse.

For a listing of public health offices, please visit:
www.gov.mb.ca/health/publichealth/offices.html.

For more information on the MMR vaccine:

- Talk to your immunization provider
- Call: Health Links – Info Santé in Winnipeg at 204-788-8200; toll-free elsewhere in Manitoba 1-888-315-9257
- **OR Visit: Manitoba's Immunization Program:**
www.gov.mb.ca/health/publichealth/cdc/div/index.html
- **Government of Canada website:**
<http://healthycanadians.gc.ca/healthy-living-vie-saine/immunization-immunisation/index-eng.php>

Please visit the Vaccine Factsheets and Resources webpage for the most current factsheet:

<http://www.gov.mb.ca/health/publichealth/cdc/div/vaccines.html>

¹ Public Health Agency. Canadian Immunization Guide
<http://www.phac-aspc.gc.ca/publicat/cig-gci/p01-02-eng.php>