
Immunization : Measles, Mumps and Rubella (MMR) Vaccine

This fact sheet provides basic information only. It must not take the place of medical advice, diagnosis or treatment. Always talk to a healthcare professional about any health concerns you have, and before you make any changes to your diet, lifestyle or treatment.

Vaccines (or needles or baby shots) are the best way to protect against some very serious infections. The Canadian Paediatric Society and the National Advisory Committee on Immunization strongly recommend routine immunization.

The MMR vaccine is a three-in-one needle that protects against measles, mumps and rubella (German measles). It should be given to children soon **after** their first birthday and again (or second dose) at 18 months of age. Vaccination against measles, mumps and rubella is required by law for all children attending school in Ontario (unless exempted).

This vaccine should also be given to adults who are not protected against measles, mumps or rubella. Pregnant women who have been told that they are not protected against rubella, should receive MMR vaccine as soon as they are no longer pregnant.

Measles

Measles is a serious infection. It causes high fever, cough, rash, runny nose and watery eyes. Measles lasts for one to two weeks. It can be complicated by ear infections or pneumonia in one out of every 10 children with measles. Measles can also be complicated by encephalitis, an infection of the brain, in about one out of every 1,000 children with measles. This may cause brain damage and mental retardation. Measles causes death in one in about 3,000 cases. In

very rare cases, measles is complicated by a disease called SSPE (subacute sclerosing panencephalitis), a very severe and always fatal brain infection. Measles can also make a pregnant woman have a miscarriage or give birth prematurely.

Measles spreads very easily from person to person. It is passed from an infected person to others through coughing, sneezing and even talking. Before measles vaccine was used widely, almost all children got measles. Now, because of the routine use of vaccine, very few children get measles in Canada. SSPE has almost completely disappeared.

Mumps

Mumps can cause fever, headaches and swelling of the cheeks and jaw. The swelling is caused by an infection of the salivary glands. Mumps can cause meningitis, an infection of the fluid and lining covering the brain and spinal cord. About one in every 10 people with mumps gets meningitis. Fortunately, mumps meningitis does not usually cause permanent damage. Mumps can cause deafness in some persons.

Mumps can cause very painful, swollen testicles in about one out of 4 teenage boys or adult men. This may rarely cause sterility. Mumps can cause a painful infection of the ovaries in one out of 20 women. Mumps infection during the first three months of pregnancy may increase the risk of miscarriage. People can get mumps from an

infected person coughing or sneezing around them or simply talking to them. It can also be spread through contact with the saliva of an infected person.

Rubella (German Measles)

Rubella is very dangerous in pregnant women. If a woman gets rubella in the early part of a pregnancy, it is very likely that her baby will die or be severely handicapped. The most common handicaps are blindness, deafness, mental retardation and heart defects.

Rubella is usually a mild illness in children; up to half of the infections with rubella occur without a rash. The disease can be more severe in older children and adults especially women. Rubella may cause fever, sore throat, swollen glands in the neck and a rash on the face and neck. Temporary aches and pains and swelling of the joints are common in adolescents and adults, especially females. Rubella can be followed by chronic arthritis. It can also cause temporary blood clotting problems and encephalitis (swelling of the brain).

Rubella spreads by contact with an infected person through coughing, sneezing or talking to them. It can also be spread by contact with the saliva of infected people.

How well does MMR vaccine protect against measles, mumps and rubella?

The vaccine protects about 99 per cent of those who get both needles against measles. It protects 95 per cent of people against mumps and about 98 per cent of people against rubella. Protection from measles, mumps and rubella after getting the vaccine is probably life-long. Vaccination also makes

these diseases milder for those who may catch them.

Is the MMR vaccine safe?

Yes. Most children will have no side effects. MMR vaccine can cause a rash or fever in some children five to 12 days after the needle is given. This may last for a few days. Occasionally, a high fever can cause a convulsion. The convulsion comes from the high fever caused by the vaccine rather than the vaccine itself. This does not make the child any more likely to get epilepsy, brain damage or any other nerve problems. Convulsions caused by high fever are more likely to occur in children who have had convulsions before or whose parents, brothers or sisters have had convulsions.

The mumps part of the vaccine may cause fever and swelling of the glands in the neck. Meningitis (an infection of the fluid and lining covering the spinal cord) may occur very rarely, in one in 800,000 people who get the vaccine. The meningitis caused by mumps vaccine is mild, and permanent brain damage does not occur.

The rubella part of the vaccine may cause a mild fever, rash or swelling of the glands in the neck in one out of seven children. This usually happens 6 to 10 days after getting the shot and lasts for one to 2 days. Less than one in 200 children may develop swelling and pain in some joints after the vaccine. Up to one in four teenage girls and adult women may get painful swelling of some joints within one to three weeks after vaccination. The joint pain and swelling usually lasts only a few days. Very rarely, chronic arthritis may occur.

Mild, temporary blood clotting problems have been reported during the month

following immunization with MMR vaccine. This condition occurs rarely and does not result in long-term problems.

There is no risk of a pregnant woman or anyone else catching measles, mumps or rubella from a child who has been vaccinated recently. It is safe to give this vaccine to women who are breastfeeding. On the whole, the benefits of the vaccine are much greater than the risks. **You should always discuss the benefits and risks of any vaccine with your doctor.**

Who should not have MMR vaccine?

The following children and adults should not have MMR vaccine :

- anyone who is ill with a fever or infection worse than a cold;
- anyone who has had a severe allergic reaction (called anaphylaxis) to a prior dose of this vaccine;
- anyone taking medication that lowers the body's ability to fight infections;
- pregnant women : If a woman gets the MMR vaccine and then discovers she is pregnant, she should call her doctor. However, the risk of damage to the fetus in this type of situation is small. Also women of childbearing age should be advised to avoid pregnancy for 1 month following immunization with MMR vaccine;
- anyone who is allergic to an antibiotic called neomycin;
- anyone who received a gamma globulin shot within the past three to 12 months, (depending on the dose and method of administration).

If you think that you or your child is in any of these groups, please talk to your doctor or public health unit.

The MMR vaccine may be given to people who are allergic to eggs even if they have hives, wheezing, difficulty breathing, or swelling of the face or mouth after eating eggs, as long as they are observed after the vaccine for signs of a reaction.

Who should I talk to if I have any questions?

Talk to your doctor or call your local public health unit.

Your record of protection

After you or your child receives any immunization, make sure the doctor updates the personal immunization record, such as the "Yellow Card". You will need to provide this information to your local health unit when your child enters school and as they get additional immunizations. Keep your records in a safe place !

Government of Ontario

For information about health services and resources :

www.health.gov.on.ca

For consumer-friendly health tips and information :

www.HealthyOntario.com

INFOline: 1-877-234-4343;

TTY: 1-800-387-5559

Telehealth Ontario:

1-866-797-0000; TTY 1-866-797-0007