

# Measles, Mumps, Rubella and Varicella Vaccine

**Vaccines have saved more lives in Canada in the last 60 years than any other medical intervention. Vaccines help your immune system to recognize and fight bacteria and viruses that cause diseases.**

**Measles (red measles), mumps, rubella (German measles) and varicella (chickenpox) are vaccine preventable diseases.**

**Measles** causes a fever, a rash and cold-like symptoms, and can cause ear infections and pneumonia in one out of 10 cases. Encephalitis (inflammation of the brain) occurs in one in 1,000 measles cases and can lead to seizures, deafness or permanent brain damage. Measles can cause a rare but fatal disease called subacute sclerosing panencephalitis (SSPE). It is estimated that for every 1000 cases of measles, one to two people will die.

**Mumps** causes a fever and swelling of the salivary glands (parotitis). Mumps can cause meningitis and encephalitis which can lead to permanent brain damage. Permanent deafness occurs in less than five in 100,000 cases. About three in 10 males (after puberty) develop swollen testicles. About one in 20 females (after puberty) develop swollen ovaries. Infertility from mumps is very rare.

**Rubella** causes a fever, a rash, swollen lymph glands and joint pain. Serious complications like encephalitis are rare. During pregnancy, rubella can cause miscarriage or stillbirth. It can cause the unborn baby to develop Congenital Rubella Syndrome (CRS) that includes heart disease, cataracts, deafness and intellectual disabilities. CRS occurs in 9 out of 10 babies born to women who have rubella within the first three months of their pregnancy.

**Varicella** begins with a high fever followed by a red, itchy rash starting on the scalp and moving to the trunk. The rash begins as red spots that become fluid-filled blisters. The blisters gradually crust over. The rash lasts 3 to 4 days, but new crops of blisters can develop every 2 to 3 days during the illness. Children may have 350 or more red, itchy blisters. In teenagers, adults and those with weakened immune systems varicella is more severe. Complications include pneumonia (lung infection), bacterial skin, soft tissue and bone infections, necrotizing fasciitis ('flesh-eating disease'), stroke and encephalitis (swelling of the brain causing convulsions, deafness or brain damage). 7 in 100,000 infants can die. The virus can reawaken later in life and cause a painful rash called shingles. Individuals who have never had chickenpox can get infected if they are exposed to someone who has shingles. If a pregnant woman gets varicella, the baby may have a low birth weight, eye problems, skin scarring, arm and leg complications, abnormal brain development, or die if the mother is infected during the baby's birth.

## **How can these diseases be prevented?**

- Be immunized. When you / your child are immunized, you help protect others as well.
- Practice good hygiene (e.g. handwashing).

## **Who can get this vaccine for free?**

- Children one year up to and including 12 years of age.
- If your child had varicella before their first birthday, **they still need this vaccine** as they likely have not developed long lasting immunity and could get chickenpox again.
- Children who have documented lab-confirmed varicella at one year of age or older do not need protection from varicella and only need the measles, mumps and rubella vaccine (MMR) vaccine.

## **Who should not get this vaccine?**

- Persons who have a serious illness, with or without a fever, should delay immunization.
- People who had a life-threatening reaction to a previous dose of a measles, mumps, rubella or varicella-containing vaccine, or any components of the vaccine.
- Children younger than 1 year of age.
- People who have recently taken some antiviral drugs.
- Pregnant women.
- Those with weakened immune systems from a disease or medical therapy without a prior medical consultation.
- People with active untreated tuberculosis.
- People younger than 18 years old who take salicylates (ASA).
- People with a family history of congenital immunodeficiency.
- A deferral of up to 11 months may be required for those who received a blood transfusion or other blood products (e.g., an immune globulin). Patients should discuss their transfusion history with a public health nurse or physician before receiving this vaccine.
- Persons who have previously had a drop in platelets (the blood cells that help prevent bleeding) within 6 weeks of getting a previous dose of a measles, mumps or rubella-containing vaccine without another cause being identified should discuss their health history with a public health nurse or physician before receiving this vaccine.

