

Human Metapneumovirus Infection: Everything You Need to Know

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ABSTRACT

Most children are infected with the human metapneumovirus (HMPV) by the age of five. The virus is capable of causing potentially fatal upper and lower respiratory tract illnesses. Elderly people and young children who are initially exposed to viruses are high-risk groups. There is currently no approved vaccination or standard therapy for HMPV. Raising awareness of HMPV's effects on public health is necessary to spur research, finish developing a vaccine, and avert serious virus-related illnesses and deaths around the world. This article aimed to overview the human metapneumovirus, the causative agent, how spread, symptoms, and treatment.

Keywords: Virus infection, Respiratory infection, Metapneumovirus, hMPV

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Introduction

The human metapneumovirus, also called hMPV, is a type of virus responsible for upper respiratory infections, or the common cold. While it normally only causes minor illness, some people may become seriously ill (1). It is a member of the respiratory syncytial virus (RSV) family of viruses, which is under the genus Metapneumovirus and the family Pneumoviridae (2). In 2001, HMPV was identified following the isolation of dozens of young infants in the Netherlands. Soon after its discovery, HMPV was discovered to be a common cause of respiratory illnesses in both young children and the elderly worldwide. HMPV outbreaks are more intermittent in tropical climates and more common in temperate climates during the winter and spring (3, 4). Nevertheless, serological investigations showed that in 1958, this disease was already circulating in the Netherlands. HMPV infections can occur on all continents worldwide; however, they peak in the northern hemisphere in late winter and early spring, despite the fact that infections may be reported throughout the year (5, 6).

How is hMPV it spread?

HMPV is most frequently transmitted to others by an infected individual through

- Coughing and sneezing fluids, close physical contact, including handshaking or touching
- Touching surfaces or items contaminated with viruses, then touching the eyes, nose, or mouth (7). HMPV re-infections are frequent but typically minor (8).

Symptoms of hMPV

HMPV symptoms include sore throat, cough, fever, congestion in the nose, and shortness of breath. Usually, three to six days following exposure, these appear. Severe HMPV-related disease may occasionally require hospitalization (3, 7, 9).

Who could get infected with the hMPV?

Although HMPV can infect anyone, the following are more susceptible:

- Newborns
- Children between two and five years old and those above 65 years old
- People who use steroids and have asthma
- Individuals suffering from chronic obstructive pulmonary disease
- Individuals with compromised immune systems as a result of diseases like HIV or cancer, or those who have received an organ transplant (10, 11,12).

Treatment of hMPV

Only supportive care is a conventional treatment for HMPV. Although laboratory studies have demonstrated anti-HMPV effectiveness for the nucleoside analogue ribavirin, clinical trials have produced inconsistent outcomes (12,13).

Conclusion

Children, adults, the elderly, and people with impaired immune systems are frequently affected by the human metapneumovirus (HMPV). Raising awareness of HMPV's effects on public health is necessary to spur research, finish developing a vaccine, and avert serious virus-related illnesses and deaths around the world.

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