

H5N5 Avian Influenza

Prelims: Current events of national and international importance | Health

Why in news?

The H5N5 bird flu has recently made headlines after the first-ever human case was confirmed in the United States in November 2025.

Avian Influenza/bird flu

- It is a disease caused by **Influenza A viruses** that typically infect birds, these viruses are **naturally found in wild aquatic birds**, which act as reservoirs.
- **Subtypes** - Influenza A viruses are categorized by their surface proteins - hemagglutinin (H) and neuraminidase (N), various subtypes include H5N1, H5N5, H5N8, etc.
- Some strains are classified as low pathogenic (LPAI), causing mild disease in birds, while others are highly pathogenic (HPAI) and can kill large numbers of birds rapidly.

- **H5N5** - It is a **subtype of the avian influenza A virus**, primarily affecting wild and domestic birds like ducks, geese, and poultry.
- **Risks associated with the emergence of H5N5** -
 - **Genetic Diversity** - Influenza A (H5) viruses come in many forms due to high genetic variation.
 - **Reassortment Risk** - These viruses can shuffle genetic material (reassort), leading to new, unpredictable variants (as per the World Organization for Animal Health).
 - **Low Current Risk** - The current threat may be limited, but the underlying pandemic potential calls for proactive monitoring of animal hosts.
- **Spread of H5N5 flu** -
 - **In Birds** - the virus spreads through respiratory secretions and feces, common in poultry farms, live bird markets, and wild bird populations.
 - **In Humans** - Infection occurs via close, unprotected contact with

infected birds or contaminated environments.

- **Transmission** - It can occur via droplets, dust, or by touching surfaces contaminated with bird secretions and then touching one's eyes, nose, or mouth.
- **Symptoms** - It can range from asymptomatic or mild to very severe symptoms.
 - In humans - include fever, cough, sore throat, shortness of breath, fatigue, muscle aches, eye symptoms (conjunctivitis) and sometimes gastrointestinal issues like vomiting or diarrhea.
 - Severe cases can lead to pneumonia, acute respiratory distress, or death.
- **Prevention** -
 - Avoid close contact with sick or dead birds.
 - Use appropriate protective gear (masks, gloves) when handling poultry or cleaning bird coops.
 - Avoid raw or undercooked poultry, meat, eggs, and raw milk from infected animals.
 - Public health agencies recommend ongoing surveillance and rapid detection of new human infections.

To know about H5N1 vs H5N2, Click [here](#)

References

1. [The Hindu | U.S. resident infected with H5N5](#)
2. [NDTV | US Reports World's First Human Case Of H5N5 Bird Flu.](#)