



Health and Wellness

# Health PEI

## Fact Sheet:

### Measles, Mumps, Rubella (German Measles) and Varicella (Chickenpox) Vaccine (MMRV)

1. **What are Measles, Mumps, Rubella and Varicella and what are the complications of these diseases?** These four diseases are caused by viruses. Measles, mumps and rubella are spread by contact with nose and throat secretions such as by coughing and sneezing. Varicella can be spread this way or by direct contact with fluid from an infected skin lesion.

**Measles** (red measles or rubeola) is a very contagious disease which causes a red blotchy rash beginning on the face and spreading down the body, high fever, cough, runny nose and watery eyes. It can cause swelling of the brain leading to permanent brain damage and seizures, hearing loss, pneumonia, and death. Measles is highly communicable spreading from person to person in households, classrooms, and areas of large gatherings of people. Measles is the leading cause of vaccine preventable death in children.

**Mumps** continues to occur worldwide with epidemics every two to five years. Mumps is an acute infectious illness with about 40% of cases developing parotitis or painful swelling below the cheek in the neck area. Complications can include hearing loss, sterility and viral meningitis (infection of the lining around the spinal cord and brain). Pregnancy associated concerns include spontaneous abortion or congenital malformations in the fetus.

**Rubella** infection is contagious and its symptoms of fever, lymph swelling, aches and joint discomfort may be mistaken for other viral infections. Rubella is of particular concern in pregnancy as it can result in miscarriage, stillbirth and/or malformations in the newborn including heart defects, cataracts, hearing loss, and brain damage. It is important for women to receive the vaccine at least one month before becoming pregnant if they do not have immunity to rubella virus.

**Varicella** is a common and highly infectious disease which causes an irritating blister-like rash. The rash or fluid filled lesions break out in stages on all areas of the body including the scalp and mucous membranes of the mouth and throat. Following initial varicella illness, the varicella virus becomes inactive and establishes itself in the body's nerve endings, allowing it to reactivate later in life as shingles.

The complications of varicella infection include viral infections in the heart, lungs, joints, brain and blood, as well as secondary bacterial infection such as invasive group A streptococcal infection. A serious complication is the development of Reye's Syndrome, a brain disease which can occur when a child who has varicella is given a medication containing **salicylates** (acetylsalicylic acid, ASA). Varicella in pregnancy can result in birth defects in the baby and if a woman develops varicella just before or after delivery, the newborn is at increased risk of developing severe varicella disease.

2. **What are the contents of the MMRV vaccine?**

The vaccine contains live but weakened particles from Measles, Mumps, Rubella, and Varicella viruses from which the body develops protection. Traces of non-medicinal ingredients that keep the vaccine stable, sterile and help it to be more effective are also present. All vaccine contents are licensed for use by the Biologics and Genetics Therapies Directorate within Health Canada. A complete listing of contents is included in the product insert which is available from the nurse.

3. **What are the possible reactions from the vaccine and how should they be managed?**

The most serious but rare side effect is a severe allergic reaction (anaphylaxis) which can be life-threatening and which usually occurs within 15 to 20 minutes of receiving the vaccine. Procedures are in place for the nurse to quickly respond to anaphylaxis by administering adrenaline.

Pain and redness at the injection site and/or low-grade fever and rash may occur. These reactions are generally mild and tend to be delayed. The rash may be red, blotchy or blister-like and may appear up to a few weeks after the immunization is given.

It is not necessary to give acetaminophen after immunization. If discomfort or fever occur acetaminophen can relieve these symptoms. **Salicylates (such as aspirin) should not be given to a person who has received MMRV vaccine for at least 6 weeks after vaccination** due to the increased risk of Reye's Syndrome.

- ◆ **Please remain in the waiting room for 15 minutes after immunization.**
- ◆ **See a doctor or seek medical attention if any serious side effect occurs.**
- ◆ **Report any serious reaction to the public health nurse.**

#### **4. What are the situations in which MMRV vaccine should not be given?**

The vaccine should not be given to anyone who has had an anaphylactic (severe or life threatening) reaction to a previous dose of MMRV vaccine or to any component of the vaccine including neomycin. Those who have a reaction to eggs (including an anaphylactic reaction) can be immunized with MMRV vaccine.

Persons presenting with significant acute fever and illness should return later for the vaccine.

**Precautions:** Assessment of a person's health status is required by the Chief Public Health Office in the following situations:

- Persons with impaired immune function should not normally receive live vaccines without consultation from their attending physician and possibly an immunologist.
- Persons on chronic salicylate therapy may be able to receive this vaccine pending consultation with their attending physician.
- Passive immunization with human immune globulin or receipt of most blood products can interfere with the immune response to live vaccines. The administration of vaccine may have to be delayed for a period of time, usually between three to 11 months.

#### **5. What are the alternatives to not receiving the MMRV vaccine?**

**Measles, Mumps & Rubella:** A person who does not receive the Measles, Mumps, & Rubella vaccine is at increased risk for becoming sick if he/she is exposed to these diseases. At times of disease outbreaks, the non-immunized person should remain at home, avoiding day care or school, until advised to return.

**Chickenpox:** The chance of acquiring chickenpox is very high in the non-immunized person. The disease is more serious for persons with decreased immunity (including cancer, leukemia or lymphoma or an inherited disease of immunity), on high doses of steroids, or in pregnant women without immunity. In these cases, it is recommended that persons avoid exposure in times of known outbreaks. If exposure occurs, persons should see their doctor. A person who is non-immune to chickenpox and is exposed to a person with chickenpox disease may receive the vaccine up to five days after being exposed, and thus decrease the chance of acquiring the disease.

Since the use of these vaccines in routine immunization programs the incidence of these illnesses and their damaging effects has been significantly reduced.

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