Post Exposure Prophylaxis (PEP) for Asymptomatic Persons Exposed to Measles:

Recommendations by Age, Health Status and Levels of Measles Immunity

Age or Health Status Category	Measles Immune Status	Time from First Exposure[1]		
		≤72 hours	>72 hours–6 days	>6 days
All ages	Immune[2]	▪ PEP not indicated when exposed person has presumptive evidence of immunity ▪ No quarantine or exclusion from congregate setting/work needed ▪ Monitor for symptoms for 21 days after exposure		
<6 months, not severely immunocompromised[5]	Non-immune	▪ Give IGIM[3] ▪ Quarantine for 21 days after last exposure and monitor for symptoms for 28 days		▪ PEP not indicated (too late) ▪ Quarantine and monitor for symptoms for 21 days after last exposure
6–11 months, not severely immunocompromised[5]	Non-immune	▪ Give MMR[4] vaccine ▪ If vaccinated: no quarantine or exclusion from congregate settings needed. Monitor for symptoms for 21 days after last exposure	▪ Give IGIM[3] ▪ Quarantine for 21 days and monitor for symptoms for 28 days after last exposure	▪ PEP not indicated (too late) ▪ Quarantine and monitor for symptoms for 21 days after last exposure
>12 months, not pregnant, not severely immunocompromised[5]	Non-immune (0 doses MMR vaccine or IgG negative)	▪ Give 1st MMR[4] vaccine dose ▪ Persons who receive their first dose of MMR vaccine within 72 hours post exposure may return to child care, school or work. **Healthcare worker restriction:** ▪ Give 1st MMR[4] vaccine dose ▪ No quarantine or exclusion from congregate setting needed if vaccinated in time ▪ *Healthcare work restriction:* exclude from work for 21 days after last exposure ▪ Monitor for symptoms for 21 days after last exposure	▪ Consider giving IGIM[3] if <66 lbs or IGIV[3] and quarantine for 21 days and monitor for symptoms for 28 days after last exposure. ▪ Otherwise, PEP is not indicated. Quarantine and monitor for symptoms for 21 days after last exposure.	▪ PEP not indicated (too late) ▪ Quarantine and monitor for symptoms for 21 days after last exposure

Age or Health Status Category	Measles Immune Status	Time from First Exposure[1]		
		≤72 hours	>72 hours–6 days	>6 days
≥12 months, not pregnant, not severely immunocompromised[5]	1 dose of MMR vaccine	▪ Give 2nd MMR[4] vaccine dose if at least 28 days since first dose ▪ No quarantine or exclusion from work/ congregate setting needed if vaccinated in time ▪ Monitor for symptoms for 21 days after last exposure	▪ PEP not indicated ▪ No quarantine or exclusion from work/congregate setting needed ▪ Monitor for symptoms for 21 days after last exposure	▪ 1 dose of MMR vaccine
≥12 months, not pregnant, not severely immunocompromised[5]	Unknown immune status	▪ Give MMR[4] vaccine ▪ No quarantine or exclusion from congregate setting needed if vaccinated in time ▪ *Healthcare work restriction:* exclude from work for 21 days after last exposure ▪ Monitor for symptoms for 21 days after last exposure	▪ Consider giving IGIM[3] if <66 lbs or IGIV[3] and quarantine for 21 days and monitor for symptoms for 28 days after last exposure ▪ PEP otherwise not indicated; quarantine and monitor for symptoms for 21 days after last exposure	▪ PEP not indicated (too late) ▪ Quarantine for 21 days after last exposure
Pregnant	Immune[2]	▪ PEP not indicated ▪ No quarantine or exclusion from congregate setting/work needed ▪ Monitor for symptoms for 21 days after exposure		
	Non-immune (IgG negative)	▪ Give IGIV[3] ▪ Quarantine for 21 days and monitor for symptoms for 28 days after last exposure		▪ PEP not indicated (too late) ▪ Quarantine and monitor for symptoms for 21 days after last exposure
	Unknown	▪ Draw IgG titers to determine immunity ▪ If IgG negative: give IGIV[3] and quarantine for 21 days and monitor for symptoms for 28 days after last exposure ▪ If IgG positive: PEP not indicated. No quarantine or exclusion from work/ congregate setting needed; monitor for symptoms for 21 days after exposure.		▪ PEP not indicated (too late) ▪ Quarantine and monitor for symptoms for 21 days after last exposure
Severely immunocompromised[5]	Any	▪ Give IGIV[3] (preferred); IGIM[3] is an option if <12 months ▪ Quarantine for 21 days and monitor for symptoms for 28 days after last exposure		▪ PEP not indicated (too late) ▪ Quarantine and monitor for symptoms for 21 days after last exposure

