



## Measles, Mumps, Rubella and Varicella Vaccines

### Measles

- Measles is a highly contagious viral infection that is spread through the air from person to person. Measles lives in the nose and throat mucus of an infected person. It can spread to others through coughing and sneezing. In addition, the measles virus can remain for up to two hours on a surface or in an airspace where the infected person coughed or sneezed. If other people breathe the contaminated air or touch the infected surface, then touch their eyes, noses, or mouths, they can become infected.
- Symptoms of measles begin 7 to 21 days, usually 10 to 14 days, after exposure to a case of measles, and include fever, runny nose, cough, drowsiness, irritability, and red eyes. Small white spots (known as "Koplik's spots") can appear on the inside of the mouth and throat but are not always present. Typically, 3 to 7 days after the start of the symptoms, a red blotchy rash appears on the face and progresses down the body. Measles is contagious one day before a fever develops and usually four days before the rash appears. Measles remains contagious until four days after the appearance of the rash.
- Most people fully recover from measles within two to three weeks. But measles can cause complications in up to 25 percent of people, such as pneumonia, ear infections, diarrhea, hearing loss, encephalitis (brain swelling), seizures, or, rarely, even death. Measles can be especially dangerous for infants, those with weakened immune systems, and pregnant women.

### Mumps

- Mumps is a contagious disease that is caused by a virus. Mumps are spread by droplets of saliva or mucus from the mouth, nose, or throat of an infected person, usually when the person coughs or sneezes. Items used by an infected

person, such as cups or utensils can also be contaminated with the virus, which may spread to others if those items are shared. In addition, the virus may spread when someone with mumps touches items or surfaces without washing their hands and someone else then touches the same surface and rubs their mouth or nose.

- Symptoms typically appear 16 to 18 days after infection, but this period can range from 12 to 25 days after infection. Mumps is best known for the swelling of the cheeks and jaw that it causes, which is a result of parotitis (inflammation of the salivary glands). Mumps also causes fever and headache. Mumps can be contagious from seven days before and up to five days after the salivary glands begin to swell. Up to half of people who get mumps have very mild or no symptoms, and therefore do not know they were infected with mumps.
- People who show symptoms usually recover after a week or two, but mumps can occasionally cause serious complications. The most common complication is orchitis (swelling of the testicles) in males who have reached puberty; rarely does this lead to fertility problems. Other rare complications include encephalitis (swelling of the brain) and/or meningitis (swelling of the tissue covering the brain and spinal cord) and oophoritis (swelling of the ovaries) in females who have reached puberty and deafness. Mumps infection during the first trimester of pregnancy may increase the risk of a miscarriage.

### Rubella (German Measles)

- Rubella is a contagious disease caused by a virus. Rubella is spread by contact with an infected person, through coughing and sneezing.
- Symptoms typically appear about 14 to 21 days after being exposed to someone contagious. The infection is usually mild with fever, rash, headache, malaise, mild runny nose (coryza), and red eyes (conjunctivitis). The rash usually starts on the face and spreads to the rest of the body. These symptoms last approximately three

days. Rubella is contagious one week before and at least four days after the appearance of the rash. About half of the people who get rubella do not have symptoms.

- Complications are not common, but they occur more often in adults. Aching joints occur in many cases, especially among young women. In rare cases, rubella can cause serious problems, including encephalitis (swelling of the brain). Rubella is most dangerous for a pregnant woman's unborn baby. Infection during pregnancy can cause miscarriage, or birth defects like deafness, blindness, intellectual disability, and heart defects.

### **Varicella (Chicken Pox)**

- Chicken pox is caused by the *varicella-zoster virus*. About 90 percent of chickenpox cases occur before a child is 12 years of age. Children with chickenpox will feel flu-like symptoms such as fatigue, mild headache, fever up to 39°C (102°F), chills, and muscle or joint aches a day or two before the itchy, red rash appears. The rash appears anywhere on the body as raised red blisters that are extremely itchy. Some children have only a few blisters while others can have as many as 500. The child will be most infectious (contagious) from one to two days before the rash appears. These blisters dry up and form scabs in four to five days.
- Chickenpox is extremely contagious. It spreads very quickly from person to person. The most common way the infection is spread is through the air if someone with chicken pox coughs or sneezes. You can also get chickenpox if you touch a blister or the liquid from a blister.
- In about five to 10 percent of healthy children, chicken pox infection can lead to more serious problems such as:
  - Bacterial skin infections and/or necrotizing
  - fasciitis ("flesh-eating disease")
  - pneumonia (infection of the lungs)
  - encephalitis (infection of the brain)
  - infection of other sites (such as blood)
  - birth defects may occur if the baby gets chicken pox from their mothers before they are born.

- Chicken pox can be very severe or even life-threatening to newborn babies, and anyone with a weak immune system.

### **Who is eligible to receive the measles, mumps, and rubella (MMR) vaccine?**

- The MMR vaccine is a part of the regular vaccination schedule within Ontario. Children are to receive this vaccine at 12 months of age.
- All adults born after 1970 are to ensure that they have received two documented doses of MMR vaccine.

### **Who is eligible to receive the varicella (VAR) vaccine?**

- All children born after January 1<sup>st</sup>, 2010, are required to have this vaccine for school attendance.
- The VAR vaccine is a part of the regular vaccination schedule at 15 months in Ontario.

### **Who is eligible to receive the combined measles, mumps, rubella, and varicella (MMRV) vaccine?**

- This vaccine is administered at 4 to 6 years of age.

### **Are the vaccines safe?**

- The vaccines are safe and have been used in Canada for many years. They may cause minor side effects such as redness, warmth, or slight swelling where your child receives the needle. Some may experience tiredness or a slight fever for a day or two. Any serious reactions such as trouble breathing, swelling of the face or mouth, a fever over 39°C, or hives require immediate medical treatment. However, these reactions are extremely rare and in the majority of cases start to develop within the first 15 minutes after immunization.
- A rash that resembles measles or chicken pox diseases may become present after a person receives these vaccines. This does not mean that they have measles or chicken pox, it is simply the body's reaction to developing antibodies to protect the vaccine recipient. There is a theoretical risk that they could transmit the disease so keep the rash covered.

The rash should resolve quickly on its own.  
Speak with your healthcare provider if it does not.

- The risk of measles, mumps, rubella, and varicella diseases is much greater than the risk of the vaccine, however, some people should not get this vaccine.
- Your nurse or physician will ask questions to determine if your child has any additional risk factors that make them ineligible to receive this vaccine.

Please let your healthcare provider know if your child has any chronic medical conditions, is taking any medications, has experienced a fever in the last 24 hours, or is recovering from any illnesses more serious than a common cold.

\* Vaccination against measles, mumps, rubella, and varicella is required by law for all children attending licensed childcare centers and schools in Ontario. \*



For any questions, contact Grey Bruce Public Health:  
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