

How to Recognize and Respond to Measles

Measles is a highly contagious viral infection that is on the rise globally. Ensure that appropriate precautions are taken when caring for patients with suspected or confirmed measles.

Immunization is the best way to protect against measles.

What are the symptoms of measles?

- **Fever, cough, coryza** (runny nose) and non-purulent conjunctivitis (red eyes) are the initial symptoms, which usually begin 10 to 12 days after exposure.
- **Koplik spots** (blue-white spots on the buccal mucosa) may appear 2 to 3 days after symptom onset and are pathognomonic.
- **Maculopapular rash** develops about 3 to 7 days after symptoms begin, starting on the face and spreading to the trunk, arms and legs (often including the palms and soles). The rash is typically not itchy and may be harder to see on darker skin.
- People with measles are infectious from 4 days before rash onset to 4 days after the appearance of the rash (i.e., 9 days total), or throughout the duration of illness for those who are immunocompromised.



Koplik spots¹



Conjunctivitis²



Rash³



Rash⁴

Image sources: 1. National Health Services; 2022. Available from: <https://www.nhs.uk/conditions/measles/>. 2. National Health Services; 2024. Available from: <https://www.nhs.uk/conditions/conjunctivitis/>. 3. CDC/James Goodson, M.P.H.; 2015. Available from: <https://phil.cdc.gov/Details.aspx?pid=19434>. 4. National Health Services; 2022. Available from: <https://www.nhs.uk/conditions/measles/>.

What should you do if you suspect that a patient has measles?

1. Use IPAC measures.

- Ensure the patient wears a medical mask when possible.
- Immediately place the patient in a single room with negative air flow, if available, or a private/single room with the door closed.
- Health care workers caring for the patient should have evidence of measles immunity and wear a fit-tested, seal-checked **N95 respirator, gown, gloves and eye protection**.
- After the patient leaves, ensure at least two hours has elapsed for the air to change in the examination room before it is cleaned and reused.

2. Contact your local public health unit.

- Contact your local public health unit **immediately** to report the suspect case and receive additional guidance (do not wait for laboratory confirmation).

3. Collect samples for measles testing.

- **A nasopharyngeal or throat swab and urine sample** for polymerase chain reaction (PCR) testing are required for diagnosis. Whole blood or serum for diagnostic serology testing is not required during periods of high community transmission.
- Complete the PHO laboratory requisition form. Specify “Suspect case of measles” as the testing indication.
- Package priority specimens for measles testing separate from routine specimens and mark “STAT” on the package. Store specimens at 2–8°C and ship to PHO’s laboratory on ice packs.

4. Counsel the patient to minimize exposure to others.

- Isolate at home while results are pending or until no longer infectious.
- Avoid contact with susceptible individuals at high-risk of measles complications (i.e., infants/children, pregnant individuals, immunocompromised persons).
- Contact healthcare facilities prior to seeking care so that precautions can be put in place.

Contact

Public Health Ontario Laboratory

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After Hours Duty Officer - Tel: 416-605-3113

For more information, please refer to publichealthontario.ca/measles.

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