

Fact Sheet:

Measles, Mumps and Rubella (German Measles) Vaccine (MMR)

1. What are Measles, Mumps and Rubella and what are the complications of these diseases?

These three diseases are caused by viruses. Measles, mumps and rubella are spread by contact with nose and throat secretions such as by coughing and sneezing.

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 four weeks before becoming pregnant if they do not have immunity to rubella virus.

2. What are the contents of the MMR vaccine?

The vaccine contains live but weakened particles from Measles, Mumps and Rubella 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 public health 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.

The most common reactions are pain, swelling and/or redness at the injection site, fever, irritability and rash. These reactions may occur up to 2 weeks after the immunization is given. The rash may be red and blotchy and it may appear between the fifth and twelfth day after immunization.

It is not necessary to give acetaminophen after immunization. If discomfort or fever do occur acetaminophen can relieve these symptoms.

- ◆ **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 MMR 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 MMR vaccine or to any component of the vaccine including neomycin. Those who have had a reaction to eggs (including an anaphylactic reaction) can be immunized with MMR vaccine.

Pregnant women should not receive this vaccine. Women who are contemplating pregnancy and who receive this vaccine should wait at least four weeks before becoming pregnant.

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

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.

Post partum women who receive Rh Immune Globulin and who are non-immune to measles, mumps and/or rubella should generally wait 3 months before receiving the vaccine, based on risk assessment.

5. What are the alternatives to not receiving the MMR vaccine?

A person who does not receive the Measles, Mumps and Rubella vaccine is at increased risk for becoming sick if he/she is exposed to these diseases. Measles, mumps and rubella illness can be more serious in persons with decreased immunity.

At times of disease outbreaks, the non-immunized person should remain at home, avoiding day care or school, until advised to return.

This vaccine is very effective in preventing measles, mumps and rubella illness and since the use of these vaccines in routine immunization programs, the incidence of these illnesses and their damaging effects has been significantly reduced.