



Avian Influenza

“Prepare to Prevent Scare”



Learning Objectives

Students should be able to:

- Identify main population affected by Avian Influenza
- Recognize some of the causes
- Name one of the organizations that reports/studies this virus
- Identify some of the risk factors
- Identify preventions and treatments



H5N1 Virus: Avian “Bird”
Influenza

NEARLY A HUNDRED YEARS AFTER THE SPANISH FLU KILLED OVER 50 MILLION PEOPLE, THE AVIAN INFLUENZA IS THREATENING US. RESEARCHERS AND GOVERNMENTS ALL OVER THE WORLD ARE SEARCHING DESPERATELY FOR A SUCCESSFUL VACCINATION PROGRAM, THAT WILL CONTAIN AND TREAT THE VIRUS.



Definition

- H5NI virus (bird flu or avian influenza)
- Type A influenza
- Infects birds
- Usually harmless to humans



Origin

- 100 years ago in Italy, Fowl Plague
- Migratory birds
- Virus constantly mutating
- 1961 South Africa
- 1997 Hong Kong
- 2003 Hong Kong

Causes



- Influenza virus- carried in the intestines of birds.
- H5N1 strain multiplies through bird-to-bird contact.
- Manure, bird feed, equipment, vehicles, egg flats, and crates become contaminated with the virus.
- Humans spread the virus through their clothing and shoes.



Statistics

- Global Statistics
- (WHO) World Health Organization- latest confirmed reported human case
- Worldwide Outbreaks between 1959-2003
- Statistics Rising- Personal Protective Equipment Guidelines

- U.S. Govt. Pandemic Defense System

FLU ARMOUR AVIAN INFLUENZA PANDEMIC DEFENSE SYSTEM

NIOSH N95 Particulate Respirators (Masks)
Non Allergic Nitrile Exam Gloves
Latex-Free Protective Goggles
Hospital Grade Germicidal Disinfectant Cloths
Hospital Grade Anti-Microbial Hand Wipes

- National Center for Health Statistics- U.S. “bird” Quarantine



Total number of cases includes number of deaths.
WHO reports only laboratory-confirmed cases.

**MAY
2006**

Country	2003		2004		2005		2006		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	8	5
Cambodia	0	0	0	0	4	4	2	2	6	6
China	0	0	0	0	8	5	10	7	18	12
Djibouti	0	0	0	0	0	0	1	0	1	0
Egypt	0	0	0	0	0	0	13	5	13	5
Indonesia	0	0	0	0	17	11	16	14	33	25
Iraq	0	0	0	0	0	0	2	2	2	2
Thailand	0	0	17	12	5	2	0	0	22	14
Turkey	0	0	0	0	0	0	12	4	12	4
Viet Nam	3	3	29	20	61	19	0	0	93	42
Total	3	3	46	32	95	41	64	39	208	115



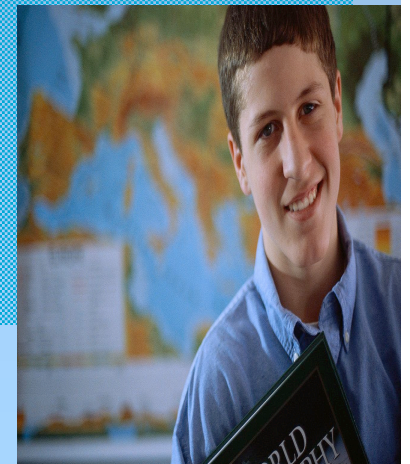
Risk Factors

- Consumption of infected poultry
- U.S. consumes an average of 85.8 lbs. per individual per year
- Direct contact with an infected bird/human
- Global panic
- No documented cure has been discovered



Intervention

- Millions spent by government in prevention efforts
- Educate the public
- Surveillance and detection
- Detect and identify the source of infection quickly
- Response and containment

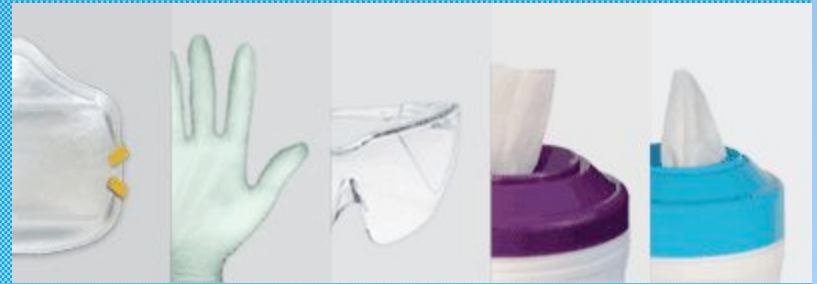


Prevention

- Washing hands
- Avoid touching your face
- Avoid traveling where cases have been reported
- Maintain a healthy diet
- Get plenty of rest
- Use medical masks
- Cook all poultry products well, avoid cross-contamination
- Avoid using raw eggs for baking/cooking
- Better management of farms/markets

Treatment

- Vaccine developments in the works
- Anti-viral drugs, effect unknown
- Sweden researchers are testing effects of chemotherapy
- Prototype vaccine available for research and development





Review Questions

- Usually harmless to humans. T/F
- Bird feed can not become contaminated by this virus. T/F
- What is the acronym for World Health Organization?

- Which of the following helps prevent Avian Influenza:
 - a. use medical masks
 - b. wash hands
 - c. cook all poultry products well
 - d. all of the above
- Avian Influenza only occurs in the USA. T/F