



# Department of Health

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DATE: March 26, 2024

TO: Hospitals, Local Health Departments, Laboratories, Emergency Rooms, Family Medicine, Pediatrics, Adolescent Medicine, Internal Medicine, Infectious Disease, Infection Control Practitioners, and Primary Care Providers

FROM: New York State Department of Health, Division of Vaccine Excellence

## HEALTH ADVISORY: MEASLES CASE IN NEW YORK STATE

A case of measles has been confirmed in Nassau County, New York in a young unvaccinated child who has not travelled abroad. Given the highly contagious nature of measles, healthcare professionals are urged to take immediate actions to prevent further spread and to manage exposures effectively.

- Providers should be on alert for patients who have febrile rash illness and [symptoms consistent with measles](#) (e.g., cough, coryza, or conjunctivitis) particularly if they have recently traveled abroad, especially to countries with ongoing measles [outbreaks](#). However, recently there have been measles cases without accompanying travel.
- Measles is one of the most contagious infections and individuals are contagious from four days before to four days after rash onset.
- Call ahead to the emergency room if you are sending patients with symptoms of measles to be seen. Medical offices should screen patients for fever and rash and ask about recent travel or exposure to measles at the first point of contact (e.g., during appointment scheduling and at the reception desk).
- Individuals who are exposed to measles without evidence of immunity against measles should be offered post-exposure prophylaxis (PEP). Evidence of immunity is defined as having received two doses of the measles-containing vaccine, positive measles antibody test results, a history of laboratory-confirmed measles, or being born before 1957.
- Providers should assess their current supply of measles post-exposure prophylaxis and consider ordering as needed.
- **Report patients with suspected measles immediately to the [local health department](#) of the patient's residence.** If the residence is in New York City, report persons with suspected measles immediately to the New York City Department of Health and Mental Hygiene at 866-692-3641. **Do not wait for laboratory confirmation to report.**
  - If you have urgent questions regarding measles during evenings, weekends, or holidays, call 866-881-2809.
- Educate patients about vaccines that provide [protection against measles](#). This is especially important [before international travel](#).
- A health advisory issued by the Centers for Disease Control and Prevention can be found at their [website](#).

## Clinical Signs and Symptoms

Measles typically [presents](#) as an acute viral illness characterized by fever and generalized maculopapular rash (Figure 1). Signs and symptoms appear 7 to 21 days after initial exposure. The prodrome may include cough, coryza, conjunctivitis, and Koplik spots. The rash usually starts on the face, proceeds down the body, and may include the palms and soles. The rash initially appears discrete but may become confluent and lasts several days (Figure 2,3). Symptoms may be mild, absent, or atypical in persons who have some degree of immunity to measles virus before infection (e.g., in previously vaccinated persons). Serious side effects of measles can include pneumonia, encephalitis, hospitalization, and death.

Figure 1 (Source CDC/PHIL)

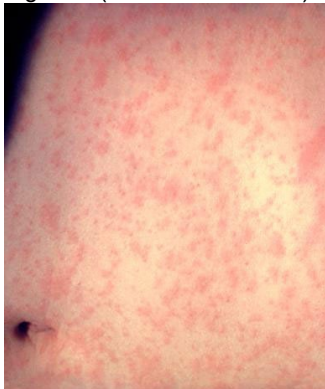
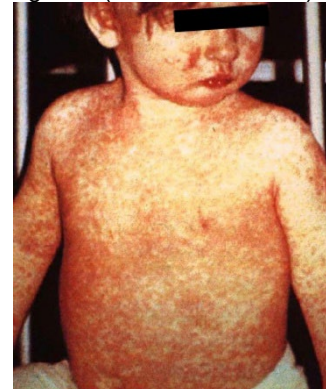


Figure 2 (Source CDC/PHIL)



Figure 3 (Source CDC/PHIL)



## Measles Testing and Specimen Collection

Healthcare providers should test for measles in individuals presenting with rash and fever, cough, conjunctivitis, and coryza, especially if they have traveled to or from areas with known measles outbreaks. [Testing should include:](#)

- Collection of a nasopharyngeal swab for reverse transcription-polymerase chain reaction (RT-PCR). Ideally 0-3 days after rash onset and up to 10 days after rash onset.
- Blood for serology should be collected to detect measles-specific IgM antibodies to confirm infection. IgM is most sensitive at 3 or more days after rash onset and may be negative from days 0-3 after rash onset.
- Collection of a urine specimen should occur within 10 days of rash onset. Collecting both respiratory and urine samples may improve test sensitivity, especially if individuals are at the end of the RT-PCR detection window.

Follow Wadsworth Center Laboratory's [tip sheet](#) and collect either a nasopharyngeal swab or throat swab for reverse transcription polymerase chain reaction (RT-PCR), as well as a blood specimen for serology, and urine sample from patients with suspected measles for testing at the lab. Follow the packaging and shipping instructions on the tip sheet. However, **if sending serology only**, address to: Diagnostic Immunology Laboratory at David Axelrod Institute Wadsworth, 120 New Scotland Ave, Albany, NY 12208. Notify local health departments and the Wadsworth Center Laboratory staff before all specimen shipping to assure plans for specimen transport and testing are completed in the fastest and most effective manner.

