

Measles-Mumps-Rubella Vaccine (Live Attenuated Viral)

MMR® II
PRIORIX®

Supplier: Merck Canada Inc.
Supplier: GlaxoSmithKline Inc.

INDICATIONS:

- Routinely as a first dose for infants at 12 months of age and as a second dose for children at school entry given at 4-6 years of age. ^A
- Infants from 6-11 months of age who are traveling to locations experiencing measles outbreaks, traveling outside of Canada where the disease is of concern, or who are identified as contacts of a measles case. ^{B, C}
- All other individuals 12 months of age and older requiring protection against measles, mumps, or rubella, including those traveling to locations experiencing measles outbreaks or traveling outside of Canada where the disease is of concern. ^{B, D}
- Select special populations as indicated in [Part 2 - Immunization of Special Populations](#).

DOSES AND SCHEDULE:

Routine infant and childhood schedule: 1 dose given as 0.5 mL **SC** at 12 months of age and older (See ADMINISTRATION). Second dose given at 4-6 years of age as MMRV, see [Part 1 – Immunization Schedules](#). ^A

Infants from 6-11 months of age for indications outlined above: 1 dose given as 0.5 mL **SC** (See ADMINISTRATION). Give 2 additional doses per routine infant and childhood schedule.

All other individuals 12 months of age and older requiring protection against measles, mumps, or rubella: 2 doses given as 0.5 mL **SC**, 4 weeks apart (See ADMINISTRATION). ^D

Select special populations: as indicated in [Part 2 – Immunization of Special Populations](#).

ADMINISTRATION:

- Both products need to be reconstituted. Use the diluent provided with the vaccine.
- MMR® II: Administer the entire volume of reconstituted product, which may be 0.5-0.7 mL.
- PRIORIX®: Administer the entire volume of reconstituted product, which may be 0.5-0.7 mL.
- Per the product monographs, both products may be administered either subcutaneously (SC) or intramuscularly (IM).

BOOSTER DOSES:

No booster doses are recommended at this time.

SEROLOGICAL TESTING:

Serological testing is not routinely recommended before or after immunization.

^A Children entering school who require both a dose of MMR and a dose of varicella vaccine may be immunized using combination MMRV (measles, mumps, rubella, varicella) vaccine.

^B Review travel alerts for the local areas where individuals are traveling. See [Part 2 - Immunization of Special Populations, Travelers](#).

^C See [Communicable Disease Control Manual, Chapter 1: Measles](#).

^D See SPECIAL CONSIDERATIONS to assess recommended number of doses.

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CONTRAINDICATIONS:

1. History of anaphylactic reaction to a previous dose of a measles, mumps, or rubella-containing vaccine or to any component of the product (See SPECIAL CONSIDERATIONS).
2. Immunocompromised as a result of disease or therapy: consult the appropriate health care provider (either the primary care physician or nurse practitioner most familiar with the client's current medical status or a medical specialist) and obtain a written referral regarding the appropriateness of MMR vaccine administration to persons whose immune status may be suppressed as a result of disease or therapy. Use [Referral Form for MMR Vaccination](#) located in Part 2 – Immunization of Special Populations. For more information on affected populations see [Part 2 – Immunization of Special Populations, Specific Immunocompromising Conditions](#).
3. Family history of congenital immunodeficiency. See Assessment for Contraindications and Precautions in [Appendix C – Contraindications and Precautions for Immunization](#).
4. Pregnancy: Pregnancy should be avoided for 1 month following immunization. Risk is theoretical and has not been observed. Inadvertent immunization during pregnancy is not considered a medical indication for therapeutic abortion and reassurance should be offered that teratogenicity from the vaccine has not been observed.
5. Physician-diagnosed significant thrombocytopenia after 1st dose of MMR vaccine with no other cause identified. In such individuals the risk of recurrence of thrombocytopenia following a 2nd dose of measles-containing vaccine is not known. Testing to confirm immunity to measles and mumps, the components for which a 2nd dose is recommended to ensure optimal protection, may help inform the decision.
6. Active untreated TB.

PRODUCT COMPONENTS:

MMR® II:

Potential allergens: hydrolyzed gelatin, neomycin, phenol red, fetal bovine serum, egg protein (See SPECIAL CONSIDERATIONS).

Other components: sorbitol, Medium 199 with Hank's salts, sodium phosphate monobasic, sodium phosphate dibasic (anhydrous), sucrose, sodium bicarbonate, Minimum Essential Medium (Eagle's), potassium phosphate dibasic (anhydrous), monosodium L-glutamate monohydrate, potassium phosphate monobasic, recombinant human albumin.

PRIORIX®:

Potential allergens: neomycin sulphate, egg protein (See SPECIAL CONSIDERATIONS).

Other components: amino acids, lactose, mannitol, sorbitol.

