

Measles, Mumps and Rubella and Varicella (MMRV) 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, rubella and varicella 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. The varicella virus can also be spread through contact with the fluid from chickenpox blisters.

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. 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 contagious and able to spread the virus to others from four 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 disease?

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 shows no symptoms. Infection can lead to serious illness and complications including swelling of the brain, infection of the lining of the brain, deafness, male sterility and death. Mumps can cause miscarriage if the pregnant person is infected early in pregnancy. There is no treatment for mumps. Any treatment only 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. Any treatment only focuses on relieving the symptoms.

What is Varicella disease?

Varicella (chickenpox) causes an itchy rash with fluid filled blisters. Other symptoms include mild fever, headache, joint and muscle aches. Most people who get varicella recover completely. But, in more severe cases, chickenpox can lead to serious infections of the skin, joints, lungs (pneumonia), blood, bones or even heart. In rare cases, it may also cause swelling of the brain (encephalitis). Newborn babies, adults and those with weakened immune systems are especially at risk. Symptoms appear 10 to 21 days after exposure. You are infectious 1 to 2 days before rash appears and lasts until rash has crusted.

What is the MMRV Vaccine?

MMRV vaccines are approved by Health Canada for use in children from 12 months to 12 years of age and provide protection against measles, mumps, rubella and varicella. 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 MMRV vaccine?

The MMRV vaccine is offered free of charge as part of Manitoba's Immunization Program when Manitoba's eligibility criteria are met.

In Manitoba, children routinely receives vaccines that protect against measles, mumps, rubella and varicella at 12 months and again at four to six years of age. Both doses can be given using the MMRV vaccine or as separate MMR and varicella vaccines.

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For those not immunized as part of Manitoba's infant routine immunization schedule who require MMR or varicella 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, rubella and varicella.

Why should I get MMRV vaccine?

Immunization is the best way to protect the person receiving the vaccine against measles, mumps, rubella and varicella that can often be serious and sometimes fatal. Vaccines help prepare the body to fight potential future exposure to the mumps, measles, rubella or varicella viruses by getting your 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.

Who should NOT get the MMRV vaccine?

Talk to your health care provider if the person receiving the vaccine has any of the following:

- Have had a severe allergic reaction after receiving a previous dose of this vaccine or any contents of the vaccine
- 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
- Have any kind of cancer or are being treated for cancer with radiation or drugs
- Has had another live vaccine in the last month

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 MMRV 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, rubella or varicella 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. Other less common reactions include swelling of the cheeks and neck, rash, and pain in the joints. These are mild reactions and usually only last one to two days.

Acetaminophen (ex: Tylenol®) can be given for fever or soreness.

Fever over 38° C can sometimes cause convulsions in children (febrile seizures). There is a small increased risk of febrile seizures after a child 12 to 23 months of age receive the first dose of MMRV vaccine. The risk is estimated at about 1 additional febrile seizure for every 2300-2800 doses of MMRV vaccine administered. Febrile seizures do not cause permanent harm and most children recover quickly.

ASA (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

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

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 rubella and varicella diseases and the MMRV 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