Measles Mumps Rubella Vaccine

BIOLOGICAL PAGE

Alberta Health Services
Communicable Disease Control

Section 7	Biological Product Information	**Standard # 07.270**	
Created and approved by	Provincial Immunization Program Standards and Quality		
Approval date	August 1, 2012	**Published**	March 24, 2025

	Priorix	**M-M-R II**
Manufacturer	GlaxoSmithKline Inc.	Merck Canada Inc.
Classification	Live; attenuated	
Areas where measles is circulating in Canada	See the "Travel advice" section at Measles | Alberta.ca.	
Indications for Provincially Funded Vaccine	**Pre-exposure:**	

Infants 6 months of age up to and including 11 months of age:

- Travelling to or through areas where measles is circulating in Canada.
- Travelling to any country outside of Canada.
- Who are candidates for a solid organ transplant. See Standard for Immunization of Transplant Candidates and Recipients.

Note:

- Infants younger than 12 months of age may not respond sufficiently to the measles component of the vaccine in part due to the persistence of maternal measles antibody; therefore, any MMR-containing vaccine dose administered before 12 months of age should be repeated at 12 months of age or older with appropriate intervals between doses.

Children 12 months of age up to and including 17 years of age:

- Children 12 months up to and including 12 years of age when varicella vaccine is not indicated.
  - The combined MMR-Var vaccine is routinely given at 12 months of age and 18 months of age, see MMR-Var Vaccine Biological Page.
- Children/adolescents 13 years up to and including 17 years of age who have not received 2 doses of measles, mumps and rubella containing vaccine.

Note:

- A second dose of measles-containing vaccine given as MMR vaccine alone or MMR-Var can be given prior to 18 months of age using the recommended interval between doses for the following individuals:
  - Those travelling to or through areas where measles is circulating in Canada.
  - Those travelling to any country outside of Canada.

  Scheduling Considerations:
  - If time allows, give the second dose on or after 15 months of age.
  - If MMR-Var is given, this dose is considered adequate and counts as the child's second dose of MMR and varicella vaccine.
  - If MMR vaccine is given, offer the child varicella vaccine at their 18-month immunization appointment.

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	○ The spacing of this dose of vaccine from previous doses of MMR and varicella vaccines must respect the minimum intervals outlined in the schedule section. **Adults 18 years of age or older:** • **Measles** ○ Individuals born in 1970 or later (regardless of country of birth) who do not have: ▪ Documented history of 2 valid doses of measles-containing vaccine ▪ History of laboratory confirmed measles disease ▪ Serological evidence of measles immunity (measles IgG positive). ○ All healthcare workers regardless of year of birth who do not have: ▪ Documented history of 2 valid doses of measles-containing vaccine ▪ History of laboratory confirmed measles disease ▪ Serological evidence of measles immunity (measles IgG positive). ○ Post-secondary students born before 1970 who do not have: ▪ Documented history of 1 valid dose of measles-containing vaccine ▪ History of laboratory confirmed measles disease ▪ Serological evidence of measles immunity (measles IgG positive). ○ Adults born before 1970, who are travelling to or through areas where measles is circulating in Canada or travelling to any country outside of Canada who do not have: ▪ Documented history of 1 valid dose of measles-containing vaccine ▪ History of laboratory confirmed measles disease ▪ Serological evidence of measles immunity (measles IgG positive). **Note:** ○ From a population perspective, individuals born before 1970 (regardless of country of birth) are generally presumed to have acquired natural immunity to measles. However, some individuals may be susceptible. Assess and immunize post-secondary students, all healthcare workers and travelers (regardless of country of birth) according to the information outlined above. ○ 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. • **Mumps** ○ Individuals born in 1970 or later (regardless of country of birth) who do not have: ▪ Documented history of 2 valid doses of mumps-containing vaccine ▪ History of laboratory confirmed mumps disease. • Positive mumps IgG serology is not an acceptable indicator of immunity. ○ Healthcare workers regardless of year of birth who do not have: ▪ Documented history of 2 valid doses of mumps-containing vaccine ▪ History of laboratory confirmed mumps disease. • Positive mumps IgG serology is not an acceptable indicator of immunity. ○ Post-secondary students born before 1970 who do not have: ▪ Documented history of 1 valid dose of mumps-containing vaccine ▪ History of laboratory confirmed mumps disease. • Positive mumps IgG serology is not an acceptable indicator of immunity. **Note:** ○ From a population perspective, individuals born before 1970 are generally presumed to have acquired natural immunity to mumps. However, some of these individuals may be	

