Influenza, or simply the flu, is a serious respiratory infection that makes hundreds of thousands of Americans ill each year. It can cause many complications for people with weakened immune systems, including people living with HIV.

Despite improved prevention and treatment, the flu still causes 36,000 deaths in the US each year. This publication provides an overview of seasonal flu disease with a focus on preventing the illness. For more complete information on H1N1 flu, read Project Inform’s publication, *H1N1 and HIV Disease* available at [www.projectinform.org/publications/h1n1/](http://www.projectinform.org/publications/h1n1/).

**What is the flu?**

The flu virus is quite common, highly contagious and very prone to mutating often. Of the 3 categories of flu viruses, type A causes most of the illness in the US. Even if you’re protected against a flu virus one year, you may not be protected from a new strain the next year.

Two proteins on the surface of the virus readily mutate: *haemagglutinin* (H) and *neuraminidase* (N). Type A strains are named by the different versions of these proteins. For example, the *avian flu virus* is called H5N1.

Each year researchers try to predict the most likely strains of flu to hit the US. Sometimes, different strains show up rather than what was predicted. For the 2010–2011 flu season, the vaccines for the following three strains were approved by the FDA:
- Type A: California/7/2009 (H1N1)-like virus;
- Type A: Perth/16/2009 (H3N2)-like virus; and
- Type B: Brisbane/60/2008-like virus.

**Who is at risk for the flu?**

Everyone is at risk for getting the flu. However, people with certain medical conditions, such as heart disease, respiratory problems or weakened immune systems, are more at risk. These individuals also have a greater chance for having more severe symptoms. People who have frequent contact with others, such as in rest homes, hospitals, day cares or schools, are also at higher risk.

**What are the symptoms?**

Many people talk about having the flu when in reality it’s just a cold virus. (The term *stomach flu* is somewhat inaccurate because the flu virus doesn’t affect the stomach, though some people may feel it does.) Here are some ways to help tell the difference between them.

*Colds* tend to be less severe than the flu, come on slowly and last only a few days, usually less than a week. Common symptoms are sore throat, sneezing, coughing, runny nose and congestion. Older children and adults rarely get more than a mild fever, if at all.
Flu symptoms usually come on suddenly. They may include a high fever, body aches, extreme fatigue, headache, cough, sore throat and chills, and they often last 1–2 weeks or longer. Headaches may appear at the start of a fever. Stomach problems are rare, but they may occur in young children.

Since the flu can lead to other respiratory illnesses like pneumonia, it’s important to seek medical help if your symptoms become worse. This includes having an extremely high fever, a fever lasting more than 3 days, trouble breathing, symptoms that do not improve or become worse, or a severe headache or stiff neck. Also, if your mucus (the fluid from your nose or chest) becomes bloody or changes color, this may indicate a new condition that needs to be looked at.

How do you diagnose the flu?
In most cases, doctors diagnose the flu simply by the symptoms you have, especially during a peak flu season. Blood tests (rarely used) and throat or nose cultures can be used. The results may take too long to help your doctor decide on the right treatment. The rapid flu test gives results in a half an hour, though it’s not 100% accurate.

How do you treat the flu virus?
Two drugs are used to prevent or reduce the severity of the flu, called neuraminidase inhibitors: Relenza (zanamivir) and Tamiflu (oseltamivir). Relenza is inhaled through the mouth and may be difficult to take for people with lung disease or who smoke. Tamiflu is taken as a capsule or powder. Relenza has been safely tested in older children and adults. Tamiflu has been studied in adults and infants over one year of age.

Very little data exist on using either drug in people with HIV. One 6-week nursing home study of Tamiflu found the flu was reduced by 92% among its residents. In other studies, the risk for getting bacterial or viral pneumonia — common and dangerous complications of the flu — was reduced by half in those taking Tamiflu compared to placebo. Symmetrel (amantadine) and Flumadine (rimantadine) have also been used this way.

It’s important to work with your health provider to decide if and when preventative treatment is right for you. If you have frequent contact with the public, a doctor may prescribe these drugs during the 2 weeks after vaccination. This helps protect you while the vaccine creates antibodies to the flu.
Some people believe taking antibiotics will help treat the flu. Antibiotics are used to treat bacterial infections, not viral infections like the flu. However, they may be used to treat a bacterial infection at the same time as the flu.

How do you treat flu symptoms?
Treating the flu also means reducing your symptoms and making yourself feel comfortable. Taking medicines will not rid your body of the virus, but they can help improve your symptoms both for how much and for how long you feel them.

