

What it is:

Swine influenza is an **acute respiratory infection caused by influenza A viruses**. These pathogens **can infect humans as well as several animal species, including pigs and birds**.

Influenza A viruses are classified into subtypes based on the proteins found on their surface.

The most common subtypes found in pigs are H1N1, H1N2, and H3N2.

In some circumstances, **genetic mutations allowing these viruses to cross the species barrier may occur**. This process is called spillover and **can lead to zoonotic diseases**, infectious diseases that spread from animals to humans. These events can pose **serious public health risks, especially when such mutations enable the virus to spread between people**.

Category

Pigs are the primary reservoirs of the virus, although other species, such as birds, can act as intermediate hosts.

Humans may become infected, especially in settings **where exposure to infected animals is high**, such as farms or live animal markets.



SUINI

Origin and Transmission

Transmission among pigs is primarily airborne, through secretions expelled during coughing or sneezing.

Human infection can occur either through direct contact with infected animals or indirectly via contaminated environments.

Human-to-human transmission is rare but can occur when viral mutations enable the virus to adapt to humans.

The disease shows a **seasonal patterns**, with peaks during the winter months.

Symptoms and Impact

ANIMALS	HUMANS
<p>In pigs, swine influenza manifests with fever, coughing, sneezing, nasal discharge, lethargy, and loss of appetite. Morbidity can reach up to 100%, although mortality is generally low.</p> <p>However, infection may predispose animals to secondary bacterial complications.</p>	<p>In humans, symptoms resemble those of seasonal influenza and include fever, cough, sore throat, muscle aches, and fatigue.</p> <p>In some cases, particularly in vulnerable individuals such as children, the elderly, and immunocompromised persons, serious complications may occur, including pneumonia and respiratory failure.</p>

Geographical Distribution

Although it does not represent a constant threat to public health, **its presence within the national territory has been documented both in the past and in the present.**

Swine influenza is found in many regions of the world where pigs are raised, including Europe, the Americas, and parts of Asia.

In Italy, swine influenza has been reported multiple times over the years, particularly in northern regions with a high density of swine farms.

Preventive Measures

In animals, prevention relies primarily on **implementing biosecurity measures on farms.**

Pigs' vaccination can be used as an **additional control measure**, particularly in high-risk farms or those with a history of outbreaks.

Another key element is **specific testing of symptomatic animals** to enable early detection of the virus.

In humans, prevention relies on **annual influenza vaccination**, which includes swine-origin influenza virus subtypes, and is particularly recommended for vulnerable groups such as the elderly, individuals with chronic illnesses, and healthcare workers.

In high-risk settings, the **use of personal protective equipment** is also important to reduce the risk of zoonotic transmission.

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