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	susceptible. Assess and immunize post-secondary students and all healthcare workers (regardless of country of birth) according to the information outlined above.
	
	• **Rubella**
	  ○ Individuals born in 1957 or later who do not have:
	  ▪ Documented history of 1 dose of rubella containing vaccine
	  ▪ History of laboratory-confirmed rubella disease
	  ▪ Serological evidence of rubella immunity (rubella IgG positive).
	  ○ Healthcare workers (regardless of age) who have face-to-face contact with patients in healthcare facilities.
	  ○ Staff of daycare facilities (regardless of age).
	  ○ Prioritize rubella immunization for the following susceptible individuals:
	  ▪ Women of child-bearing age.
	  ▪ Healthcare workers.
	  ▪ Staff of daycare facilities.
	  ▪ Candidates for solid organ transplant (SOT).
	  ○ Offer a second dose of rubella-containing vaccine to the following priority groups who have negative rubella serology:
	  ▪ Women of child-bearing age.
	  ▪ Healthcare workers who have face-to-face contact with patients in healthcare facilities.
	  ▪ Staff of daycare facilities.
	Note:
	  ○ From a population perspective, adults born before 1957 are generally presumed to have immunity to rubella. However, some of these individuals may be susceptible. Assess and immunize all healthcare workers and staff of daycare facilities (regardless of country of birth) according to the information outlined above.
	  ○ Individuals with 2 documented doses of a rubella-containing vaccine or previous serological evidence of rubella immunity (rubella IgG positive) do not require further doses regardless of subsequent negative rubella serology.
	
	Note:
	• Immunization of children and adults with HIV should be completed under the direction of the infectious disease specialist attending the individual.
	• Individuals who are recipients of hematopoietic stem cell transplant (HSCT), see:
	  ○ Immunization for Adult HSCT Transplant Recipients
	  ○ Immunization for Child HSCT Transplant Recipients.
	• Candidates for solid organ transplant (SOT), see:
	  ○ Immunization for Adult Solid Organ Transplant Candidates and Recipients
	  ○ Immunization for Children Expecting Solid Organ Transplant Before 18 Months of Age
	  ○ Immunization for Children Expecting Solid Organ Transplant After 18 Months of Age.	

	Post-exposure:	

	• **Measles**
	  ○ Susceptible contacts of a measles case should receive either MMR, MMR-Var (12 months to 12 years of age only) or immunoglobulin (IG) depending upon the time-lapse from exposure, age and health status.
	  ○ Susceptible immunocompetent contacts (without contraindications) 6 months of age and older should receive measles-containing vaccine. Administer the vaccine within 72 hours of exposure and do not delay pending serology results. This includes children between 12	

