



## *X-Plain* *Influenza - Flu* **Reference Summary**

### **Introduction**

Influenza, also known as the flu, is a contagious disease that is caused by the influenza virus.

Infection with influenza viruses can result in severe illness and life-threatening complications. However, most people recover within one or two weeks.

If you or your child has the flu, this reference summary will help you understand this disease. It discusses the causes, symptoms, diagnosis, treatment, and prevention of flu.

### **What is Flu?**

The influenza virus causes flu. A virus is the smallest type of organism. The human body fights such viruses by forming protective antibodies.

The flu viruses attack the nose, throat, and lungs in humans. They spread from person to person. When a person who has the flu coughs, sneezes, or speaks, the virus spreads into the air, and other people inhale the virus.

The viruses can also be spread when a person touches a surface with flu viruses on it, such as a door handle, and then touches his or her nose or mouth.

Most people who get influenza will recover in one to two weeks. Some people will develop life-threatening complications, such as pneumonia, as a result of the flu. They are known as people who are at high risk of developing flu complications.

People at high risk of developing flu complications include:

- People age 65 years and older



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- Pregnant women
- Children between 6 months and 23 months of age
- People of any age who have chronic medical conditions.

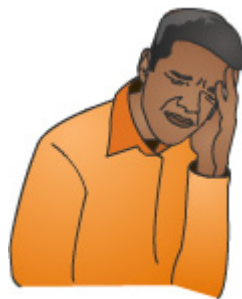
Thirty to sixty million U.S. residents get flu each year. About 100,000 of them are hospitalized and 36,000 die each year from complications of the flu.

## Symptoms and Diagnosis

When flu viruses enter the nose, throat, or lungs of a person, they begin to multiply, causing symptoms of flu.

Flu usually comes on suddenly and, and its symptoms may include:

- High fever
- Headache
- Tiredness/weakness, which can be extreme.
- Dry cough
- Sore throat
- Runny nose
- Body or muscle aches



Diarrhea and vomiting can also occur, but are more common in children.

Colds and flu are both highly contagious and, in the initial stages, a bad cold and a mild case of the flu might seem alike. However, unlike colds, the flu is a serious illness that can have life-threatening complications.

If you get a medical test within two to three days after your symptoms begin, your healthcare provider can determine whether or not you have the flu.

## Complications of Flu

Some of the complications caused by flu include bacterial pneumonia, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes.

Children may also get sinus and ear infections.

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## Treating Flu

If you are considered to be at high risk for complications from the flu, you should consult your healthcare provider as soon as you get flu-like symptoms.

Four antiviral drugs have been approved for treatment of the flu. A doctor must prescribe all of these. You need to start an antiviral treatment within the first two days of your illness. The treatment lasts for five days.

If you develop flu-like symptoms, but you do not have an underlying medical condition, you can help your body fight the infection by:

- Getting plenty of rest
- Drinking a lot of liquids
- Avoid using alcohol and tobacco.
- Consider taking over-the-counter medications to relieve your flu symptoms.



Children or teenagers with the flu should get plenty of rest and drink lots of liquids. The medicines that they take to relieve their symptoms should NOT contain aspirin. (Never give aspirin to children or teenagers who have flu-like symptoms, especially a fever, without first speaking to your healthcare provider. Giving aspirin to children and teenagers who have influenza can cause a rare but serious illness called Reye syndrome. )

To avoid spreading the disease to others:

- Stay home and avoid contact with other people
- Cover your nose and mouth with a tissue when you cough or sneeze

## Emergency Signs

There are some “emergency warning signs” that require urgent medical attention.

In children, some emergency warning signs include:

- High or prolonged fever
- Fast breathing or trouble breathing
- Bluish skin color
- Not drinking enough fluids

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You should also seek immediate medical attention if:

- You notice changes in the child's mental status:
  - Not waking up
  - Not interacting
  - Extreme irritability and not wanting to be held.
- Your child has seizures.

If your flu-like symptoms improve but then return with a fever and a worse cough, seek medical attention as soon as possible.

