



(L)

Influenza (Flu)

Influenza, commonly called "the flu," is an infection of the respiratory tract caused by the influenza virus. Compared with most viral respiratory infections, such as the common cold, influenza infection often causes a more severe illness. Typical influenza illness includes fever (usually 100 degrees F to 103 degrees F in adults and often even higher in children) and respiratory symptoms, such as cough, sore throat, runny or stuffy nose, as well as headache, muscle aches and extreme fatigue. Although nausea, vomiting and diarrhea can sometimes accompany influenza infection, especially in children, these symptoms are rarely the primary symptoms. The term

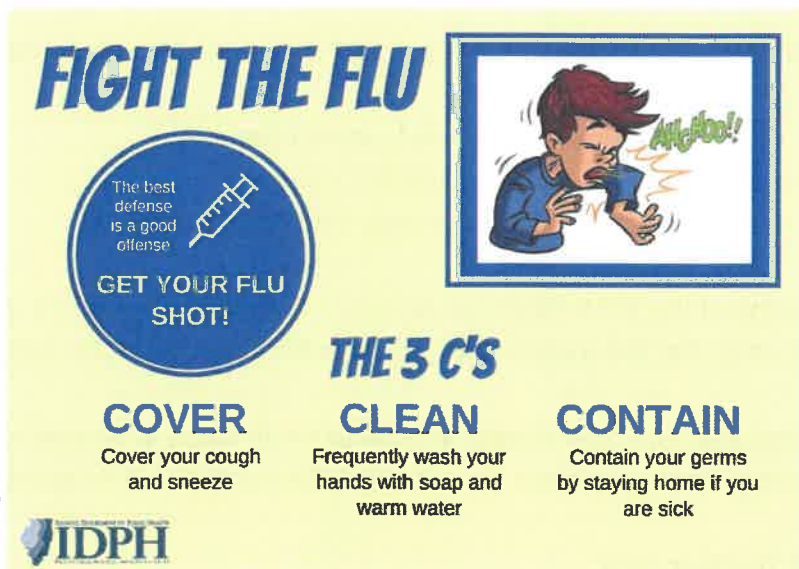
"stomach flu" is a misnomer that is sometimes used to describe gastrointestinal illnesses caused by organisms other than influenza viruses.

The best way to prevent flu is by getting vaccinated each year. Everyone 6 months of age and older should get a flu vaccine every season. Flu vaccine is provided at many local health departments, private health care providers, and pharmacies across Illinois. It is recommended you contact your health care provider about what form of flu vaccine you should receive. Click [here \(/contact-us/idph-regional-health-departments\)](/contact-us/idph-regional-health-departments) to find the local health department where you live. You can also find locations that offer influenza vaccine at [Vaccine Finder \(https://vaccinefinder.org/\)](https://vaccinefinder.org/).

Most people who get the flu recover completely in 1 to 2 weeks, but some people develop serious and potentially life-threatening medical complications, such as pneumonia. Over the past decade, influenza and pneumonia have been associated with an average of 3,500 deaths a year in Illinois. Since 1992, the highest number of flu and pneumonia deaths was the 4,021 recorded in 1993. Flu-related complications can occur at any age, but the elderly and people with chronic health problems are much more likely to develop serious complications after influenza infection than are young, healthier people. During most flu seasons, which typically run from October through May, between 10 percent and 20 percent of the population is infected with influenza viruses. More than 200,000 people are hospitalized from flu complications each year in the U.S.

Influenza Viruses

Influenza viruses are divided into three types, designated A, B and C. Influenza types A and B are responsible for epidemics of respiratory illness that occur almost every winter and are often associated with increased rates for hospitalization and death. Influenza type C differs from types A and B in some important ways. Type C



Infection usually causes either a very mild respiratory illness or no symptoms at all. It does not cause epidemics and does not have the severe public health impact that influenza types A and B do. Efforts to control the impact of influenza are aimed at types A and B.

While there are many different flu viruses, each season a flu vaccine protects against the three or four viruses that research suggests will be most common. Three kinds of flu viruses commonly circulate among people today: Influenza A (H1N1) viruses, influenza A (H3N2) viruses, and influenza B viruses.

All of the 2019-2020 influenza vaccine is made to protect against the following:

- A/Brisbane/02/2018 (H1N1)pdm09-like virus
- A/Kansas/14/2017 (H3N2)-like virus
- B/Colorado/06/2017-like virus (Victoria lineage)

Some of the 2019-2020 flu vaccine is quadrivalent vaccine, which also protects against an additional lineage of B virus. For this season that will be a B/Phuket/3073/2013-like virus. This is a B/Yamagata lineage virus.

