

LETTER TO EDITOR

Influenza

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Received: 05 March 2026 Accepted: 20 March 2026 Published: 23 March 2026

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Dear Editor,

Influenza is an acute disease that mainly causes respiratory symptoms and, more rarely, gastrointestinal symptoms. It usually causes mild illness in the general population, but rarely severe illness in specific groups of the population.

The outbreak of the disease usually begins in the 45th week of the year, which coincides with the beginning of October, and ends at the end of April.

Influenza viruses are RNA viruses of the Orthomyxoviridae family (Orthomyxoviridae). The genome consists of eight separate RNA strands. The virus is surrounded by a capsid consisting mainly of viral proteins (hemagglutinin and neuraminidase).

Influenza virus strains

The influenza virus is divided into four strains, two of which usually infect humans. Type A and type B.

Virus A

It consists of two proteins, hemagglutinin (H) and neuraminidase (N). Hemagglutinin (H) has 18 subtypes (H1–H18) and neuraminidase (N) has 11 (N1–N11). The subtypes of A also occur in several birds, which can cause many mutations. Mutations occur when two different types of the virus infect the same host and exchange genetic information. One of the best-known new types is H 5 N 8, which causes avian influenza. The influenza A viruses that usually cause disease in humans are H1 N1 and H3 N2, which are responsible for seasonal influenza.

Virus B

It seems like A, is transmitted only from person to person, and mainly affects children. However, because influenza A can be transmitted from animals to humans, as mentioned above, it is more likely to cause pandemics than influenza B.

Modes of transmission

It is mainly transmitted aerodynamically through airborne droplets produced during speech, singing, and especially coughing and sneezing.

There are two types of droplets: those with a diameter of several micrometers, the large ones, and those with a small diameter, the small ones. Large droplets fall quickly and are usually not responsible for the direct transmission of the disease.

However, small droplets remain suspended in the air for several hours and are mainly responsible for transmission in enclosed spaces. Ventilation of rooms and classrooms is essential. It is also transmitted when we touch objects contaminated with droplets, such as mobile phones, various surfaces, etc. We must wash our hands frequently.

Symptoms

Fever, chills, cough, sore throat, runny nose, fatigue, headache. Vomiting and diarrhea are also common in children and rare in adults.

Diagnosis

It is made by molecular testing, which is usually used to standardize H1N1, H3N2, H5N2, but also

Citation: Vasileios Spyropoulos, Georgia Spyropoulou, Agathi-Panagiota Spiropoulou, *et al.* Influenza. Archives of Pulmonology and Respiratory Medicine. 2026;9(1):11-12.

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to differentiate between Covid-19 and respiratory syncytial virus (RSV).

Complications

In healthy individuals, influenza usually causes mild illness lasting 3–7 days. Sometimes the illness can last for several weeks. However, in individuals with underlying diseases that cause immunosuppression (diabetes mellitus, cancer, taking immunosuppressive drugs, etc.), the clinical picture can be severe. Pneumonia from bacterial infection (pneumococcus, mycoplasma, etc.) can lead to the patient being admitted to the intensive care unit (ICU). The high-risk group for severe illness also includes patients with heart failure, chronic obstructive pulmonary disease, respiratory failure, bronchial asthma, interstitial lung disease.

Incubation period

It lasts 1–3 days up to 7 days, during which time the patient transmits the disease before it becomes clinically apparent.

Treatment

Rest, plenty of fluids, antipyretics (paracetamol, ibuprofen), antivirals (oseltamivir Tamiflu) (zanamivir, Relenza). Treatment with antivirals should begin within the first 48–72 hours of illness.

Prevention

Prevention is achieved through vaccination, which should be administered before the expected outbreak period of the epidemic, as it takes about 2 weeks to achieve an immune response. Vaccination should be completed by the end of November. The flu vaccine can even be given on the same day as the coronavirus vaccine. People under the age of 65 can only receive the “simple” quadrivalent (QIVi, QIVc). People over the age of 65 can receive the simple or the enhanced (aQIV, QIV – HD). The enhanced vaccines provide a high immune response and greater protection. However, they have more frequent side effects.

During pregnancy, the “simple” vaccines (vaxigrip, fluarix, Influvac, and Flucelvax) are preferred.

Side effects of vaccination

The usual side effects are mild and local (pain, swelling, redness at the injection site). However, headache, fever, fatigue, and muscle pain lasting a few days may occur. In rare cases, serious allergic reactions, neuralgia, and thrombocytopenia may occur.

Influenza vaccination in children

It is given to children over 6 months of age, it is safe, and especially important for children with chronic diseases.

For the first time, a nasal vaccine is also available for children aged 2–5 years. Children who should be vaccinated are aged 6 months to 5 years.

Also, children and adolescents with chronic pulmonary, cardiac, metabolic, etc. diseases. Children who take aspirin chronically and children who come into contact with infants under 6 months of age or high-risk individuals.

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