

Measles, Mumps and Rubella (MMR) Vaccine

Public Health - Fact Sheet

Immunization is one of the most important accomplishments in public health. Immunizations help in eliminating and controlling the spread of infections and diseases. 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 disease?

Symptoms develop 7-21 days after being exposed to the virus. 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. A red blotchy rash appears on the face and progresses down the body approximately 14 days after being exposed. An infected person is contagious and able to spread the virus to others from four days before the rash appears, until 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 treatment for measles. Treatment focuses on relieving the symptoms.

What is Mumps disease?

Symptoms of mumps appear 12 to 25 days after exposure to the virus. An infected person is able to spread the virus from seven days before symptoms appear until five days after. The common symptoms are fever, headache, swollen and painful salivary glands and swollen cheeks. Of those infected with the virus, one out of five 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, male sterility and death. Mumps can cause miscarriage if the pregnant person is infected early in pregnancy. There is no treatment for mumps. Treatment focuses on relieving the symptoms.

What is Rubella disease?

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 23 days after infection with the virus. An infected person can spread the virus for at least seven days before and seven days after the rash appears. There is no specific treatment for rubella. Treatment focuses on relieving the symptoms.

What is the MMR vaccine?

MMR vaccines are approved by Health Canada and protect against measles, mumps and rubella. The MMR vaccine contains weakened, live viruses. A person cannot get measles, mumps, or rubella from the vaccine. This vaccine is given by a needle. Multiple doses may be needed over time to be fully protected against these diseases.

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.

In Manitoba, children routinely receive a vaccine that combines MMR and varicella at 12 months and again at four to six years of age. (See the MMRV factsheet (www.manitoba.ca/health/publichealth/factsheets/mmr.pdf).

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 two doses.
- Non-immune students born before 1970 receive one dose; and those born in 1970 or later receive two doses.
- People born between 1970 and 1984 who have not received a vaccine containing measles or mumps, or have not had natural measles or mumps infection are eligible for one dose.
- People born during or after 1985 receive two doses.

Please visit Manitoba's Eligibility Criteria for Publicly-Funded Vaccines (www.manitoba.mb.ca/health/publichealth/cdc/vaccineeligibility.html) for more information on who is eligible for vaccines.

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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 (www.manitoba.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 before being immunized with the MMR vaccine if you have received blood products or immunoglobulins in the last 12 months.

Why should I get the 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 a person's body to fight potential future exposure to the mumps, measles or rubella viruses by getting their immune system ready. The vaccine helps to protect you, your family, and other people in your community. To ensure protection from these diseases, it is important to follow Manitoba's Immunization Schedule (www.manitoba.ca/health/publichealth/cdc/div/schedules.html).

Who should NOT get the MMR vaccine?

If the person receiving the vaccine has any of the following, they should talk to his/her 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 is being treated for cancer with radiation or drugs

Anyone with high fever should postpone immunization until recovered. The vaccine can still be given if the illness is mild, like a cold.

What are the possible side-effects of the MMR vaccine?

Health Canada approves vaccines based on a review of quality and safety. It is much safer to get the vaccine than to get measles, mumps or rubella disease. Common reactions to the vaccine include soreness, redness or

swelling where the vaccine was given. Some children may have fever, drowsiness, fussiness or loss of appetite. These are mild reactions and usually only last one to two days. Other less common reactions include swelling of the cheeks and neck, rash, and pain in the joints. Acetaminophen (ex: Tylenol®) can be given for fever or soreness.

Acetylsalicylic acid-ASA (ex: Aspirin) * should NEVER be given to children because it can cause a severe liver and brain disease called Reye's Syndrome.

More serious but rare reactions may include:

- A temporary drop in the blood cells (immune thrombocytopenic purpura) that help prevent bleeding (about 1 child in 30,000 doses). Post-immunization ITP requires medical care, but in most children, it resolves in 6 months.
- Inflammation of the brain (encephalitis) can occur post-immunization in 1 child per 1 million doses. But encephalitis occurs even more commonly after getting measles (1 case of encephalitis in 1,000 measles cases).
- Severe allergic reaction. Symptoms could include hives, difficulty breathing, or swelling of the throat and face. It is important to stay in the clinic for 15 minutes after getting any vaccine so you or your child(ren) can be monitored. If symptoms occur after leaving the clinic, call 911 or go to the nearest emergency department for immediate attention.

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

Your record of protection

All immunizations are recorded in a person's immunization record in Manitoba's Immunization Registry.

This registry enables:

- your health care provider to find out which immunizations you or your child(ren) have received
- the production of immunization records or notification to you about overdue vaccines
- public health officials to monitor how well vaccines work in preventing disease

For information on how to obtain a copy of your immunization record, visit: www.gov.mb.ca/health/publichealth/cdc/div/records.html

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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 more information, please refer to: www.gov.mb.ca/health/publichealth/surveillance/phims.html

For the most current version of this or other vaccine factsheets and resources visit: www.gov.mb.ca/health/publichealth/cdc/div/vaccines.html

For more information on measles, mumps and rubella diseases and the MMR vaccines, you can:

- talk to your health care provider
- call Health Links–Info Santé in Winnipeg at 204-788-8200; toll free elsewhere in Manitoba 1-888-315-9257
- visit Manitoba's Immunization Program website at: www.gov.mb.ca/health/publichealth/cdc/div/index.html