

Epidemic Disease Information Sheet for Flu

Prepared by: The Students Currently Enrolled in STS 4400: Epidemic Disease

The flu is a contagious respiratory illness caused by Influenza viruses. It can cause mild to severe illness, and can lead to death.

Infectious Organism and Mode of Transmission:

The flu is caused by the infectious virus *Haemophilus influenzae*. There are three types of influenza virus: type A, type B, and type C. Types A and B produce yearly outbreaks which normally occur during the fall and winter months. Type C produces a milder illness and is not associated with epidemics.

Transmission is usually through a person's sneeze or cough, shaking hands with an infected person, or coming in contact with an object an infected person has touched or coughed or sneezed on.

Disease Characteristics:

It takes between one and four days to develop symptoms. A person is contagious beginning one day before symptoms develop until five to seven days after becoming sick.

The symptoms of flu may include:

- Fever
- Runny nose
- Stuffed up nose
- Fatigue
- Headache
- Cough
- Sore throat

The flu almost never causes symptoms in the stomach and intestines, except as secondary symptoms. The illness that some call the "stomach flu" is not influenza. Flu season usually runs from December through March, with February being the most active month for the virus.

Prevention, Treatment, Cure:

The best way to prevent the flu is to get a flu vaccination. There are two types. The flu shot is an inactivated vaccine containing killed virus. The nasal-spray flu vaccine is made with live, weakened virus. Neither vaccine causes the flu. It takes about two weeks for protective antibodies to develop after vaccination.

Other important prevention measures include:

- Avoid close contact with those who are sick
- Stay home from work, school, and errands when you are sick
- Cover your mouth and nose with a tissue when coughing or sneezing
- Wash your hands often
- Avoid touching your eyes, nose, or mouth

Treatment for flu is largely symptomatic, including:

- Rest
- Drink plenty of liquids
- Avoid using alcohol or tobacco
- Take medication on time

There are some antiviral drugs that will decrease the duration of the illness, but they must be taken within the first 48 hours and may have side effects.

One should never give aspirin to a child or teenager with the flu. Doing so may result in a serious condition called *Reyes syndrome*.

Historical Significance:

The Influenza Pandemic of 1918-1919 killed between 20 and 40 million people in one year. A fifth of the world's population was affected. More people died of flu over a period of weeks than died in all of World War I.

There were also major outbreaks in 1957 (Asian Flu) and 1968 (Hong Kong Flu).

Contemporary Occurrence:

Although difficult to assess, annual epidemics are thought to result in between 3 and 5 million cases of severe illness and between 250,000 and 500,000 deaths every year around the world.

Each year 10-20% of the US population get the flu. An average of 36,000 people in the US die from flu and over 200,000 people are hospitalized each year.

For More Information:

Center for Disease Control: Division of Influenza website, "Facts Sheet," last revised 28 Sept. 2005, available on-line at: <http://www.cdc.gov/flu/keyfacts.htm> , accessed 3 Oct. 2005.

Good site that gives reliable information on the flu virus, transmission, treatment, and prevention. Also goes into detail on the vaccines available to fight the flu virus.

NIAID's web site, "Flu NIAID Fact Sheet," last revised 31 Jan. 2005, available online at: <http://www.niaid.nih.gov/factsheets/flu.htm> , accessed 3 Oct. 2005. This site gives good facts about the flu virus. It gives some historical significance and also discusses the different strains of the virus.

World Health Organization web site, Fact Sheet: "Influenza," last revised March 2003, available online at: <http://www.who.int/mediacentre/factsheets/fs211/en/index.html> , accessed 2 Oct. 2005. This fact sheet includes more global information, including a brief history and more detailed vaccine information.

The 1918 Influenza Pandemic web site: "The Influenza Pandemic of 1918," last revised Feb. 2005, available online at: <http://www.stanford.edu/group/virus/uda/> , accessed 2 October 2005. This site strictly discusses the effects of the flu pandemic of 1918. It is very detailed and has pictures to show the seriousness of the flu pandemic.

Nature "Web Focus" page for Flu: no posting date given, but continually updated, <http://www.nature.com/nature/focus/avianflu/index.html> , accessed 6 October 2005. Excellent place to trace and access the latest research.

Links recommended by today's speaker available at:

<http://www.spsu.edu/cteacad/newell/STSCoordinator/INTER2005.html>

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Contemporary Significance:

Avian flu is currently drawing significant media attention as world health authorities warn of a global pandemic caused by the spread and mutation of the avian flu virus.

So far, the H5N1 virus (Avian Flu) has mainly infected humans who were in close contact with infected birds. It has killed 66 people in four Asian nations, Thailand, Vietnam, Indonesia, and Cambodia, since late 2003.

Progress is being made on an avian flu vaccine. Current vaccines for seasonal flu are strain specific and based on types A and B. There are few effective drugs, and resistance is a threat.