PRECAUTIONS:

- MMR immunization should be given on the same day or delayed until 4 weeks after administration of another live parenteral vaccine.
- For certain immunocompromised clients only: separate administration of MMR and varicella vaccine by at least 4 weeks. For additional information see [Part 2 – Immunization of Special Populations, Specific Immunocompromising Conditions](#).

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PRECAUTIONS (continued):

- TB skin testing should be completed on the same day as MMR immunization or after an interval \geq 4 weeks.
- Recent administration of an immune globulin preparation or blood product. See [Part 4 – Biological Products, Immune Globulin Preparations or Blood: Timing Intervals for Vaccines Containing Live Measles, Mumps, Rubella, or Varicella Virus](#).
- Individuals who receive RhIg postpartum and are eligible for MMR vaccine should generally wait 3 months before being vaccinated with this vaccine. However, if there is a risk of exposure to measles, mumps, or rubella, a risk of pregnancy in the 3-month postpartum period, or a risk the vaccine may not be given later, MMR vaccine may be given prior to discharge with a 2nd dose at the recommended interval if indicated. If MMR vaccine is given within 3 months of receipt of RhIg, serologic testing for rubella should be done 3 months postpartum and at least 1 month after the final dose. Those who have not mounted an antibody response should be revaccinated.

SPECIAL CONSIDERATIONS:

- In view of the cumulative data indicating the safety of MMR immunization in people with a history of anaphylactic hypersensitivity to hens' eggs, [NACI](#) recommends that such individuals should be immunized according to guidelines without special precaution. As for all vaccines, [NACI](#) recommends immunization by personnel with the capability to manage adverse events including anaphylaxis following immunization.
- **Consider as immune** those persons who have had any of the following:
 - Measles; consider as immune:
 - birth date before January 1, 1970 ^A (**January 1, 1957 for health care workers**);
 - birth date on or after January 1, 1970 (**January 1, 1957 for health care workers**) AND
 - laboratory evidence of measles immunity; **or**
 - documentation of 2 doses of a live measles vaccine at 12 months of age and older and given at least 4 weeks apart.^B

^A These persons are generally assumed to have acquired immunity to measles or mumps from natural infection. There may be susceptible individuals in this age group, however, and those who self-identify without a history of measles or mumps vaccine or disease may be considered susceptible and should be offered 1 dose of MMR vaccine.

^B Individuals with two documented doses of a measles-containing vaccine do not require a third dose regardless of negative or indeterminate measles serology. Consider these individuals to have presumptive evidence of immunity.

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SPECIAL CONSIDERATIONS (continued):

- Consider as immune:
 - Mumps; consider as immune:
 - birth date before January 1, 1970 ^A (**January 1, 1957 for health care workers**)
 - birth date on or after January 1, 1970 (**January 1, 1957 for health care workers**) AND
 - prior clinical diagnosis of acute mumps and laboratory confirmation of same; **or**
 - documentation of 1 dose of live mumps vaccine for any susceptible adult born in 1970 and later. The following populations require documentation of 2 doses: children as per routine schedule; students of post-secondary educational settings and travelers to outside of North America. Health care workers require documentation of 1 dose if born between January 1, 1957 and December 31, 1969; 2 doses if born in 1970 or later. To be considered valid all doses must be given at 12 months of age and older. If 2 doses are required they must be separated by 4 weeks.
 - Rubella; consider as immune:
 - Health care workers:
 - there is no age above which immunity against rubella can be assumed for health care workers.
 - All others:
 - birth date before January 1, 1957;
 - birth date on or after January 1, 1957 AND
 - documented receipt of 1 dose of live rubella vaccine (most often given as MMR). To be considered valid, 1 dose must be given at 12 months of age or older; **or**
 - laboratory evidence of rubella immunity; **or**
 - laboratory confirmed acute rubella infection.
- If a pregnant person has received one dose of rubella-containing vaccine on or after 12 months of age and subsequent rubella titres indicate that they are non-immune, a second dose of MMR can be provided post-partum. Serological testing following this dose is not required, and no further doses are recommended regardless of serological test results. See [Part 2 - Immunization of Special Populations, People Who Are Pregnant or Planning a Pregnancy](#).

ADVERSE EVENTS:

Local: pain, redness, swelling, induration, wheal and flare reaction, urticaria.

^A These persons are generally assumed to have acquired immunity to measles or mumps from natural infection. There may be susceptible individuals in this age group, however, and those who self-identify without a history of measles or mumps vaccine or disease may be considered susceptible and should be offered 1 dose of MMR vaccine.

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ADVERSE EVENTS (continued):

Systemic: fever, rash, malaise, headache, nausea, myalgia, paraesthesia, thrombocytopenia, encephalitis. Acute transient arthritis or arthralgia is uncommon in children, but frequency and severity increases with age. 25% of rubella susceptible post-pubertal females may experience arthralgia, and 10% may have arthritis-like signs and symptoms. Rubella vaccine does not cause chronic arthropathy.