## **Other Considerations:**

- If you need another live vaccine or a TB skin test, get it at the same time or wait at least 4 weeks before immunizing.

## What are common reactions to this vaccine?

**Vaccines are very safe and effective. It is much safer to get this vaccine than to get any of these contagious diseases.**

- Temporary pain, swelling and redness at the injection site.
- A mild fever, tiredness, and fussiness.
- Decreased appetite and swelling of the jawline (salivary glands) and cheeks 7 to 12 days later are uncommon.

### Other normal temporary reactions:

- A blotchy red measles/rubella-like rash may occur 7 to 10 days after being immunized.
- A varicella-like (blister) rash 3 weeks (rarely up to 6 weeks) after getting immunized. People who have this rash rarely spread the vaccine virus to others. To prevent possible viral spreading, the rash should be covered until the blisters have dried and crusted over. **The risk of spreading the varicella virus is much greater if a person becomes infected with wild-type varicella, and this can cause serious threats to contacts including:**
  - People with weakened immune systems who cannot receive this vaccine.
  - Newborn infants of mothers who do not have a known history of chickenpox or laboratory evidence of prior disease.
  - Pregnant women who have never had chickenpox (some have immunity because they have been exposed to varicella, but did not have any disease symptoms).
- A high fever lasting 1 to 2 days may occur 7 to 10 days after getting this vaccine.
- Less than 1 in 3,000 children with high fevers after getting their first dose of MMRV may have febrile seizures.

**Febrile seizures are temporary and not harmful to the child. If you are concerned, please talk to a public health nurse.**

- Only treat a fever (at least 6 to 8 hours after immunization) if your child is uncomfortable, refusing fluids and not sleeping.

**Extremely rare** reactions may include:

A temporary drop of the blood cells that prevent bleeding (thrombocytopenia). In most children, this resolves within three months without serious complications.

Acetaminophen (Tylenol, Tempra) may be given for fever or soreness. ASA (Aspirin) must NOT be given to anyone younger than 18 years old because of the risk of Reye syndrome.

**For more information, contact your local public health office, your physician, nurse practitioner, HealthLine online or by calling 811.**

- Encephalitis (less than 1 in 1 million). As noted on the first page, **the risk of encephalitis from measles is about 1 in 1,000**, which is much higher than from the vaccine.

It is important to stay in the clinic for 15 minutes after getting any vaccine because there is an extremely rare possibility of a life-threatening allergic reaction called anaphylaxis. This may include hives, difficulty breathing, or swelling of the throat, tongue or lips. **If this happens after you leave the clinic, call 911 or the local emergency number.** This reaction can be treated, and occurs in less than one in one million people who get the vaccine.

### Who should you report reactions to?

- Report any adverse or unexpected reactions to your local public health nurse, your doctor, or nurse practitioner as soon as possible.

### Talk to a public health nurse:

- If you have questions or concerns about you or your child's reaction to an immunization.
- If you or your child had to go to a doctor, a hospital or to a health centre with a symptom that might be related to immunization.

### What does this vaccine contain?

**PRIORIX-TETRA®** is a live vaccine and contains weakened forms of measles, mumps, rubella and chickenpox viruses, amino acids, lactose, mannitol, neomycin sulphate, sorbitol, and water for injection. It is thimerosal-free. The rubber stoppers in the vials are made of natural rubber.

**ProQuad™** is a live vaccine and contains weakened forms of measles, mumps, rubella and chickenpox viruses, sucrose, hydrolyzed gelatin, urea, sodium chloride, sorbitol, monosodium L-glutamate, sodium phosphate, recombinant human albumin, sodium bicarbonate, potassium phosphate, potassium chloride, residual components of MRC-5 cells including DNA and protein, neomycin, bovine serum albumin, minute quantities of egg protein and other buffer and media ingredients. It is thimerosal-free and latex free.

Provincial immunization fact sheets are available at [www.saskatchewan.ca/immunize](http://www.saskatchewan.ca/immunize).

References: Product monographs (PRIORIX-TETRA®, 2019), ProQuad™ (2020).