If you think you may have the flu, stay home, get enough rest, and check with your health care provider as needed. If you go to a clinic, emergency room or doctor’s office, tell the receptionist that you may have the flu and ask for a mask. This helps reduce passing it onto others.

Getting enough rest is important for recovering from the flu. Drinking plenty of fluids will help replace those lost from a fever. Drinking various drinks like water, fruit juice, and clear soups or warm drinks like tea with lemon are all good choices.

To relieve fever, body aches and headache, taking acetaminophen or ibuprofen helps. Sponging your body with lukewarm water can also help reduce fever. For a stuffy nose, breathing moist air from a hot shower can help. Using a decongestant or nasal spray with phenylephrine in it can help clear or dry up a stuffy nose. If your nasal drainage is thick, the ingredient guaifenesin may help keep it thin. Antihistamines are discouraged as they do not treat flu symptoms and may even make your drainage thicker. As with all medicines, follow the directions for their use or talk to a pharmacist.

Cough drops or plain, hard candy can help ease coughing. Over-the-counter medicines with dextromethorphan in them can help ease a dry, hacking cough. Beware of cough medicines since some have a high content of alcohol. If you have difficulty sleeping, raise your head at night with an extra pillow if coughing or stuffy breathing keeps you awake. Avoiding smoking and breathing secondhand smoke will also help you breathe.

What about flu shots?
Getting a flu shot will help protect and/or reduce the symptoms of specific strains of the flu. It takes about 2 weeks for your body to become protected. Some people may feel fatigue and muscle ache from the shot, which is due to the response by the immune system. Flu shots do not give you the flu.

People with CD4 counts below 200 may have a weaker antibody response to a flu shot. However, many experts still recommend those at high risk for the flu complications get vaccinated. The Centers for Disease Control recommends flu shots for the following people:

- children 6 months to 6 years old
- pregnant women or women who are planning a pregnancy during flu season
- people with chronic medical conditions such as diabetes, asthma, heart disease and HIV/AIDS
- people 50 years and older
- people who live, work or volunteer in health care facilities
- people with close contact with someone in a high-risk group

Some people are not recommended to get a flu shot, such as those with a severe allergy to hens’ eggs or a history of Guillain-Barre Syndrome.

Other publications that can help

Flu Clinic Locator
www.flucliniclocator.org

H1N1 (swine flu) and HIV disease
www.projectinform.org/publications/h1n1/
Flu season and living with HIV

Concerns for people living with HIV
People with HIV are more likely to get complications from the flu, such as pneumonia. They are also at higher risk of dying from the flu. Therefore, people living with HIV are considered a priority group to get a flu shot in order to prevent or lessen complications from the flu, particularly heart and lung problems. For people where CD4s are below 200, they may need a booster shot of the flu vaccine to ensure a higher rate of protection.

HIV levels may increase during the 4 weeks after getting a flu shot. If you have HIV, plan your routine blood draws and flu shots carefully. It’s recommended that people with HIV should not get the live virus flu vaccine sold as FluMist. Although no firm data exist, some recommend avoiding close contact for 2 weeks with those who have taken FluMist to avoid possible exposure to the live virus.

Concerns for children and people over 50
Flu shots are recommended for people 50 years of age and older. This helps protect from developing more serious symptoms as well as complications from the flu.

Both influenza type A and B have been linked to Reye's Syndrome, a possibly fatal complication that usually affects children under 18. The risk for the condition is increased when taking aspirin. It’s strongly recommended that children should not take aspirin products during a viral illness like the flu or chickenpox.

Children under 6 months of age should not get the flu vaccine. Cough and cold medicines should not be given to children younger than 2 unless a doctor has said so.

Concerns for pregnant women
It’s important to prevent the flu during pregnancy, as it can last 3 times longer in pregnant women. Being pregnant can also increase your risk for getting other complications from the flu, such as pneumonia. Catching a cold or the flu during pregnancy rarely causes birth defects.

The best way to prevent the flu is by getting a flu shot, and by following the personal habits described in How do you prevent the flu?. The flu shot is safe to get while you’re pregnant or nursing, though it may be wiser to get it before becoming pregnant. However, getting the nasal flu vaccine is not recommended since it’s not been tested in pregnant women.

Many flu and cold medicines have not been well studied in pregnant women. Some flu medicines to avoid during pregnancy include Tamiflu, Flumadine, Relenza or Symmetrel. These drugs may cause a small increase in the risk of birth defects. Acetaminophen is the recommended medicine for pain and fever. Aspirin may cause bleeding. Ibuprofen hasn't been studied in pregnant women.