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	and 18 months of age who have received 1 dose of vaccine and are considered up-to-date for age, ensuring the minimum interval since the previous dose. ▪ If MMR vaccine is contraindicated or if more than 72 hours since exposure has elapsed, IG may be indicated. See Immune Globulin Biological Page. ▪ If MMR vaccine is administered more than 72 hours after exposure, it may not provide protection against the current exposure but would offer protection against subsequent exposures. **Note:** ▪ As an outbreak control strategy during a measles outbreak, the Medical Officer of Health may recommend MMR vaccine for children 6 months up to and including 11 months of age. ▪ Not all HCW require measles serology post-exposure. Most HCW have robust measles immunity assessments upon hire, and if those records meet current criteria for measles immunity, there is no need to request serology following an exposure. ▪ For disease investigation, contact assessment and reporting requirements, refer to Alberta public health disease management guidelines: measles. • **Mumps** o Immunize susceptible eligible contacts. ▪ This is not likely to prevent or alter the clinical severity of mumps from the current exposure; however, if the current exposure to mumps does not cause infection, this dose offers protection against subsequent infection. o For disease investigation, contact assessment and reporting requirements refer to Alberta public health disease management guidelines: mumps. • **Rubella** o Immunize susceptible eligible contacts. ▪ This is not likely to prevent or alter the clinical severity of rubella from the current exposure; however, if the current exposure to rubella does not cause infection, this dose offers protection against subsequent infection. o For disease investigation, contact assessment and reporting requirements refer to Alberta public health disease management guidelines: rubella.	
Specific Travel Indications and Recommendations	**Individuals travelling:** • To or through areas where measles is circulating in Canada • To any country outside of Canada. **Infants: 6 months up to and including 11 months of age:** • One dose of MMR vaccine. **Note:** o Infants younger than 12 months of age may not respond sufficiently to the measles component of the vaccine in part due to the persistence of maternal measles antibody; therefore, any MMR-containing vaccine dose administered before 12 months of age should be repeated at 12 months of age or older with appropriate intervals between doses. **Children: 12 months up to and including 17 years of age (if not previously immunized with two doses):** • Dose 1: Day 0 • Dose 2: 4 weeks after dose 1 **Note:**	

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	○ When both MMR vaccine and varicella vaccine are indicated for children 12 months up to and including 12 years of age, MMR-Varicella combined vaccine should be considered. **Adults (18 years of age and older):** • **Adults born in 1970 or later** ○ 2 life-time doses with at least 4 weeks between doses. • **Adults born before 1970** • 1 dose of measles-containing vaccine for adults born before 1970 without a documented history of 1 dose of measles-containing vaccine, history of laboratory confirmed measles disease or serological evidence of measles immunity (measles IgG positive).	
Serology	**Measles** **Measles pre-immunization serology (measles IgG):** • Not routinely recommended. • Positive measles IgG serology results or laboratory confirmed measles disease can be accepted as immunity to measles disease, if previously drawn. **Note:** ○ Measles IgG serology results may be used in other specific situations to determine immunity to measles. Refer to the following supporting standards: ▪ Immunization Recommended for Health Care Workers Chart ▪ Immunization Recommended for Health Care Students and Students in Other High-Risk Occupation Programs ▪ Standard for Immunization of Transplant Candidates and Recipients. **Measles post-immunization serology (measles IgG):** • Not routinely recommended. **Note:** ○ Measles IgM serology (alone or in addition to measles IgG serology) may be unnecessarily ordered when an individual presents to their healthcare provider with a measles-like rash (expected reaction) following immunization with measles-containing vaccine. ○ Measles IgM can indicate evidence of acute disease. It can also be present following recent immunization. Assessment of positive measles IgM results includes checking for recent immunization with measles-containing vaccine. ○ Follow up with Provincial Notifiable Disease program immediately for further advice and direction in the event of a recent positive measles IgM serology result. **Mumps** **Mumps pre-immunization serology (mumps IgG):** • Not recommended. **Mumps post-immunization serology (mumps IgG):** • Not recommended. **Note:** ○ Mumps IgG is not accepted as evidence of immunity to mumps disease in Alberta. In other jurisdictions a positive mumps IgG result may be accepted as evidence of immunity. If an individual has other historical laboratory evidence of past mumps disease (such as isolation of mumps virus from nasopharyngeal swabs, saliva, urine or cerebral spinal fluid) then these tests can be taken as confirmation of mumps disease. ○ When reviewing medical records, it should be noted that mumps IgM serology has the potential for false positive findings. Historical positive mumps IgM serology is not an acceptable indication of immunity when making immunization decisions.	

