

M-M-R[®] II

Number of Doses	Age	Minimum age for 1st dose	Minimum Interval between doses	Dose and Route	How Supplied	Vaccine Storage and Handling Guidelines
2 (3 doses may be indicated in outbreak situations and foreign travel where measles exposure is likely*)	<p><u>12 months – 18 years</u></p> <p>1st dose: 12-15 months 2nd dose: 4-6 years and/or at least 4 weeks after the first dose</p> <p><u>19 years and over¹</u></p> <p>1st dose: ≥ 19 years 2nd dose: at least 4 weeks after the 1st dose</p>	*12 months (doses given before 12 months are invalid)	4 weeks	0.5 mL subcutaneous	<ul style="list-style-type: none"> • 10 vial box of lyophilized powder • 10 vials of diluent 	<ul style="list-style-type: none"> • Lyophilized vaccine – less than 5° F but no colder than -58° F (aim for 0° F) • Diluent – may be stored at room temperature or refrigerated • Only use the diluent supplied with the vaccine

M-M-R Vaccine Indications and Usage

- Two doses of MMR vaccine are routinely recommended for all children 12 months of age and older.
- Individuals vaccinated at 12 months or older should receive the second dose prior to elementary school entry at 4-6 years of age.
- A dose of MMR administered before the first birthday should not be counted as a valid dose and should be repeated at any time after the first birthday as long as it is separated from the first dose by at least 4 weeks.
- Adults born during or after 1957 should have documentation of at least one dose of MMR administered on or after the first birthday or other evidence of measles, mumps and rubella immunity. Documentation of provider-diagnosed disease is not considered acceptable evidence of immunity for measles, mumps, or rubella (laboratory evidence of immunity or laboratory confirmation of disease is acceptable).
- Certain groups at increased risk of measles or mumps exposure should have 2 doses, including persons attending colleges and other post-high school educational institutions, persons working in medical facilities, and international travelers.
- ¹A second dose is recommended for adults entering college or other post high school educational institutions, international travelers, health care workers born in 1957 or later, and should be considered for and is recommended for unvaccinated healthcare personnel born before 1957 who lack laboratory evidence of measles immunity or laboratory confirmation of disease during an outbreak of measles or mumps.

Contraindications

- Persons who have experienced a severe allergic reaction (e.g anaphylaxis) following a prior dose or to a vaccine component (e.g gelatin, neomycin).
- Women known to be pregnant.
- Persons who are immunosuppressed from medications such as high dose steroids, have leukemia (until 3 months have passed since last chemotherapy treatment), generalized malignancy, lymphoma, or severe immunosuppression from HIV.
- Persons who are receiving antibody-containing blood products (e.g. immune globulin, whole blood or packed red blood cells) due to potential interference with seroconversion to measles component of vaccine.

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- Two appropriately spaced doses of MMR should be given to all persons with perinatal HIV infection who were vaccinated prior to establishment of an effective anti-retroviral course of treatment and to those ≥ 12 months with HIV infection who do not have evidence of current severe immunosuppression.
- Persons who received inactivated (killed) measles vaccine or measles vaccine of unknown type during 1963–1967 should be revaccinated with 2 doses of MMR vaccine.

- **Measles outbreak and foreign travel schedule for infants between 6-12 months of age:**

Vaccination of infants between 6-12 months with the MMR vaccine may be recommended (for the measles component) in outbreak situations. This population may fail to respond to the other components of the vaccine as safety and effectiveness of mumps and rubella vaccine in infants less than 12 months of age have not been established. ***Such infants should receive a second dose of MMR between 12-15 months of age followed by a third dose between 4-6 years of age (please see table on page 1).**

- **Non-pregnant Adolescent and Adult Females:**

Immunization of non-pregnant adolescent and adult females of childbearing age with MMR (for the rubella component) is indicated because it confers individual protection against subsequently acquiring rubella infection during pregnancy. This, in turn, prevents infection of the fetus and consequent congenital rubella injury. Women of childbearing age should be advised not to become pregnant for 3 months after vaccination.

- **Measles Revaccination Recommendations:**

The following groups should be considered unvaccinated and should receive MMR vaccine according to the following recommendations:

- Persons vaccinated before the first birthday;
- Persons vaccinated with killed measles vaccine (KMV)
- Persons vaccinated with KMV followed by live vaccine less than 4 months after the last does of KMV;
- Persons vaccinated before 1968 with an unknown type of vaccine;
- Persons vaccinated with IG in addition to a further attenuated strain or vaccine of unknown type (revaccination not necessary if IG was given with Edmonston B vaccine).

- **Post-exposure Vaccination Recommendations:**

Measles: MMR may prevent disease if given within 72 hours of exposure. (IG) is recommended for high-risk susceptible or severely compromised persons including those for whom MMR vaccine is contraindicated. It must be given within 6 days of first exposure to the measles case. See the IG B-71 fact sheet at <http://publichealth.lacounty.gov/ip/providers/B71/VIG.pdf>.

Mumps: There is no conclusive evidence that vaccination of individuals recently exposed to natural mumps will provide protection.

Rubella: Neither rubella-containing vaccine nor immune globulin is effective for post-exposure prophylaxis of rubella.

Precautions

- Moderate or severe illness until illness improves or is resolved.
- Personal or family history of seizures of any etiology.
- History of thrombocytopenic purpura or thrombocytopenia.

Adverse Reactions

- Fever of 103°F (39°C) beginning 5-12 days after vaccination.
- Transient rashes.
- Thrombocytopenia rarely within 2 months after vaccination.
- Transient lymphadenopathy and parotitis sometimes occur.
- Arthralgias and other joint symptoms are reported in up to 25% of adult women (related to rubella component).

Healthcare Personnel (HCP)

- Consider vaccinating unvaccinated HCP born before 1957 who lack laboratory evidence of measles, mumps or rubella immunity or laboratory confirmation of disease with 2 doses of MMR vaccine at appropriate intervals and 1 dose of MMR vaccine for rubella immunity.
- Recommend 2 doses of MMR during a measles or mumps outbreak for all unvaccinated HCP born before 1957 who lack laboratory evidence of immunity or laboratory confirmation of disease; 1 dose for protection during a rubella outbreak.

Tuberculin Skin Tests

- Measles-containing vaccines can interfere with the response to a tuberculin test.
- Tuberculin testing, if indicated, can be done on either the same day that a measles-containing vaccine is administered or 4-6 weeks later.