

Measles, Mumps, Rubella and Varicella (MMRV) Vaccine

Public Health - Factsheet

Immunization has saved more lives in Canada in the last 50 years than any other medical intervention¹. Vaccines help your immunization 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?

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

What is Varicella?

Also called chickenpox, varicella 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 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 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.

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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 and 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.

Possible side-effects of MMRV vaccine

It is much safer to get the vaccine than to get measles, mumps, rubella or varicella. 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. Acetaminophen (Tylenol®) can be given for fever or soreness.

Other side effects include a mild fever, rash and swelling in the cheeks or neck may occur about 1 to 2 weeks after getting the vaccine. The rash can appear blotchy-red and/or there can be spots that look like blisters. The spread of chickenpox through the fluid in these blisters is possible, but rare. It will disappear without treatment.

Fever over 38°C is common in young children. There is a small increased risk of febrile seizures after the first dose of MMRV vaccine given to children 12 to 23 months of age. A febrile seizure is a seizure caused by a high body temperature, but is not associated with any long term health issues. The risk is estimated at about 1 additional febrile seizure for every 2300-2800 doses of MMRV vaccine administered.

More serious reactions may include a temporary drop in the blood cells that help prevent bleeding (about 1 child in 30,000) and encephalitis, an inflammation of the brain (about 1 child in 1 million). The possibility of getting encephalitis from measles disease is much higher than from the vaccine (about 1 in 1,000). The risks of these serious reactions following MMRV vaccine have not been established but are expected to be similar to the risks reported for MMR vaccines.

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 MMRV vaccine?

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

Children in Manitoba get immunized against measles, mumps, rubella and varicella as part of Manitoba's infant routine immunization schedule at 12 months of age and a booster at 4-6 years of age. Both doses can be given using the combination MMRV vaccine or as individual MMR and varicella vaccines

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.

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

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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;
- 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 health care 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:
<http://www.gov.mb.ca/health/publichealth/offices.html>.

For more information on the MMRV vaccine:

- 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.
- OR Visit: **Manitoba's Immunization Program:**
<http://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>

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