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## **What is the Flu?**

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Influenza, the “flu,” is a viral infection, which occurs in epidemics -- acute outbreaks -- and pandemics -- worldwide occurrences -- usually in the fall or winter. It affects as many as 35% of young adults during the "flu season." Flu is contagious and is spread by those carrying the virus through “droplet nuclei,” water droplets produced by breathing or sneezing. The following are common questions about the flu.

Q: What kind of virus is it? The flu virus is an orthomyxovirus, which has 3 types: A, B, and C. Type A and B produce similar type of disease, whereas type C produces only minor illness. Epidemics are caused by both type A and B. A worldwide occurrence of the flu -- a pandemic -- is typically associated with type A and has a significantly higher mortality. The time from exposure to the flu virus and the onset of infection -- the incubation period -- is usually one to four days. It is difficult to diagnose influenza in the absence of an epidemic, as it resembles many other mild, febrile illnesses, but is almost always associated with cough.

Q: What are the symptoms of the flu? The flu is associated with the abrupt onset of fever, chills, malaise, cough, coryza, substernal soreness, muscle ache, fever and prostration out of proportion to the nasal congestion and runny nose. The fever can last from one to seven days but generally lasts three to five days. The cough associated with the flu is non-productive and occurs with nasal stuffiness, headache, flushed face and conjunctival redness.

Q: Do you need a blood test to diagnose flu? Not necessarily; the flu is a clinical diagnosis based on symptoms, as antibodies to the virus do not appear until the second week of the onset of symptoms. Physicians may check a blood count to exclude other infections, but there is no pattern in those tests, which are diagnostic of the flu.

Q: What are the complications of flu? Bacterial infection is very common, as the virus helps bacteria to grow by causing damage to respiratory tract lining and bacterial enzymes help virus activation. Frequent complications are sinusitis, pneumonia, otitis media, and bronchitis. The elderly and chronically ill patients are at higher risk of

complications. Viral pericarditis, myocarditis of heart and venous clot formation, also, sometime occur.

Q: What is Reye's Syndrome? It is a rare and severe complication of flu, particularly in young children when they take ASPIRIN. It consists of rapidly progressive liver failure and encephalopathy (altered mental status progressing to coma). Thirty percent of patients with Reye's Syndrome die. It occurs within 2-3 weeks after onset of viral infection. If your child is taking aspirin for any reason, you should get them a flu vaccination every year.

Q: Who is prone to develop complications of the flu?

1. Elderly
2. Chronically ill patients who have congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), respiratory failure (RF), diabetes mellitus (DM), cancer, immunosuppression such as HIV, or patients who are on steroids.
3. Young adults on Aspirin therapy.
4. Pregnant women and patients with rheumatic heart disease also have a higher mortality due to bacterial pneumonia.

Q: What is the treatment of influenza? There is no cure for influenza. The major treatment is symptomatic treatment like bed rest, painkillers, and cough medicine. A number of medicines are used in the treatment of the flu. They are:

1. Amantadine: 100-200 mgs a day in divided doses decreases duration of signs and symptoms.
2. Rimantadine: is preferred in renal failure patients.
3. Ribavirin: helped severely ill patient with influenza A or B.
4. Zanamivir: nasal spray is also used.

Antibiotics are used only when a bacterial infection develops as a complication of the flu..

Q: How can you prevent getting influenza?

1. Vaccination -- Getting trivalent influenza virus vaccine commonly called a "flu shot" in October or November has been shown to reduce morbidity and mortality and is 85% effective for a few months to 1 year. That's why the flu vaccine is needed every year. Presently, the vaccine used is made of specific protein of the virus, which is capable of generating antibodies in the human body. Recently live attenuated virus vaccines have been used in trials in the United States with good results. This new vaccine is a live virus with antigen, unable to produce disease but this vaccine produces a higher defense response in the body.
2. Medicine
  1. Amantadine 100-200mg a day in divided doses for 10 days.

2. Rimantadine 100mg twice a day for 10 days

Q: Who should get the flu vaccination?

1. Persons over age 65.
2. Children and teenagers receiving chronic aspirin therapy.
3. Nursing home residents.
4. Persons with chronic lung or heart disease, diabetes or cancer.
5. Health care workers.
6. HIV patients should receive vaccine, though it is less effective if disease is severe.
7. For 2000 - 2001, all persons 50-64 years old have been added to the primary target group.

Q: What are the contraindications of the vaccination?

1. Persons hypersensitive to chicken eggs or other components of the vaccine.
2. Persons with an acute febrile illness.
3. Persons with low platelet count, thrombocytopenia. Coumadin or Steroid therapy is not a contraindication.

Q: What are the side effects of the vaccine?

1. Infrequent like tenderness, redness due to formalin component, or induration at the site of injection.
2. Rarely myalgia or fever.
3. Some side effects associated with early impure vaccine are no more a concern like Guillain-Barre' Syndrome.

Some antiviral medicines have been available for a long time for prevention of flu and newer medicines are becoming available.

1. Amantadine (Symmetrel) 100-200mg daily orally
2. Rimantadine (Flumadine) 200mg per day in divided doses

These medicines markedly reduce illness in exposed unvaccinated patients, if begun immediately upon exposure and continued for 10 days. Amantadine is good for patients with liver failure and Rimantadine for those with kidney failure. These medicines are effective against type A only and are ineffective against type B.

3. Zanamivir (Relanza) Dry powder for oral inhalation in first 2 days of illness. Side effects are GI upset, bronchospasm, nasal congestion. Do not use if patient has asthma or COPD. Inhalation used twice a day for 5 days.
4. Oseltamivir (Tamiflu) Oral medicine. Use within 2 days of symptoms. 75mg twice a day for 5 days. Lower dose if renal failure is present. Do not give to nursing mothers. It can cause neuroleptic malignant syndrome, nausea, dizziness, insomnia, heart failure.

Both drugs Zanamivir and Oseltamivir are 70% effective against both viruses and used in both treatment and prevention of influenza.

An ounce of prevention - getting a flu shot - is worth a pound of cure, bed rest, medication, etc. Exercise, healthy eating, weight loss, stopping smoking and reasonable vitamin supplements can help you increase your resistance to the flu.

Remember, it is your life and it is your health.