## Transmission and Infection Control

- To promptly identify suspected cases of measles and prevent exposures, consider screening patients for rash with fever at the point of entry of a healthcare facility (e.g., during appointment scheduling and at the reception desk), and inquire about recent international or domestic travel and possible exposure to measles.
- Providers should call ahead to the emergency room if they are sending patients with suspected symptoms of measles to be seen.
- Immediately [institute standard and airborne precautions](#) for patients with known or suspected measles and call ahead for patients being referred to other healthcare facilities to prevent healthcare-associated exposures.
- Place the patient in a single-patient airborne infection isolation room (AIIR).
  - If a single-patient airborne infection isolation room is unavailable, mask the patient immediately. Place the patient in a private exam room with the door closed and have them continue to wear a mask. After the patient leaves, it should remain vacant for at [least two hours](#).

## Measles Post-Exposure Prophylaxis (PEP)

Individuals who are exposed to measles and do not have evidence of immunity against measles should be offered [post-exposure prophylaxis \(PEP\)](#). Evidence of immunity is defined as having received two doses of the measles-containing vaccine, positive measles antibody test results, a history of laboratory-confirmed measles, or being born before 1957.

- **MMR Vaccine as Measles PEP:**

The MMR (measles, mumps, rubella) vaccine may offer protection against measles when administered [within 72 hours of exposure](#). For individuals aged  $\geq 6$  months exposed to measles, MMR vaccination within 72 hours of exposure is preferred over human immune globulin (IG), as it can induce protection against subsequent exposures and might modify the course of the disease if infection occurs. Do **not** administer MMR vaccine and immune globulin simultaneously, as this practice invalidates the vaccine.

- **Immune Globulin (IG) Products as Measles PEP:**

Human immune globulin (IG), a blood product that provides antibodies for short-term prevention of infectious diseases like measles, can be administered as post-exposure prophylaxis. The United States uses multiple immune globulin preparations, including intramuscular (IGIM) and intravenous (IGIV) forms. Immune globulin administration [within 6 days](#) of exposure can prevent or modify measles in nonimmune persons.

Immune globulin is not specific to measles but can be used for post-exposure prophylaxis to provide passive immunity. The decision to use immune globulin should be based on individual patient risk assessment, including age, immunization status, and exposure details. It is crucial to follow specific guidelines for administering immune globulin, especially in high-risk groups such as [infants under 12 months](#), [pregnant women](#) without measles immunity, and severely immunocompromised patients.

Human immune globulin (GamaSTAN) is indicated for prophylaxis following exposure to measles in susceptible persons within six days of exposure. If you do not regularly procure human immune globulin, ordering information is available through the [GamaSTAN website](#).

- **Recommended Dose and Use of IG for PEP:**

The [dose of IGIM](#) for post-exposure prophylaxis is 0.5 mL/kg of body weight (maximum dose = 15 mL), while IGIV is given at 400 mg/kg. Immune globulin should be prioritized for those in high-risk settings and can be administered based on the individual's exposure risk and immune status.

### **Avoiding Exposures**

Healthcare professionals should ensure that all staff and patients are aware of the symptoms of measles and the importance of notifying healthcare facilities before visiting if they suspect they have measles. To avoid exposure:

- Screen patients for fever and rash and ask about recent travel or exposure to measles at the first point of contact (e.g., during appointment scheduling and at the reception desk).
- Implement immediate masking and [institute standard and airborne precautions](#) for suspected measles cases to prevent the spread within healthcare settings.
- Use and provide personal protective equipment (PPE) and ensure strict adherence to infection control practices.

### **Reporting**

Suspected measles cases must be reported immediately to the [local health department](#) of the patient's residence. The local health department in New York State (outside of New York City) can assist in arranging testing at the Wadsworth Center Laboratory, and for specimens to arrive at the lab within 24-hours of collection, when feasible.

### **Public Health Action**

Those who are infected should be isolated for four days after they develop a rash; standard and airborne precautions should be followed in [healthcare settings](#). People who are suspected to be exposed to measles who cannot readily show that they have evidence of immunity against measles should be offered post-exposure prophylaxis (PEP).

To potentially provide protection or modify the clinical course of disease among susceptible persons, either administer MMR vaccine within 72 hours of initial measles exposure, **or** immune globulin (IG) within six days of exposure. Do **not** administer measles, mumps, rubella (MMR) vaccine and immune globulin simultaneously, as this practice invalidates the vaccine.

Educate patients about vaccines that provide protection against measles. This is especially important before international travel. All U.S. residents travelling internationally, regardless of destination, should be current on their measles, mumps, rubella (MMR) vaccine. Healthcare providers and local health departments should coordinate outbreak response with each other and consider offering MMR vaccine clinics to prevent an outbreak in your community.