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	Rubella **Rubella pre-immunization serology (rubella IgG):** • Not routinely recommended. • A history of documented positive rubella IgG serology can be accepted as immunity to rubella disease, if previously drawn. **Note:** ○ Rubella IgG serology results may be used in other specific situations to determine immunity to rubella. Refer to the following supporting standards: ▪ Alberta prenatal screening program for select communicable diseases guidelines ▪ Immunization Recommended for Health Care Workers Chart ▪ Immunization Recommended for Health Care Students and Students in Other High-Risk Occupation Programs ▪ Standard for Immunization of Transplant Candidates and Recipients. **Rubella post-immunization serology (rubella IgG):** • Not routinely recommended. **Note:** ○ Serological testing is not indicated when an individual has a positive rubella IgG, or a history of age-appropriate rubella immunization. ○ Vaccine is not indicated when rubella IgG testing was unnecessarily ordered, and results are negative after documented history of 2 valid doses of rubella containing vaccine.	
Schedule	**Infants 6 months of age up to and including 11 months of age:** • Single dose prior to 12 months of age only when required because of increased risk of exposure. **Note:** ○ Infants younger than 12 months of age may not respond sufficiently to the measles component of the vaccine in part due to the persistence of maternal measles antibody; therefore, any MMR-containing vaccine dose administered before 12 months of age should be repeated at 12 months of age or older with appropriate intervals between doses. • Children who are candidates for a solid organ transplant, see Standard for Immunization of Transplant Candidates and Recipients. **Children 12 months up to and including 17 years of age (2 doses):** • Dose 1: 12 months of age (routinely given as MMR-Var) • Dose 2: 18 months of age (routinely given as MMR-Var), respecting minimum intervals. **Note:** ○ Most children in Alberta routinely receive measles, mumps, rubella and varicella combined vaccine (MMR-Var) at 12 months and 18 months of age. See Measles, Mumps, Rubella and Varicella Vaccine Biological Page. ○ The second dose of MMR may be administered using a minimum interval of 4 weeks between the doses if child is off schedule or rapid protection is required. ○ A second dose of measles-containing vaccine given as MMR vaccine alone or MMR-Var can be given prior to 18 months of age using the recommended interval between doses for the following individuals: ▪ Those travelling to or through areas where measles is circulating in Canada. ▪ Those travelling to any country outside of Canada. **Spacing Considerations:**	

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Recommended Intervals for MMR and Varicella Containing Vaccines

Previous Vaccine Administered	Recommended Interval to Next Dose		
	MMR-Var	MMR	Varicella
MMR-Var	3 months	3 months	3 months
MMR	3 months	4 weeks[1,2]	3 months
Varicella	3 months	3 months	6 weeks or 3 months[3]

1. For all HSCT recipients there must be a minimum of 3 months separating 2 doses of MMR vaccine. See Standard for Immunization of Transplant Candidates and Recipients.
2. For HIV positive individuals, the minimum interval between doses of MMR vaccine is 3 months.
3. An interval of 3 months between doses of varicella containing vaccines is recommended for individuals under 13 years of age and 6 weeks for individuals over 13 years of age unless they have one of the following conditions: HIV, asplenia/hyposplenia and chronic renal disease. Individuals with these conditions require a minimum spacing of 3 months between doses.

- See above for routine recommended intervals between all measles, mumps, rubella and varicella vaccines.
- With the exception of Yellow Fever vaccine, MMR can be administered simultaneously with other live vaccines or separated by an interval of at least 4 weeks. See Administration with Other Products section for additional information for MMR and Yellow Fever vaccine spacing.
- LAIV/QLAIV may be administered any time before or after the administration of other live attenuated or inactivated vaccines.
    - Specialists recommending alternate spacing for specific high-risk individuals may be accommodated on a case by case basis.
- If live vaccine was inadvertently administered at less than the routine intervals outlined above, the dose can be considered valid, and vaccine would not need to be repeated if there is a minimum interval of at least 4 weeks.