Footnotes

[1]**Exposed** - Household or other close contact, persons in the same congregate setting (e.g., school classroom), or anyone who shared air space with a confirmed case within 2 hours of the person known or suspected to have measles leaving a room.

- All exposed persons should self-monitor for **signs and symptoms of measles.**
- Quarantine or self-quarantine means to stay home and away from others. It includes not going to school, work, or public spaces and not using public transportation.
- After receipt of IG, individuals should self-quarantine at home for 21 days after the last exposure to measles and self-monitor for symptoms of measles for an additional seven days (total of 28 days after exposure). This is because IG potentially prolongs the incubation period. Persons who continue to be exempted from or who refuse measles vaccination should be excluded from the school, child care, or other institutions until 21 days after last contact with any case of measles.

[2]**Immune** - Meets presumptive evidence of immunity criteria for exposed persons, as defined below.

Presumptive Evidence of Immunity for Exposed Persons who Do Not Work in a Healthcare Setting

Acceptable presumptive evidence of measles immunity includes at least one of the following:

- Written documentation of adequate vaccination- receipt of one or more doses of a measles-containing vaccine administered on or after the first birthday for children 12 months through preschool-age and adults not at high risk, and two doses of measles-containing vaccine for school-age children and adults at high risk for exposure transmission (i.e., health care personnel, international travelers, and students at post-high school educational institutions); or
- Laboratory evidence of immunity; or
- Birth before 1957; or
- Laboratory confirmation of disease.

Persons who do not meet the above criteria are considered susceptible and should be vaccinated unless contraindicated.

Presumptive Evidence of Immunity for Exposed Persons who Work in a Healthcare Setting (including volunteers, trainees, nurses, physicians, technicians, receptionists, and other clerical and support staff)

Presumptive evidence of immunity to measles for health care personnel includes any of the following.

- Written documentation of vaccination with 2 doses of live measles or MMR vaccine administered at least 28 days apart, or
- Laboratory evidence of immunity, or
- Laboratory confirmation of disease.

Source: **CDC Vaccine Preventable Diseases Surveillance Manual (Chapter 7: Measles)**

[3]**Immunoglobulin** (IG) - Use of IG is prioritized for infants, susceptible pregnant women, and severely immunocompromised persons. It is not indicated for persons who have received one or more doses of measles-containing vaccine at age 12 months or older, unless they are severely immunocompromised.

- Doses – intramuscular (IGIM) = 0.5 mL/kg. Maximum dose 15 mL. Give measles vaccine 6 months after IGIM as long as at least 12 months of age and not contraindicated. For dosing information, refer to the GamaSTAN package insert.
- Doses – intravenous (IGIV) = 400 mg/kg. Give measles vaccine 8 months after IGIV as long as at least 12 months of age and not contraindicated. For dosing information, refer to the GamaGUARD package insert.

[4]**MMR** - measles, mumps, rubella vaccine. For dosing information, refer to the MMR II package insert, Priorix package insert and MMRV package insert.

[5]**Severely immunocompromised** persons includes:

- Patients with severe primary immunodeficiency;
- Patients who have received a hematopoietic stem cell transplant, until at least 12 months after finishing all immunosuppressive treatment or longer in patients who have developed graft- versus-host disease;
- Patients undergoing treatment for acute lymphoblastic leukemia, within and until at least 6 months after completion of immunosuppressive chemotherapy;
- People who have received a solid organ transplant;
- People with human immunodeficiency virus (HIV) infection who have severe immunosuppression; and
- Patients younger than 12 months whose mothers received biologic response modifiers during pregnancy.

Source: Red Book: 2021 Report of the Committee on Infectious Diseases, 32nd Edition, American Academy of Pediatrics. https://ebooks.aappublications.org/content/red-book-2021