

Frequently Asked Questions: Measles Virus Precautions

#1 What is measles?

- Measles is a highly contagious viral illness that occurs worldwide.
- **The infection is characterized by fever, cough, runny nose, and pinkeye, followed by a rash. Cough may persist for one or two weeks after measles. A minority of patients develop severe complications from measles including otitis, pneumonia and encephalitis.**
- Children less than five years of age, adults older than 20 years of age, pregnant people and people who are immunocompromised are at higher risk of complications from measles

#2 How does it spread?

- Through the air when a person who is infected breathes, coughs, sneezes or talks. It may also spread through direct contact with fomites contaminated with secretions from the nose and throat of a person who is infected.
- The measles virus can persist in the air for up to two hours after a person who is infected has left the space.
- Airborne precautions should be used for patients with confirmed or suspected measles

#3 What are the symptoms of measles?

- Fever that lasts for a couple of days.
- Cough, runny nose, and red and watery eyes that follow the fever.
- Small red spots with bluish-white centers inside mouth appear two or three days later.
- Rash that starts on the face and hairline, upper neck and spreads down the body before spreading to the arms, hands, legs and feet, three to five days later.

#4 How soon do symptoms appear?

- Symptoms usually start between day 7 to 21 days after exposure (most people by day 13).
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#5 Are there travel destinations of greater concern?

- At this time, measles is an increasing problem in many jurisdictions from areas in the USA, Europe, Asia, etc. Therefore we are not able to provide a list of epidemiologically higher risk areas at this time and anyone who has travelled outside of Canada with symptoms will be considered potentially at risk if not immune
- Other than making sure patients are up to date with their vaccines before travelling, consider early MMR booster doses for children older than one year who have not received their second dose.
- However, individualized conversations would be necessary to ensure there is no contraindication to vaccination (e.g. immunosuppressive medications, etc.)

#6 What can you do to prevent the spread of measles?

- If measles is suspected, isolate the patient in airborne precautions (or place the patient in a private room with a HEPA filter).
- Wear a fit-tested, seal-checked N95 respirator for entry to the patient's room.
- Keep the door and windows to the patient room shut at all times.
- Contact IPAC if you have a case or a suspected case and are unsure of patient placement/when the room can be used after the patient vacates.
- Testing: PCR of NPS, throat swab within seven days of rash, and/or urine PCR within 14 days of rash.
- Adherence to infection prevention and control measures by staff and visitors is required to prevent further spread of the virus.
- Ensure your patients are fully MMR vaccinated or immune to measles; if not, offer or recommend the vaccine, if appropriate.

#7 If exposed, what is the risk?

- Measles is very contagious as it is airborne. The illness may be transmitted in public spaces even in the absence of direct or face to face contact.
 - However, prior infection with measles or having 2 doses of MMR vaccine provides life-long protection of almost 100%. Breakthrough infections are very rare.
 - In those who are non-immune, following an exposure approximately 90 percent of individuals develop measles.
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#8 If exposed, what can be done to minimize the risk of acquiring measles?

1. Verify your immunity status
 - If you have two doses of measles vaccine, history of measles infection, confirmatory bloodwork that shows antibodies to measles, or were born before 1970, you are considered immune.
2. If you have only received one dose of measles vaccine, it is advised to get a second dose as soon as possible. You will not be required to isolate and can return to work once you get your second dose.
3. If you have had no doses of vaccine and no history of measles infection or antibody testing proving immunity, you would be at high risk of getting measles. You will be required to isolate from day five to 21 after a known measles exposure.
 - In the first three days after exposure, the measles vaccine reduce the risk of severe infection.
 - Anyone less than one year of age, pregnant or immunocompromised, would be eligible to receive measles immunoglobulin or IVIG as prevention of measles infection after exposure. This needs to be given within the first five to six days after exposure for preventative effect, home isolation is still need from day five to 28 after exposure.

#9 If exposed and immunocompromised, do I need to do anything differently?

- Verify your immunity status.
 - If you have two doses of measles vaccine, history of measles, confirmatory bloodwork that shows antibodies to measles, or born before 1970, you would be considered immune.
 - Even immunocompromised patients that have received vaccines prior will have immune protection from vaccine.
- Some immunocompromised individuals are eligible for measles immunoglobulin or IVIG as added protection regardless of immunity status.

#10 If someone is suspected to have measles, how do we confirm it?

- We send either a nasal swab “NPS”, and throat swab and urine specimen for the virus (Measles PCR).
 - Blood testing for antibodies to measles (measles IgG and IgM)
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#11 What is required to be considered “measles immune”?

- Most individuals are vaccinated against measles, usually at one year and four to six years in Ontario. Two doses are considered evidence of full immunity.
- In general, adults born before 1970 are considered immune regardless of whether they received a vaccine or not.
- Some people may have a known history of having had measles, or been tested for immunity to measles by bloodwork and would be considered immune.
- Children under 1 year are not considered measles immune

#12 I am not vaccinated and not immune, and I have symptoms. When should I suspect measles and isolate?

- Anyone with a travel history outside of Canada and symptoms in keeping with measles such as fever, respiratory symptoms or a rash.
- Anyone with a known exposure to a measles case with symptoms
- Anyone who presents with typical signs and symptoms of measles regardless of travel history or exposure history

#13 I received measles immunoglobulin (Ig) because I was not immune and exposed. What should I monitor for?

- You may have pain, redness or swelling at the injection site.
- Fever or allergic reaction are possible side effects.
- If you get fever, URTI symptoms or rash, it may be measles infection or injection related.
 - Children less than one month of age would be advised to come back to the Emergency Department if they have fever to be assessed. We would isolate in airborne precautions for the duration of the stay until day 28 after measles exposure.
- For all patients who have received measles Ig:
 - They cannot receive any measles or varicella vaccine for six months after having the measles Ig dose.
 - No changes to other vaccine timings are needed.
- For all patients who have received IVIG as measles prevention:
 - They cannot receive any measles vaccine for eight months after having the measles Ig dose.

#14 Where can I learn more?

- [Measles: For health professionals](#)
 - [Statement from the Chief Public Health Officer of Canada on Global Increase in Measles and Risk to Canada](#)
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