**Measles, Mumps, Rubella (MMR) Vaccine**

**For Children, 12 Months Through 18 Years of Age**

**Precautions and Contraindications**

Screen all patients for precautions and contraindications to immunization.

**Recommended Schedule**

* Children 12 months through 18 years of age. (See adult protocol for those aged 19 and older)
	+ The first dose of MMR vaccine is recommended at 12 to 15 months of age
	+ The second dose is recommended at 4 to 6 years of age. The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.
	+ The minimum interval between the two doses of MMR vaccine is 4 weeks.
* If MMR and varicella vaccines are not administered at the same visit, they should be separated by at least 4 weeks.
* Infants aged 6 through 11 months who are traveling internationally should receive one dose of MMR vaccine before departure. These children should be revaccinated with 2 doses of MMR vaccine, the first at ages 12 through 15 months and at least 4 weeks after the previous dose, and the second at ages 4 through 6 years.
* During a measles outbreak, MMR vaccine may be given to infants as young as 6 months of age. These infants should be revaccinated with 2 doses of MMR vaccine, the first at ages 12 through 15 months and at least 4 weeks after the previous dose, and the second at ages 4 through 6 years.
* During a mumps outbreak: A third dose of MMR vaccine should be given to persons previously vaccinated with two doses of a mumps virus-containing vaccine and are identified by public health authorities as being part of a group or population at increased risk for acquiring mumps because of an outbreak.

**Dosage and Route**

* 0.5 mL subcutaneously

**Anatomical Site**

* Outer aspect of the deltoid of the upper arm or in the higher anterolateral area of the thigh.

**Precautions**

* Prior to administering the vaccine, obtain a vaccination history to determine any reactions to any vaccine including MMR vaccine.
* Pregnancy should be avoided for at least 1 month after receiving the MMR vaccine1.

**Contraindications**

**DO NOT** administer MMR vaccine to individuals with:

* A history of anaphylactic reactions to neomycin.
* A history of hypersensitivity to gelatin or any other component of the vaccine.
* Blood dyscrasia, leukemia, lymphomas of any type, malignant neoplasms
* Primary and acquired immunodeficiency states, including AIDS
* Active untreated tuberculosis
* Women who are pregnant
* An active febrile illness with fever greater than 101.3°F.
* Immunosuppressive therapy including high-dose systemic corticosteroids.
* See package insert WARNING about administering MMR to individuals with a history of anaphylactic or other immediate hypersensitivity reactions (e.g., hives, swelling of the mouth and throat, difficulty breathing, hypotension, or shock) after egg ingestion.

**Adverse Events**

* See the product’s package insert
* See Adverse Events Following Vaccinations page of this section

**Storage and Handling**

* MMR vaccine may be stored in the refrigerator or freezer, (It is recommended to keep MMR vaccine in the freezer to prevent confusion with MMRV vaccine).
* MMR vaccine can be refrigerated for up to 8 hours after reconstitution and must be protected from light.

**Other Important Notes**

* Breastfeeding is not a contraindication to receiving the vaccine.

**Tuberculin Testing and Live Vaccines**

Recommendations for use of the tuberculin skin test are independent of those for immunization. Tuberculin testing at any age is not required before administration of live-virus vaccines. A tuberculin skin test (TST) can be applied at the same visit during which these vaccines are administered. Measles vaccine temporarily can suppress tuberculin reactivity for at least 4 to 6 weeks. The effect of live-virus varicella, yellow fever, and live-attenuated influenza vaccines on tuberculin skin test reactivity is not known. In the absence of data, the same TST spacing recommendation should be applied to these vaccines as described for MMR. There is no evidence that inactivated vaccines, polysaccharide vaccines or recombinant or subunit vaccines or toxoids interfere with immune response to TST.

**Tuberculin Skin Testing (TST) and Measles, Mumps, Rubella Vaccine (MMR)**

* Apply TST at same visit as MMR (preferred strategy)
* Apply TST first and administer MMR when TST is read (least favored option because receipt of MMR is delayed) (least preferred strategy)
* Delay TST at least 4 weeks if MMR is given first.

1October 2001, the ACIP shortened its recommended period to avoid pregnancy after receipt of rubella-containing vaccine from 3 months to 28 days, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5049a5.htm>. Vaccine Information Statements (VISs) for MMR vaccine, last revised in 2018, include a precaution that “Women should avoid getting pregnant for at least 1 month after getting MMR vaccine.” Note that both the ACIP recommendations and the text of the MMR VIS differ from the package insert precautions to avoid pregnancy for three months after vaccination.

**Resources**

Marin M, Marlow M, Moore K, Patel M. Recommendation of the Advisory Committee on Immunization Practices for Use of a Third Dose of Mumps Virus–Containing Vaccine in Persons at Increased Risk for Mumps During an Outbreak. MMWR Morb Mortal Wkly Rep 2018;67:33–38, <https://cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm>

Advisory Committee on Immunization Practices (ACIP) Resolution No. 10/17-3: Vaccines to Prevent Measles, Mumps, Rubella, and Varicella,

[www.cdc.gov/vaccines/programs/vfc/providers/resolutions.html](http://www.cdc.gov/vaccines/programs/vfc/providers/resolutions.html).

Vaccine Information Statement. MMR (Measles, Mumps, and Rubella) Vaccine: *What You Need to Know.*  Centers for Disease Control and Prevention. Last revised 2/12/2018,
<https://www.cdc.gov/vaccines/hcp/vis/vis-statements/mmr.pdf>.

Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger, U.S., 2018, <https://www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html>

Last updated August 1, 2012 and July 1, 2018