



# Measles/Rubella (MR)

## V A C C I N E I N F O R M A T I O N S H E E T

Most children receive a measles immunization shot at about one year of age. However, to ensure a child is protected, a second shot at the time of entering Kindergarten is necessary.

Outbreaks of measles have occurred in other parts of Canada recently. The reason for this is that children entering school have not had a second immunization shot.

### 1. What is the purpose of the vaccine?

The purpose of this vaccine is to prevent measles and rubella. These two diseases are caused by a virus and are spread by air droplets or fluids coming from the mouth or nose of infected people by coughing or sneezing. There is **NO TREATMENT** for these diseases, but children can be protected by immunization shots.

*Measles* causes a red blotchy rash, fever, red eyes, runny nose and cough. It usually lasts 1 - 2 weeks. In some people, the disease can be quite severe. Some suffer an infection of the middle ear and a few get pneumonia. A smaller number may get an inflammation of the brain, which can result in headaches, seizures, coma and/or long-term damage. Very rarely a long-term infection of the brain can happen. This causes seizures and problems with brain function, which eventually leads to death.

The disease can occur in people of any age who are not immune. Immunity comes from either having the disease or from the protection of an immunization shot. Large outbreaks usually occur in children.

*Rubella* is a serious disease to avoid during pregnancy, since infection can cause damage to the unborn baby. Brain damage, abnormally small head, deafness, heart defects, blindness, small eyes, diabetes and even death can result. A high number, (90%) of women infected during the first three months of pregnancy will have affected babies. Therefore, protection at an early age for all children is important to avoid either getting the disease later in life, or giving it to a pregnant mother.

In children and adults, rubella may cause a red rash, fever, sore throat, headache, swollen lymph glands, pain in the joints and arthritis. The joint pains and arthritis can take up to a month to disappear. Rarely, chronic (long lasting) arthritis or inflammation of the brain can occur.

### 2. What is the vaccine made of?

The vaccine is made of two weakened forms of these viruses and a stabilizer containing gelatin, lactalbumin hydrolyzate, sorbitol and lactose.

### 3. How effective is the vaccine?

About 94% of children immunized with rubella and 88% of children immunized with a single dose of measles develop protective antibodies. After two doses of measles, 99% are protected. Protection for both viruses is felt to be lifelong in most people.

### 4. Who should NOT get the vaccine?

Anyone whose immune system is weakened. If someone has a medical condition or is taking medication or X-ray therapy that can weaken their immune system, he/she should check with a doctor before being immunized.

Anyone who has a severe allergy to any of the vaccine ingredients or has had a severe allergic reaction to a measles or rubella containing vaccine in the past.

Anyone who has a severe latex allergy should check with a doctor.

Anyone who has a serious illness, with or without fever. A mild illness, with or without a low fever, is not a reason to avoid immunization.

Anyone who has had immune globulin or received blood products in the last several months. Depending on what was received and when, immunization may have to be delayed. Check with your doctor or public health nurse.

Women who are pregnant.

## 5. What are the side-effects?

Common short-term reactions from the shot can be redness, swelling, firmness and tenderness on the arm where the shot was given.

A red rash 5 - 12 days after immunization occurs in about 5% of people who are not immune to measles or rubella. Sometimes it can cover the whole body. The rash disappears by itself and does not infect other people.

Temporary swelling of lymph glands, especially those of the head and neck, occur in about 5 - 15% of people who are not immune to rubella.

Fever over 39.4°C can occur in about 5 - 15% of people who are not immune to the viruses. It generally begins 5 - 12 days after immunization and generally lasts 1 - 2 days. High fever can sometimes cause seizures, which are more common in people who have had seizures in the past or have family members who have seizures. Seizures due to fever do not lead to brain damage or increase the risk of developing seizures in the future.

Arthritis and painful joints are rare in children younger than 12 years. However, they can occur in older children and adults, especially women. The risk is greatest in those people who are not already immune.

In rare cases, chronic arthritis or bleeding problems can occur. Severe allergic reactions or death (almost always in people with already-weakened immune systems) are very rare.

## 6. What should be done if side-effects happen after the vaccine is given?

Fever can be treated by:

- keeping the room temperature about 18°C;
- removing clothing;
- encouraging rest and drinking liquids, such as watered-down apple juice or flat soft drinks;
- taking Tylenol or Tempra.

If problems more serious than moderate fever (up to 39.4°C), redness, pain, swelling or rash occur, please contact your doctor.

## 7. Are there any precautions which should be taken after receiving the vaccine?

Women should not become pregnant within three months of receiving the vaccine.

## 8. How is the vaccine given?

The vaccine is given by injection (shot) with a needle into the tissue below the skin, in the upper arm.

## 9. Does a child have to be immunized with two doses of measles vaccine in order to attend school?

At present, all children must have received one dose of measles vaccine unless a parent or guardian provides evidence that:

- the child is already immune;
- the child has a medical reason for not receiving the vaccine; or
- the parent or guardian holds religious or other beliefs against immunization.

*Under the Public Health Act, any child not considered to be fully immunized would be excluded from school in the event of a measles outbreak.*