In adults, some emergency warning signs that need urgent medical attention include:

- High or prolonged fever
- Difficulty breathing or shortness of breath
- Pain or pressure in the chest
- Near-fainting or fainting
- Confusion
- Severe or persistent vomiting



Get immediate medical care - call your healthcare provider or go to an emergency room - if you or someone you know has ANY of these:

- the signs described in this section
- a worsening of existing medical conditions
- other unusually severe symptoms

When you arrive, tell the receptionist or nurse about your symptoms. You may be asked to wear a mask and sit in a separate area to protect others from getting sick.



## Preventing Flu

The single best way to prevent the flu is to get vaccinated each fall. If this is not possible, there are some other ways to protect against flu.

Three antiviral drugs are available for use in preventing the flu.

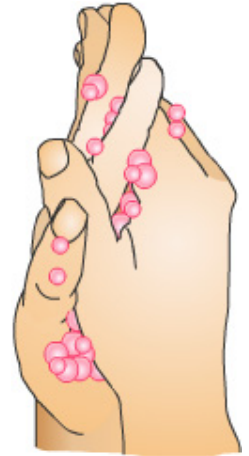
They do require a prescription, so you need to consult your healthcare provider about them.

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The following steps may help prevent the spread of respiratory illnesses like flu:

- Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick too.
- If possible, stay home from work, school, and errands when you are sick. You will help prevent others from catching your illness.
- Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick.
- Wash your hands often. This will help protect you from germs.
- Avoid touching your eyes, nose or mouth. Germs are often spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth.



## Flu Vaccine

The flu can be prevented through the use of the flu vaccine. It helps the body develop immunity to flu.

The vaccine is best given before winter, which is when the flu becomes widespread in the U.S. That is why flu shots are usually given in October or November.

Every year there are different types of influenza viruses that can cause the flu. Scientists need to prepare a new vaccine for each flu season. The vaccine prevents the three viruses that will be most likely to spread.



The flu shot contains inactivated (dead) flu viruses. It is recommended for people who are at high risk of developing serious complications from flu.

Side effects from the flu shot are rare, except for redness or soreness in the area where the shot was given. A few people, especially those being vaccinated against influenza for the first time, may get a mild fever, headache, and flu-like signs such as aching muscles. These reactions start in 6 to 12 hours and last 24 to 48 hours.

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People in the following groups should NOT get the flu vaccine without first talking to their health provider:

- People who have a severe allergy to hens' eggs
- people who previously developed Guillain-Barré syndrome or GBS within 6 weeks after getting a flu shot

There is a new nasal spray version of the vaccine, and it contains weakened live flu viruses. It is called the LAIV (Live Attenuated Influenza Vaccine).

The nasal-spray flu vaccine contains three different live but weakened influenza viruses. When the viruses are sprayed into the nose, they stimulate the body's immune system to develop protective antibodies. These antibodies will prevent an infection caused by naturally-occurring influenza viruses.

The following people should not be vaccinated with LAIV:

- People less than 5 years of age
- People 50 years of age and over
- Children or adolescents receiving aspirin
- People with a history of Guillain-Barré syndrome
- Pregnant women
- People with a history of allergy to any of the components of LAIV or to eggs
- Individuals who have a weakened immune system



In children, side effects of LAIV can include runny nose, headache, vomiting, muscle aches, and fever. In adults, side effects of LAIV can include runny nose, headache, sore throat, and cough.

## Summary

Influenza or flu is a contagious disease that is caused by the influenza virus. Infection with influenza viruses can result in severe illness and life-threatening complications.

Symptoms of flu are similar to those of cold but are more sudden, more severe, and usually include high fever.

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For healthy people, resting and drinking plenty of fluids usually allow the patient to recover from flu. For people at high risk of developing flu complications, medications and hospitalization may be needed.

Flu shots are available and are recommended for people at high risk of developing flu complications. A nasal-spray vaccine is also available for healthy people.

Flu can be prevented by avoiding close contact with sick people and by washing the hands frequently. If you have the flu, you can help to stop the spread of this infectious disease by staying home while you are sick, and by covering your mouth and nose as you cough or sneeze.



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