



## Bird Flu

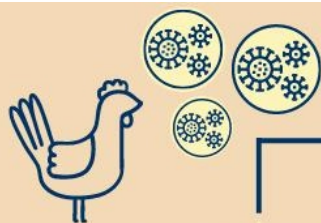
[Source: IE](#)

### Why in News?

A casualty was observed in Andhra Pradesh from bird flu virus marking **India's second recorded human fatality from H5N1 since 2021.**

### What is Bird Flu?

- **About: Bird flu, or avian influenza,** is a highly contagious viral disease that affects both wild and domestic birds.
  - It is caused by **avian influenza A viruses**, with subtypes such as **H5N1** and **H5N8** being particularly significant.
- **History of Human Cases:** First human cases were reported in **1997 (Hong Kong)**. Most have occurred in Asia and were linked to close contact with infected birds.
  - Between 2003 and February 2025, the [World Health Organization \(WHO\)](#) has recorded **972 cases** of confirmed H5N1 influenza.
- **Transmission:** H5N1 spreads primarily through **direct contact with infected live or dead birds** or **contaminated environments** (e.g., live bird markets).
  - **Rarely, transmission from infected mammals to humans** has been observed. Though human infections are rare, **H5N1 has a high fatality rate (~60%)**, much higher than the peak fatality of Covid-19 (~3%). Also, **airborne transmission has not been confirmed in humans.**
  - Human-to-human transmission remains **extremely rare**. The **virus continues to evolve**, and **if it mutates to allow sustained human-to-human transmission**, it could **trigger a global pandemic.**
    - Hence, H5N1 is listed as a **priority disease under WHO R&D Blueprint.**
- **Symptoms:** Common symptoms include **high fever, cough, sore throat, and muscle aches.**
  - Severe cases can lead to **respiratory failure** or **neurological complications**. Some individuals may remain asymptomatic despite exposure.
- **Treatment:** Antiviral drugs like **oseltamivir** are effective, especially when administered early in high-risk or severe cases.
- **Vaccination:** Current seasonal flu vaccines **do not protect** against H5N1.
  - Some **countries** have developed **H5N1-specific vaccines** for emergency use.
- **Strains of Avian Influenza Viruses:**



# Avian Influenza

## Low pathogenic forms



Only affect poultry animals



Induced by some H5, H7 or H9 subtypes



Cause few to no clinical signs. Weaken the immune system of infected animals



Cause substantial losses to poultry farmers

## Highly pathogenic forms



Mostly affect poultry, some strains can endanger humans



Some H5 and H7 forms are highly pathogenic



Severe clinical illness, high mortality in birds.



Cause enormous societal and economic losses

## What are Influenza Virus Types?

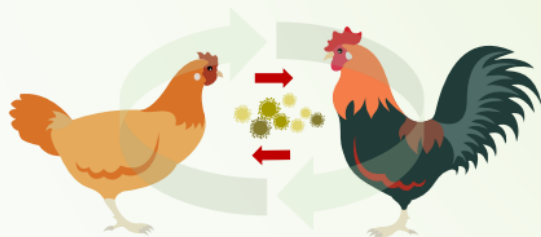
Type	Hosts	Impact on Humans	Key Features	Public Health Relevance
<b>Influenza A</b>	Humans, birds, pigs, other animals	High – causes pandemics and severe epidemics	Subtypes (H1N1, H5N1) based on HA & NA proteins	Major global concern; pandemic potential
<b>Influenza B</b>	Humans	Moderate – seasonal flu outbreaks	Two lineages: B/Yamagata and B/Victoria; slower mutation	Seasonal flu impact; affects vulnerable groups
<b>Influenza C</b>	Humans (rare)	Low – mild respiratory illness	No epidemics; long-lasting immunity	Limited concern; self-limiting
<b>Influenza D</b>	Cattle and other animals	None	No human infections; animal monitoring	Veterinary relevance; no human threat

# About Bird Flu

## WHAT IS BIRD FLU?

Bird flu is an infectious disease in birds caused by avian influenza type A viruses. It may cause mild to severe illness or sudden death in birds. Domestic poultry like chickens are particularly vulnerable.

Avian influenza viruses do not usually infect humans but may sometimes be transmitted to humans who have contact with infected poultry and their secretions and faeces, or contact with contaminated surfaces.

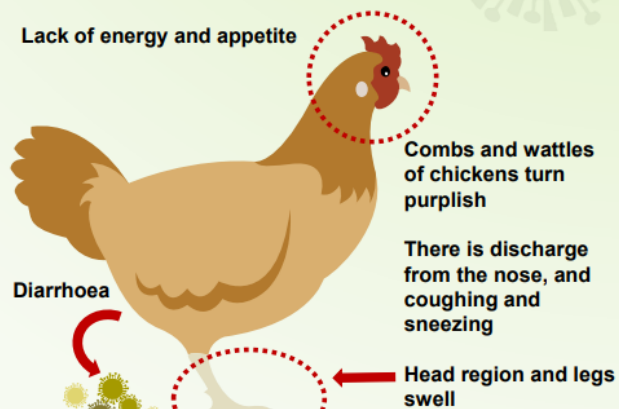


## HOW DOES BIRD FLU SPREAD BETWEEN BIRDS?

- Direct contact with nasal and respiratory secretions from infected birds
- Direct contact with infected bird faeces
- Contamination of feed and water
- Contact with contaminated equipment and humans

## SIGNS IN INFECTED BIRDS

Lack of energy and appetite



## UPSC Civil Services Examination, Previous Year Question (PYQ)

### **Prelims**

**Q. H1N1 virus is sometimes mentioned in the news with reference to which one of the following diseases? (2015)**

- (a) AIDS
- (b) Bird flu
- (c) Dengue
- (d) Swine flu

**Ans: (d)**

**Q. Which of the following statements is/are correct? Viruses can infect (2016)**

- 1. bacteria
- 2. fungi
- 3. plants

**Select the correct answer using the code given below:**

- (a) 1 and 2 only
- (b) 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Ans: (d)**

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