

Vaccination for measles – (FAQs – March 29, 2019)

Q: How effective is the MMR vaccine at preventing measles?

One dose of MMR vaccine is approximately 93% effective at preventing measles; two doses are approximately 97% effective.

Q: What are common adverse effects related to MMR vaccine?

Fever can occur in 5-15% of vaccine recipients. In general, fever occurs 6-12 days after receipt of the MMR, usually lasting 1-2 days. A transient rash can also occur in up to 5% of vaccine recipients. Patients with fever and rash are NOT contagious. Febrile seizure (one case for every 3,000 to 4,000 doses of MMR) and ITP (one case per 40,000 doses) are considered rarer adverse effects.

Q: What are contraindications to the measles vaccine?

Contraindications for receiving MMR vaccine include: history of anaphylaxis to any component of the vaccine, including neomycin; pregnancy; and immunosuppression/being in an immune suppressed state (including, but not limited to, history of immune deficiency, history of malignancy, history of transplantation, those receiving systemic immunosuppressive therapy).

Q: What are the routine MMR vaccine recommendations for children?

Routine childhood immunization for MMR vaccine is a first dose at 12 through 15 months of age, and the second dose at 4 through 6 years of age with at least 28 days following the first dose.

Q: Are there specific recommendations for MMR vaccinations in young children during an outbreak?

Consider using the earlier intervals (i.e. 12 months and four years rather than 15 months and 5 years) to provide protection in the event of an exposure. If early vaccination of a second dose is provided, the interval must be at least 28 days after the first dose.

In some situations, MMR vaccine can be given to patients age 6-11 months if at high risk for exposure due to conditions of the outbreak. Physicians should follow the local health department guidance relevant to the patient's county of residence. If vaccinated prior to the first birthday, this dose does not count as part of the routine schedule.

In some situations, the second MMR vaccine, is given prior to age 4. Physicians should follow the local health department guidance relevant to the patient's county of residence. The 2nd dose must be given at least 28 days after the first dose.

Q: What are the routine MMR vaccine recommendations for adults born after 1957?

Adults and teens should also be up to date on MMR vaccination. MMR vaccination is especially important for students at post-high school educational institutions, International travelers, healthcare professionals, Women of childbearing age who are not pregnant, people who care for or are around immunocompromised people, people living with HIV without evidence of severe immunosuppression, and during outbreaks.

Q: What are the routine MMR vaccination recommendations for adults born before 1957?

Birth before 1957 provides presumptive evidence for measles immunity. The majority of people born before 1957 are likely to have been infected naturally and therefore are presumed to be protected against measles.

Q: Are there specific recommendations for older children and adults during an outbreak?

Older children and adults who have not received 2 doses of MMR should be vaccinated. For adults born before 1957, MMR vaccine can be offered or measles/Rubeola IgG can be checked for evidence of immunity depending upon the characteristics of the outbreak.

Q: What should I recommend for a patient who is unsure if they are immune to measles?

Patients should first try to find vaccination records. If patients do not have written documentation of measles immunity, then MMR vaccine can be given or measles/Rubeola IgG can be checked for evidence of immunity.

Q; What are MMR vaccine recommendations for international travelers?

A: Infants 6 through 11 months of age should receive one dose of MMR vaccine
Children 12 months of age or older should have documentation of two doses of MMR vaccine (the first dose of MMR vaccine should be administered at age 12 months or older; the second dose no earlier than 28 days after the first dose)

Teenagers and adults born during or after 1957 without evidence of immunity against measles should have documentation of two doses of MMR vaccine, with the second dose administered no earlier than 28 days after the first dose.

Q: What do I do if I have a patient that's been exposed to measles?

Determine whether the patient has immunity to measles. Patient are considered protected from measles if they have written documentation of two doses of MMR, one dose of MMR in a pre-school age child, laboratory confirmed measles, or laboratory confirmation of immunity. (Exposed unvaccinated adults with birth prior to 1957 should have laboratory testing performed to confirm immunity).

People exposed to measles who cannot readily show that they have evidence of immunity against measles should be offered post-exposure prophylaxis

If live virus vaccines are not otherwise contraindicated, non-immune exposed patients can be given the MMR vaccine within 72 hours the initial measles exposure; this can provide some protection and help to modify disease. If MMR vaccine is not administered within 72 hours of exposure as post-exposure prophylaxis (PEP), MMR vaccine should still be offered at any interval following exposure to the disease in order to offer protection from future exposures

For exposed individuals at high-risk for disease, immune globulin therapy can be given within 6 days of the initial measles exposure. Those considered to be at high-risk for disease include: infants age <12 months who could not otherwise receive the vaccine, pregnant women without evidence of measles immunity,

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and severely immunocompromised patients regardless of vaccination status. Of note, in younger patients who will require subsequent MMR vaccinations, additional MMR vaccines should be deferred for 6-8 months after receiving immune globulin depending on the route IG was administered.

References:

1. Committee on Infectious Diseases, American Academy of Pediatrics. Measles. Red Book 2018.
2. McLean, HQ, et. al. Centers for Disease Control and Prevention. Prevention of Measles, Rubella, Congenital Rubella Syndrome, and Mumps, 2013: Summary Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep. 2013;62(RR-4):1-34.
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