

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) which includes heart disease, cataracts, deafness and mental retardation. 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 unborn 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 get 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?

A mild illness, with or without a fever, is not a reason to avoid immunization.

- 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 old.
- Those who have an immune system weakened by disease or medical treatment.
- Those with weakened immune systems from a disease or medical therapy unless they have a doctor's permission.
- People with active untreated tuberculosis.
- People who have received a blood transfusion or other blood products within the past 11 months.
- People who have recently taken some antiviral drugs.
- Those who had a drop in platelets (the blood cells that help prevent bleeding) within 6 weeks of getting a previous dose of MMR or MMRV vaccine without another cause being identified.

Other Considerations:

- If you need another live vaccine, get it at the same time or wait at least 4 to 6 weeks.
- If you need TB skin testing, the vaccine should be given on the same day or you should wait for 4 to 6 weeks.

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 and swelling of the jawline (salivary glands) and cheeks 7 to 12 days later.
- Tiredness, fussiness, decreased appetite or an upset stomach.

Other temporary reactions include:

- A measles/rubella-like rash (blotchy red rash) 4-12 days later.
- Varicella-like rash (blister-like) within 3 weeks (rarely up to 6 weeks later) later. Vaccine recipients who develop a rash within 6 weeks rarely spread the chickenpox virus. However, they should avoid close contact with susceptible high-risk people until the rash disappears. These include:
 - People with weakened immune systems.
 - Pregnant women who have never had chickenpox.
 - Newborn infants of mothers who do not have a known history of chickenpox or laboratory evidence of prior disease.
- A high fever lasting 1 to 2 days may occur 7 to 10 days after getting this vaccine.
 - Less than one 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.**
 - High fevers can be controlled by giving acetaminophen to the child when they begin developing a fever after getting this vaccine.

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

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.

References: Product monographs (PRIORIX-TETRA® (2014), ProQuad™ (2017).

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 your or your child's reaction to an immunization.
- If you had to take your child 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 may contain traces of latex.

ProQuad™ is a live vaccine and contains weakened forms of measles, mumps, rubella and chickenpox viruses, sucrose, hydrolyzed gelatin, 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 and other buffer and media ingredients. It is thimerosal-free and latex free.

To ensure that a complete immunization record is maintained, every immunization administered to an individual will be documented by Public Health into the electronic provincial immunization registry, known as Panorama. Panorama is a secure electronic system used in Saskatchewan to record and manage immunization records and the health information related to immunization for all Saskatchewan residents. Immunization records may be shared with other health care professionals to provide public health services; assist with diagnosis and treatment; and to control the spread of vaccine preventable diseases. Information about Panorama is detailed in the "Protecting the Privacy of Your Immunization

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