



Health Alert



City of Chicago
Rahm Emanuel, Mayor

Immunization Program

Chicago Department of Public Health
Julie Morita, MD, Acting Commissioner

Measles MMR Vaccination Guidelines, Update #4

Date: February 17, 2015

To: Infection Control Professionals, Infectious Disease Physicians, Emergency Departments, Laboratories, and Health Care Providers and Clinics

From: Anagha Loharikar MD, Julie Morita MD

Subject: Measles Vaccination Guidelines

Background

Measles can be prevented with the MMR (measles, mumps, and rubella) vaccine. One dose of MMR vaccine is about 93% effective at preventing measles, and two doses are about 97% effective. In the United States, widespread use of measles vaccine has led to a greater than 99% reduction in measles cases compared with the pre-vaccine era.

Routine MMR Vaccine Recommendations

CDC recommends all children get two doses of MMR vaccine, starting with the first dose at 12 through 15 months of age, and the second dose at 4 through 6 years of age. Children can receive the second dose earlier as long as it is at least 28 days after the first dose.

Students at post-high school educational institutions who do not have evidence* of immunity against measles need two doses of MMR vaccine, separated by at least 28 days.

Adults who do not have evidence* of immunity against measles should get at least one dose of MMR vaccine.

Special Circumstances

International Travel

People 6 months of age and older who will be traveling internationally should be protected against measles.

Infants 6 through 11 months of age should receive one dose of MMR vaccine. Infants who get one dose of MMR vaccine before their first birthday should get two more doses (one dose at 12 through 15 months of age and another dose at least 28 days later).

Children 12 months of age and older should receive two doses of MMR vaccine, separated by at least 28 days. Teenagers and adults who do not have evidence* of immunity against measles should get two doses of MMR vaccine separated by at least 28 days.

Healthcare Workers

Healthcare personnel should have documented evidence* of immunity against measles. Healthcare personnel without evidence of immunity should get two doses of MMR vaccine, separated by at least 28 days.

Post-exposure Prophylaxis

People exposed to measles who cannot readily show that they have evidence* against measles should be offered post-exposure prophylaxis (PEP) or be excluded from the setting (school, hospital, childcare, etc.) MMR vaccine, if administered within 72 hours of initial measles exposure, may provide some protection or modify the clinical course of disease.

If MMR vaccine is not administered within 72 hours of exposures as PEP, MMR should still be offered at any interval following exposure to the disease in order to offer protection from future exposures. People who receive MMR vaccine as PEP should be monitored for signs and symptoms consistent with measles for at least one incubation period.

Except in healthcare settings, unvaccinated people who receive their first dose of MMR vaccine within 72 hours after exposure may return to childcare, school or work. Children vaccinated before their first birthday should be revaccinated when they are 12-15 months old and again when they are 4-6 years old.

Contraindications to MMR Vaccination

Absolute contraindications to MMR vaccination include:

1. Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component.
2. Known severe immunodeficiency (e.g., from hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, or long-term immunosuppressive therapy or patients with human immunodeficiency virus [HIV] infection who are severely immunocompromised).
3. Pregnancy

Take caution with vaccination in the following instances:

1. Moderate or severe acute illness with or without fever
2. Recent (within 11 months) receipt of antibody-containing blood product. (For more details, see table 5 in www.cdc.gov/mmwr/preview/mmwrhtml/rr6002a1.htm).
3. History of thrombocytopenia or thrombocytopenic purpura
4. Need for tuberculin skin testing (MMR vaccine might interfere with the response to a tuberculin skin test. Skin tests can be performed any time before, simultaneously or 4-6 weeks after MMR or MMRV vaccine.)

Duration of Measles Immunity after Vaccination

Both serologic and epidemiologic evidence indicate that measles-containing vaccines induce long lasting immunity in most persons. Approximately 95% of vaccinated persons examined 11 years after initial vaccination and 15 years after the second dose of MMR vaccine had detectable antibodies to measles.

***Evidence of Immunity to Measles**

Presumptive evidence of immunity to measles for persons includes any of the following:

- Written documentation of vaccination with 2 doses of live measles or MMR vaccine administered at least 28 days apart
- Laboratory evidence of immunity (titer)
- Laboratory confirmation of disease
- Birth before 1957**

**Although birth before 1957 is considered as presumptive evidence of immunity, for unvaccinated healthcare professionals born before 1957 that lack laboratory evidence of measles immunity or laboratory confirmation of disease, health care facilities should consider vaccinating personnel with two doses of MMR vaccine at the appropriate interval.

Additional Resources

For additional MMR vaccination information, visit:

<http://www.cdc.gov/vaccines/vpd-vac/measles/vacc-in-short.htm>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm>

For more information on healthcare personnel vaccination recommendations, visit:

<http://www.cdc.gov/mmwr/pdf/rr/rr6007.pdf>