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Measles, Mumps, Rubella and Varicella (MMRV) Vaccine

Keep your child safe.
Get all vaccines on time.

By getting all vaccines on time, your child can be protected from many diseases over a lifetime.

Immunization has saved more lives in Canada in the last 50 years than any other health measure.

What is the MMRV vaccine?

The MMRV vaccine protects against measles, mumps, rubella and varicella (chickenpox). The vaccine contains weakened forms of the measles, mumps, rubella and varicella-zoster viruses that do not cause disease. The vaccine is approved by Health Canada.

The MMRV vaccine is provided free as part of your child's routine immunizations. Call your health care provider to make an appointment.

Who should get the vaccine?

The MMRV vaccine is given as one dose to kindergarten age children starting at age 4. Most of these children would have received one dose each of MMR and varicella vaccines as separate injections on or after their 1st birthday. The dose of MMRV vaccine provides additional protection for your child against measles, mumps, rubella and varicella. The MMRV vaccine may also be given as a series of 2 doses to children 4 to 12 years of age who have not been immunized against these diseases.

What are the benefits of getting the vaccine?

The vaccine is the best way to protect against measles, mumps, rubella and varicella which are serious and sometimes fatal diseases. When you get your child immunized, you help protect others as well.

What are the possible reactions after the vaccine?

Vaccines are very safe. It is much safer to get the vaccine than to get measles, mumps, rubella or varicella.

Common reactions to the MMRV vaccine may include soreness, redness and swelling where the vaccine was given. A mild fever, swelling in the cheeks or neck, and a rash that looks like measles, rubella or chickenpox may occur about 1 to 2 weeks after the vaccine. Very rarely, a person who develops a chickenpox-like rash after being immunized can spread the virus from the vaccine to others. To prevent spreading the virus to others the rash should be covered until the blisters have dried and crusted over.

More serious reactions may include a temporary drop in the blood cells that help prevent bleeding (about 1 child in 30,000) and encephalitis, an inflammation of the brain (about 1 child in 1 million). The possibility of getting encephalitis from measles is about 1 in 1,000, which is much higher than from the vaccine. The risks of these serious reactions following MMRV vaccine have not been established but are expected to be similar to the risks reported above for MMR vaccines.

Acetaminophen (e.g. Tylenol®) or ibuprofen* (e.g. Advil®) can be given for fever or soreness. ASA (e.g. Aspirin®) should not be given to anyone under 18 years of age due to the risk of Reye Syndrome.

*Ibuprofen should not be given to children under 6 months of age without first speaking to your health care provider.

For more information on Reye Syndrome, see HealthLinkBC File #84 Reye Syndrome.

It is important to stay in the clinic for 15 minutes after getting any vaccine because there is an extremely rare possibility, less than 1 in a million, of a life-threatening allergic reaction called anaphylaxis. This may include hives, difficulty breathing, or swelling of the throat, tongue or lips. Should this reaction occur, your health care provider is prepared to treat it. Emergency treatment includes administration of epinephrine (adrenaline) and transfer by ambulance to the nearest emergency department. If symptoms develop after you leave the clinic, call **9-1-1** or the local emergency number.

It is important to always report serious or unexpected reactions to your health care provider.

Who should not get the vaccine?

Speak with your health care provider if your child:

- had a life-threatening reaction to a previous dose of a measles, mumps, rubella or varicella vaccine, or any

component of the vaccine including neomycin and gelatin;

- has an immune system weakened by disease or medical treatment;
- had a blood transfusion or received other blood products within the past 12 months;
- had a drop in platelets, the blood cells that help prevent bleeding, after getting a previous dose of MMR or MMRV vaccine without another cause being identified;
- has active untreated tuberculosis; or
- is pregnant.

There is no need to delay getting immunized because of a cold or other mild illness. However, if you have concerns speak with your health care provider.

What are measles, mumps, rubella and varicella?

Measles, mumps, rubella and varicella are diseases caused by viruses. The viruses are easily spread through the air when an infected person coughs or sneezes. You can become infected when you breathe in air or touch a surface contaminated with virus. The viruses can be spread through contact with an infected person's saliva such as by sharing food, drinks or cigarettes, or by kissing. Varicella can also be spread by contact with fluid from the varicella blisters.

Measles, also known as red measles, causes fever, rash, cold-like symptoms and red, inflamed eyes that can be sensitive to light. It can lead to infections of the ear or lungs (pneumonia). More serious complications, occurring in 1 person in 1,000, include encephalitis, an inflammation of the brain. This can lead to seizures, deafness or permanent brain damage. About one person in 3,000 with measles can die from complications.

Mumps causes fever, headaches, and swelling of the salivary glands and cheeks. More serious complications include encephalitis. About 1 in 20 people with mumps get mumps meningitis, an infection of the lining of the brain. Mumps can also cause temporary deafness. Permanent deafness occurs in less than 1 in 20,000 people with mumps. About 1 in 4 adult men and teenage boys develop painful swelling of the testicles.

Rubella, also known as German measles, can cause serious complications and birth defects in an unborn baby including deafness, eye problems, heart defects, liver damage, and brain damage. This is called Congenital Rubella Syndrome. It occurs in about 9 out of 10 babies born to women who become infected with the virus in the first 3 months of their pregnancy. Rubella can also cause miscarriage or stillbirth.

Varicella (chickenpox) is an infection caused by the varicella-zoster virus. Children with chickenpox can have on average 350 red, itchy blisters. Infection in newborns, teenagers, adults, pregnant women and those with weakened immune systems is more severe.

Complications from chickenpox include pneumonia, encephalitis, and bacterial infections of the skin. Encephalitis can lead to seizures, deafness or brain damage. About 1 in 3,000 adults will die from the infection.

Infection early in pregnancy can result in a baby being born with birth defects. This is known as congenital varicella syndrome (CVS). Although this complication is rare, affected children may be of low birth weight, have scarring of the skin and problems with their limbs, eyes and brain. Chickenpox can also cause miscarriage or stillbirth.

These diseases are now rare in B.C. because of routine childhood immunization programs.

Mature Minor Consent

It is recommended that parents or guardians and their children discuss consent for immunization. Children under the age of 19, who are able to understand the benefits and possible reactions for each vaccine and the risk of not getting immunized, can legally consent to or refuse immunizations. For more information on mature minor consent see HealthLinkBC File #119 The Infants Act, Mature Minor Consent and Immunization.

For More Information

For more information on measles, mumps, rubella and varicella, see the following HealthLinkBC Files:

- HealthLinkBC File #14a Measles, Mumps, Rubella (MMR) Vaccine
- HealthLinkBC File #14b Measles
- HealthLinkBC File #14c Mumps
- HealthLinkBC File #14d Rubella
- HealthLinkBC File #44a Facts About Chickenpox
- HealthLinkBC File #44b Chickenpox (Varicella) Vaccine

For more information on immunizations visit ImmunizeBC at www.immunizebc.ca.

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BC Centre for Disease Control
An agency of the Provincial Health Services Authority