Adults (18 years of age and older):

- **Measles**
    - Individuals born in 1970 or later:
        - Documented history of 2 valid lifetime doses of measles-containing vaccine.
    - Healthcare workers:
        - Documented history of 2 valid lifetime doses of measles-containing vaccine.
    - Students at post-secondary educational institutions:
        - Born before 1970: documented history of 1 valid dose of measles-containing vaccine.

    Note:

    - Laboratory confirmed measles disease or serological evidence of measles immunity (measles IgG positive) would be accepted; however, serology is not recommended if it has not already been done.
    - See Standard for Recommended Immunization Schedules for information regarding killed measles vaccine.
    - Individuals with 2 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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	• **Mumps**
	  ○ Individuals born in 1970 or later:
	  ▪ Documented history of 2 valid lifetime dose of mumps-containing vaccine.
	  ○ Health care workers:
	  ▪ Documented history of 2 valid lifetime doses of mumps-containing vaccine.
	  ○ Students at post-secondary educational institutions:
	  ▪ Born before 1970: documented history of 1 valid dose of mumps-containing vaccine.
	
	• **Rubella**
	  ○ Individuals born in 1957 or later:
	  ▪ Documented history of 1 valid lifetime dose of rubella-containing vaccine.
	  ○ Healthcare workers and staff of daycare facilities (regardless of age):
	  ▪ Documented history of 1 valid lifetime dose of rubella-containing vaccine.
	  ○ Prioritize rubella immunization for the following susceptible individuals:
	  ▪ Women of child-bearing age
	  ▪ Healthcare workers who have face-to-face contact with patients in healthcare facilities.
	  ▪ Staff of daycare facilities.
	  ▪ Candidates for solid organ transplant (SOT) who do not have evidence of rubella immunity.
	  • See Immunization for Adult SOT Candidates and Recipients.
	  Note:
	  ○ Laboratory confirmed rubella disease or serological evidence of rubella immunity (rubella IgG positive) would be accepted.
	  ▪ Serology is not recommended if it has not already been done.
	  ○ Individuals with 2 documented doses of a rubella-containing vaccine do not require a third dose regardless of negative or indeterminate rubella. Consider these individuals to have presumptive evidence of immunity except for pregnant individuals.
	  ○ Pregnant individuals who have negative or indeterminate rubella serology are to be considered susceptible if exposed to rubella disease and followed up as per the Alberta public health disease management guidelines: rubella.	

Preferred Use	None. • Both vaccines are safe and immunogenic in individuals 12 months of age and older. • Offer individuals with medical contraindications to one product the alternate product if supply is available.	
Dose	0.5 mL **Note:** • Withdraw the entire contents of the diluent and inject into the vial containing the powder. • Withdraw the entire contents of the vial once reconstituted and inject the entire volume.	
Route	SC	
Contraindications/ Precautions	**Contraindications:** • Known severe hypersensitivity to any component of the vaccine. • Anaphylactic or other allergic reaction to previous dose of vaccine containing similar components. • Pregnancy. • Impaired immune function, including those with primary or secondary immunodeficiency: ○ HIV	

