

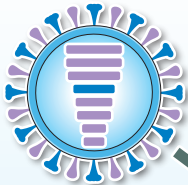
China on alert over new bird flu strain

Scientists are warning that a new strain of bird flu not previously found in humans has the potential to become a pandemic. The H10N8 virus, which has already killed one person in China and sickened another, has genetic similarities to two other types of avian flu – H5N1 and H7N9 – that have led to deaths in humans

HOW H10N8 VIRUS MAY HAVE EVOLVED

1 Avian H10N?

H10 gene segment found to be closely related to virus in Chinese ducks



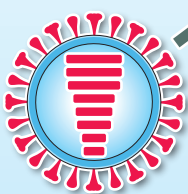
2 Avian H7N8

N8 gene segment likely to have originated in birds from North America



3 Avian H9N2

Remaining gene segments probably came from avian virus known to circulate in Chinese poultry



4 Avian H10N8

Swapping of gene segments (reassortment) occurs in habitats shared by wild and domestic birds, creating completely new strain of influenza



5 Human H10N8: Possibly contracted through close contact with live birds and their droppings. **Investigators yet to find evidence of person-to-person transmission. Tests show H10N8 could be attacked by antiviral drugs *Tamiflu* and *Relenza***



Potential human-to-human transmission



INFLUENZA VIRUS ANATOMY

Haemagglutinin (HA) protein

Allows virus to latch onto host cell. H10N8 virus contains mutation, suggesting it can cause deep lung infections like H5N1 strain

Neuraminidase (NA) protein

Enables virus to be released from host cell, spreading flu infection within victim

Viral envelope

Membrane taken from infected host cell

Layer of matrix protein

Eight gene segments

H10N8 has mutation in its PB2 segment, suggesting it can adapt to mammals

