

# Measles, Mumps and Rubella and Varicella (MMRV)



Region of Waterloo  
PUBLIC HEALTH AND  
PARAMEDIC SERVICES

## What is Measles?

Measles is a viral infection that lasts for one to two weeks and causes high fever, cough, rash, runny nose and watery eyes. Complications include:

- Ear infections or pneumonia (approximately one in ten may get either)
- Encephalitis — an infection of the brain that may cause brain damage (in one of 1,000 people)
- Death (in one of about 3,000 cases)
- Miscarriage or premature birth

Measles spreads very easily from person to person through coughing, sneezing and even talking. Before measles vaccine was used widely, almost all children got measles. Now, because of the routine use of vaccine, very few children get measles in Canada.

## What is Mumps?

Mumps is a viral infection that can cause fever, headaches and swelling of the salivary glands in the cheeks and jaw. Complications include:

- Meningitis—swelling of the lining covering the brain and spinal cord
- Deafness
- Painful, swollen testicles in about 1 in 4 teenage males (may rarely cause sterility)
- Infection of the ovaries (in 1 out of 20 women)
- Miscarriage if infection occurs during the first three months of pregnancy

Mumps is spread through coughing, sneezing or simply talking with an infected person. It can also be spread through contact with the saliva of an infected person.

## What is Rubella (German Measles)?

Rubella is a viral infection that can be very dangerous in pregnant women. If infection occurs in the early part of a pregnancy, it is very likely that the baby will die or be severely disabled. The most common complications are blindness, deafness, intellectual disability and heart defects.

Rubella is usually a mild illness in children; half of the infections with rubella occur without a rash. The disease can be more severe in older children and adults, especially women.

Rubella may cause fever, sore throat, swollen glands in the neck and a rash on the face and neck. Temporary aches, pains and swelling of the joints are common in adolescents and adults, especially females. Rubella can be followed by chronic arthritis. Rubella can also cause temporary blood clotting problems and encephalitis (swelling of the brain).

Rubella spreads by contact with an infected person through coughing, sneezing or talking to them. It can also be spread through contact with the saliva of an infected person.

## What is Varicella?

Varicella, or chickenpox, is a very infectious disease caused by the varicella-zoster virus. It is passed from person to person through coughing, sneezing, and even talking. You can also get chickenpox if you touch a blister or the liquid from a blister then touch your mouth, nose or eyes.

Children with the infection will feel sick with fatigue, mild headache, and fever up to 39°C, chills and muscle or joint aches a day or two before the red rash begins. The raised itchy red blisters can be anywhere on the body and dry up and form scabs in 4–5 days. Chickenpox can also cause complications such as bacterial skin infections, pneumonia and encephalitis (swelling of the brain).

## Who should get the vaccine?

In Ontario, children are eligible to receive the publicly funded MMRV vaccine from 4–11 years of age to protect against measles, mumps, rubella and chickenpox.

Most children will receive their first dose of MMR after their first birthday and varicella at 15 months for age.

### MMRV vaccine

The MMRV is a live vaccine that will be offered to children between 4-6 years of age as part of their routine immunization schedule. It is recommended that this vaccine be given before entering school, or as soon as the child turns 4 (if they are already in school).

Almost all children who receive two doses of vaccine against these four diseases are protected against all of them.

Protection from measles, mumps and rubella after getting the vaccine is probably lifelong. However, sometimes children may acquire the infection after vaccination, but the disease will be milder. The length of chickenpox protection after the MMRV is not known, but children who receive the vaccine and got chickenpox, had more mild cases of the disease.

### Who should NOT get the vaccine?

- Anyone who is ill with a fever or infection worse than a cold
- Anyone who has had a severe allergic reaction to any measles, mumps, rubella or varicella vaccine
- Anyone taking medication that lowers the body's ability to fight infections
- Anyone who is allergic to an antibiotic called neomycin;
- Anyone who received a gamma globulin shot within the past 3–12 months, (depending on the dose and method of administration)

Alternate formats of this document are available upon request.

**Region of Waterloo Public Health and  
Paramedic Services**  
*Infectious Diseases*

## Side effects

MMRV vaccine may cause redness, swelling and tenderness in the area where the needle was given. Fever and/or a rash can occur 4–12 days after getting the vaccine. The rash can be a blotchy red rash (measles like) and/or spots that look like blisters (chickenpox).

There have been studies conducted in the United States that showed a possible increased risk of febrile seizures in children who received MMRV vaccine as a first dose when younger than two years of age. This vaccine is not approved for use in Canada. The MMRV vaccine approved for use in Canada has not shown to have a higher rate of febrile seizures than if MMR and varicella vaccines are given separately.

The risk of febrile seizures lessens with age. Children who are four to six years of age do not experience febrile seizures as often as children less than four years of age.

There is a minimum risk of a pregnant woman or anyone else catching measles, mumps, rubella or varicella from a child who has been vaccinated recently. No additional precautions are recommended for pregnant women who may come in contact with recently vaccinated children. Women should speak to their doctor about risk of infection to measles, mumps, rubella and varicella if they are trying to become pregnant or once they learn of their pregnancy.

### When should I seek medical attention?

Severe reactions are rare. If you develop hives, swelling of the face or mouth, trouble breathing, serious drowsiness or other serious problems seek immediate medical attention.

### Your record of protection

The Immunization of School Pupils Act requires Public Health to maintain vaccination records for all private, public and Catholic school students. If your child gets a mandatory vaccine from their health care provider, you need to notify Public Health. It is recommended to also keep a personal record of your vaccines.

Visit [regionofwaterloo.ca/vaccines](http://regionofwaterloo.ca/vaccines) for details on how to submit your records.

### Questions?

Talk to your health care provider or contact Public Health at 519-575-4400.

[regionofwaterloo.ca/vaccines](http://regionofwaterloo.ca/vaccines)  
519-575-4400 TTY 519-575-4608