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	▪ Consult with infectious disease specialist prior to immunizing children and adults with HIV. ▪ Asymptomatic children with HIV can receive MMR after consultation with their infectious disease specialist. o Agammaglobulinemia or hypogammaglobulinemia. o Immunocompromised due to blood dyscrasias, leukemia, lymphoma, Hodgkin's disease, generalized malignancy affecting the bone marrow or lymphatic system. • Family history of congenital or hereditary immunodeficiency unless the immune competence of the potential vaccine recipient is demonstrated. • Recent treatment with the following categories of immunosuppressive therapies: o anti-B cell therapies (monoclonal antibodies targeting CD19, CD20 and CD22) o high-dose systemic corticosteroids o alkylating agents o antimetabolites o tumor necrosis factor (TNF) inhibitors o other biologic agents that are significantly immunosuppressive. • Active untreated tuberculosis o See Precautions section for further details. • Solid organ transplant recipients. See: o Immunization for Child SOT (before 18 months of age) o Immunization for Child SOT (after 18 months of age) o Immunization for Adult SOT. • Administration of immune globulins and/or blood products within the last 11 months. The interval between the receipt of IG or a blood product and the subsequent MMR administration is dependent upon the IG or blood product received and the dosage administered. See: Standard for Recommended Immunization Schedules. • Administration of another live vaccine within the past 1-3 months (see Spacing Considerations above). **Precautions:** • Egg allergy, including anaphylaxis, is not a contraindication to immunization with MMR vaccine. o The amount of egg protein found in the vaccine is not felt to be enough to cause an allergic reaction. o Observation for 30 minutes post immunization is recommended for clients who have experienced anaphylaxis to eggs. • The risk for vaccine-associated thrombocytopenia may be higher for persons who previously had thrombocytopenia, especially if it occurred in temporal association with an earlier MMR immunization. o Recommend serology for individuals who develop vaccine-associated thrombocytopenia to assess immunity to measles and rubella. o Administer a second dose of vaccine only if non-immune and after consultation with zone MOH/designate. • Measles-containing vaccines are contraindicated in individuals with active, untreated tuberculosis as a precautionary measure. o Consult with attending physician. o Tuberculosis may be exacerbated by natural measles infection, but there is no evidence that measles-containing vaccines have such an effect. o Anti-tuberculous therapy for active TB disease is advisable before administering measles-containing vaccines and it may be prudent to avoid vaccine in those with active TB disease until treatment is underway.	

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	• Immunization with a measles-containing vaccine can temporarily suppress tuberculin reactivity resulting in false-negative results. ○ Tuberculin skin testing can be done on the same day as immunization with a measles-containing vaccine or delayed for at least four weeks after immunization.	
Possible Reactions	**Common:** • Redness, swelling and tenderness at injection site • Burning and/or stinging at injection site for a short duration immediately following injection • Fever, rash, and/or measles-like rash appearing between the fifth and twelfth day following immunization • Gastroenteritis, constipation, diarrhea, vomiting • Conjunctivitis • Ear pain • Ear infection, nasopharyngitis • Irritability, insomnia • Teething • Croup infection • Arthralgia/arthritis (more common in post pubescent females) • Runny nose, cough, wheezing • Upper respiratory tract infection, sinusitis, nasal congestion • Urticaria, eczema • Viral infection. **Uncommon:** • Lymphadenopathy • Nervousness, abnormal crying • Bronchitis • Parotid gland enlargement • Anorexia. **Rare:** • Anaphylaxis • Febrile convulsions • As with any immunization, unexpected or unusual side effects can occur. Refer to the product monograph for more detailed information.	
Pregnancy	Do not use during pregnancy. • Advise people who could become pregnant to delay pregnancy for 4 weeks following immunization.	
Lactation	May use for people who are lactating and feeding their milk to infants or children.	

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	Priorix	M-M-R II
Composition	Each 0.5 mL dose of reconstituted vaccine contains: • Not less than $10^{3.0}$ $CCID_{50}$ of the Schwarz measles* strain • Not less than $10^{3.7}$ $CCID_{50}$ of the RIT 4385 mumps* (derived from the Jeryl Lynn strain) • Not less than $10^{3.0}$ $CCID_{50}$ of the Wistar RA 27/3 rubella** virus strain • Amino acids • Lactose • Mannitol • Sorbitol • Water for injection • Residual Neomycin sulphate *Produced in chick embryo cells ** Produced in MRC_5 human diploid cells	Each 0.5 mL dose of reconstituted vaccine contains: • Measles virus*, Enders' Edmonston strain (live, attenuated) >1,000 $CCID_{50}$ • Mumps virus*, Jeryl Lynn® (B level) strain (live attenuated) >5,000 $CCID_{50}$ • Rubella virus**, Wistar RA 27/3 strain (live attenuated)> 1,000 $CCID_{50}$ • 14.5 mg sorbitol • 14.5 mg hydrolyzed gelatin • 3.3 mg Medium 199 with Hank's salts • 3.1 mg sodium phosphate monobasic • 2.2 mg sodium phosphate dibasic (anhydrous) • 1.9 mg sucrose • 0.5 mg sodium bicarbonate • 0.1 mg Minimum Essential Medium, Eagle • 30 mcg potassium phosphate dibasic (anhydrous) • 25 mcg neomycin • 20 mcg monosodium L-glutamate monohydrate • 20 mcg potassium phosphate monobasic • 3.4 mcg phenol red • ≤ 0.3 mg recombinant human albumin • Less than 1 ppm fetal bovine serum *Propagated in chick embryo cell culture **Grown in human diploid lung fibroblasts • No Preservative • Sterile water for injection (diluent)
Blood/Blood Products	The rubella virus is grown in MRC_5 human diploid cell culture.	• Manufacturing process residual: human albumin. • The rubella virus is propagated in human diploid lung fibroblasts.
Bovine/Porcine Products	**Bovine Products:** • Contains lactose and galactose derived from bovine milk. • Fetal bovine serum is used as raw materials during routine manufacturing process. **Porcine Products:** • Trypsin (isolated from porcine pancreas) is used as raw materials during routine manufacturing process.	**Bovine Products:** • Manufacturing process residual: fetal bovine serum. **Porcine Products:** • Gelatin used in manufacturing originates from porcine skin collagen.
Latex	Does not contain latex.	
Interchangeability	MMR vaccines may be used interchangeably. • Use the manufacturer recommended dose and schedule.	

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<tr><td>Administration with Other Products</td><td colspan="2">

See schedule section for recommended intervals between all measles, mumps, rubella and varicella vaccines.
MMR can be administered simultaneously with other live vaccines or separated by an interval of at least 4 weeks.

Exception: Yellow Fever vaccine

Limited data suggest preferred spacing of 30 days between MMR-containing and Yellow Fever vaccine if time permits. This is because of lower seroconversion rates for mumps, rubella, and yellow fever in those immunized at the same time than in those immunized 30 days apart. However, it is important to ensure that all travellers are immunized appropriately before travel, therefore co-administration of Yellow Fever vaccine and MMR vaccine is acceptable.

LAIV/QLAIV may be administered any time before or after the administration of other live attenuated or inactivated vaccines.

Specialists recommending alternate spacing for specific high-risk individuals may be accommodated on a case by case basis.

May be given at the same time as other inactivated and live vaccines.

Use a separate needle and syringe for each vaccine.
The same limb may be used if necessary, but use different sites on the limb.

Give tuberculin skin tests either before or at the same time as MMR vaccine. If not possible, delay the tuberculin skin test for 4 weeks following MMR vaccine.
Do not give immune globulins (IG) and antibody-containing blood products at the same time as live vaccines. They need to be separated by specified time intervals depending upon the dosage and the biological.

Give MMR vaccine at least 14 days prior to administration of an IG preparation or blood product, or delay until the antibodies in the IG preparation or blood product have degraded.
Repeat the vaccine dose if the interval between administration of vaccine and subsequent administration of an IG preparation or blood product is less than 14 days. Ensure adequate spacing between the doses of MMR.
See Standard For Recommended Immunization Schedules for spacing considerations.

If MMR is given to rubella susceptible women less than 3 months from receipt of the RhIg (RhoGam, Anti-Rho D), recommend serology 3 months after the MMR dose to assess the immune response. If MMR is given 3 months or more following RhIg, then serology is not necessary.

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<tr><td>Appearance</td><td>

Diluent: clear, colourless
Vaccine prior to reconstitution: whitish to slightly pink coloured cake or powder
Reconstituted vaccine: due to minor variation of its pH, may vary in colour from clear peach to fuchsia pink without deterioration of the vaccine potency
If other variation is observed, do not use the vaccine.

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Diluent: clear, colourless
Vaccine prior to reconstitution: light yellow compact crystalline plug
Reconstituted vaccine: clear yellow.

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<tr><td>Storage</td><td colspan="2">

Store at +2^{0}C to +8^{0}C.
Protect from light.
Do not freeze.
Do not use beyond the labeled expiry date.
Store diluent at room temperature or at +2^{0}C to +8^{0}C.
Use reconstituted vaccine as soon as possible.

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	Priorix	M-M-R II
Vaccine Code	MMR	
Antigen Code	Measles – MEA Mumps – MU Rubella – RUB	

Licensed for	• Individuals 12 months of age and older.
	• Off-license use for infants 6 months up to and including 11 months of age who are:
	  ○ Travelling to or through areas where measles is circulating (see indications).
	  ○ Contact of a measles case (see indications for post-exposure).
	  ○ Pre solid organ transplant (see Immunization for Children Expecting Solid Organ Transplant Before 18 Months of Age for indications).	

Program Notes	**Historical Notes:** • 1966-1970 July – Killed Red Measles vaccine introduced. • 1969-1971 January 1 - E/Z Measles (Live). • 1970 July-1998 December 31 – Measles (red) dose catch up for Grades 1 to 9. • 1971 January 1 – Rubella became available. • 1972 January 1 to 1982 January 1 – Rubella (school program for Grade 6 girls). • 1982 February 1 to 2004 February 8 – Mumpsvax. • 1997 January 1 to 1997 December 31 – Measles/Rubella second dose measles catch-up for Grades 1 to 9. • 1997 April 1 to 1998 June 30 – Measles (red) second dose measles catch-up for Grades 1 to 9 using monovalent measles vaccine. • 1997 January 1 – 1999 April 30 – Measles/Rubella – Second dose measles catch up for individuals in Grades 1 to 9. **Program Notes:** • 1982 October 1: MMR vaccine was introduced into the routine immunization program in Alberta. • 1983 to 1986: Catch-up programs with MMR vaccine for grade 1 and 6 were offered. • 1996 June: The second dose of MMR vaccine was introduced at 4 to 6 years of age. • 1997 April to the end of June 1998: A catch-up program was offered for the second dose of measles in grades 1 through 9 using monovalent measles vaccine. A second catch-up program using measles/rubella vaccine was offered for grades 1 through 9 from January 1997 to end of December 1997. • 2007 November: A mass immunization campaign in response to a mumps outbreak was initiated using the combined MMR vaccine. • 2008 February 14: Mumps-containing vaccine two doses for HCWs and post-secondary. students born in 1970 or later. • 2010 September 1: MMR-Var (Priorix-Tetra) replaced MMR at 12 months for routine program. • 2013 September 26: An expanded measles immunization program was implemented as part of measles outbreak measures. • 2017 June 1: Adults born in or after 1970 became eligible for 2 doses of mumps-containing vaccine. • 2018 April: Updated rubella vaccine indications to include adults born before 1957 generally presumed to have immunity to rubella. • 2021 January 1: MMR second dose offered at 18 months of age instead of 4 years of age. • 2022 May 18: Updated Indications for infants 6 months up to and including 11 months of age who are travelling • 2024 April 3: Updated to indicate that children older than 18 months of age and younger than 4 years of age who have only received one dose of vaccine are no longer considered up-to-	

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	Priorix	M-M-R II
	date for measles. Clarification on the locations where measles is circulating in Canada. Immunization is now recommended for all measles-susceptible individuals travelling to any country outside of Canada (including all of the US). • 2024 July 19: Updated the areas where measles is circulating in Canada section. • 2024 November 22: Updated the areas where measles is circulating in Canada section to include New Brunswick. • 2025 January 31: Updated the areas where measles is circulating in Canada section. • 2025 March 3: Reference to the Communicable Diseases Regulation removed. • 2025 March 14: Update areas where measles is circulating in Canda section and MMR-Var included as an option for post exposure prophylaxis for individuals 12 months to 12 years of age. • 2025 March 24: Updated areas where measles is circulating in Canada section.	
Related Resources	Measles Mumps Rubella Vaccine Information Sheet	

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