Vaccines that give protection against three kinds of viruses are called trivalent vaccines. Vaccines that give protection against four viruses are called quadrivalent vaccines.

If You Get Sick

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

Symptoms of flu include:

- fever (usually high)
- headache
- extreme tiredness
- dry cough
- sore throat
- runny or stuffy nose
- muscle aches
- Stomach symptoms, such as nausea, vomiting, and diarrhea, also can occur but are more common in children than adults.

While getting a flu vaccine each year is the best way to protect against flu, **influenza antiviral drugs** can fight against influenza, offering a second line of defense against the flu.

Antiviral Drugs

Antiviral drugs are an important second line of defense against the flu.

- If you do get the flu, antiviral drugs are an important treatment option. (They are not a substitute for vaccination.)
- Antiviral drugs are prescription medicines (pills, liquid or an inhaler) that fight against the flu by keeping flu viruses from reproducing in your body.
- Antiviral drugs can make your illness milder and make you feel better faster. They may also prevent serious flu complications. This could be especially important for people at high risk.
- For treatment, antiviral drugs work best if started soon after getting sick (within two days of symptoms).

The U.S. Centers for Disease Control and Prevention has issued interim guidance on which antiviral drugs to use during the 2019-2020 flu season. The three antiviral drugs are:

- **Oseltamivir** (brand name Tamiflu ®)
- **Zanamivir** (brand name Relenza ®)
- **Intravenous Peramivir** (brand name Rabivab®)

Antiviral drugs differ in terms of who can take them, how they are given, their dose (which can vary depending on a person's age or medical conditions), and side effects.

For more information, see [CDC Influenza Antiviral Medications: Summary for Clinicians](http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm) (<http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm>) or consult the package insert for each drug. Your doctor can help decide whether you should take an antiviral drug this flu season and which one you should use.

If You Get Sick

Most healthy people recover from the flu without complications. If you get the flu:

- Stay home from work or school.
- Get lots of rest, drink plenty of liquids, and avoid using alcohol and tobacco.
- There are over-the-counter (OTC) medications to relieve the symptoms of the flu (but never give aspirin to children or teenagers who have flu-like symptoms, particularly fever).
- Remember that serious illness from the flu is more likely in certain groups of people including people 65 years of age and older, pregnant women, people with certain chronic medical conditions and young children.
- Consult your doctor early on for the best treatment, but also be aware of emergency warning signs that require urgent medical attention.

Emergency Warning Signs

Seek emergency medical care if you or someone you know is having any of following warning signs discussed below.

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

- Fast breathing or trouble breathing

- Bluish skin color
- Not drinking enough fluids
- Not waking up or not interacting
- Being so irritable that the child does not want to be held
- Fever with a rash

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

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting

Seek emergency medical care if you or someone you know is experiencing any of the signs above.

Menu Link:

[Influenza \(Flu\) \(/topics-services/diseases-and-conditions/influenza\)](/topics-services/diseases-and-conditions/influenza)

Protecting health, improving lives.



Meningococcal Disease

What is meningococcal disease?

Meningococcal disease is a bacterial infection. It occurs commonly in two forms: inflammation of the membranes covering the brain and spinal cord (meningococcal meningitis) or a severe blood infection (meningococemia).

The bacterium that causes meningococcal disease, *Neisseria meningitidis*, first infects the mucous membranes of the nose and throat, usually without any symptoms. In fact, 5 percent to 10 percent of the population may carry the bacteria at any given time without becoming ill. In a small proportion of infected persons, the bacterium passes through the mucous membrane and reaches the blood stream, causing meningococcal meningitis or meningococemia. When illness occurs, it does so within four days of exposure, but can develop as long as 10 days later. The disease is most common during winter and spring.

How is meningococcal disease spread?

Meningococcal infection is not highly contagious. Transmission from person to person occurs through direct contact with nose and throat secretions. An infected person can transmit the disease by coughing or sneezing directly into the face of others, kissing a person on the mouth, or sharing a glass or cup.

Because it is possible to harbor the bacteria in the nose and throats yet not develop symptoms, healthy persons as well as persons who are ill may spread the bacteria to others. The bacteria is not transmitted by casual contact, such as sitting in the same room as an infected person or passing an infected person in a hallway or on a sidewalk.

What are the symptoms of meningococcal disease?

Meningococcal disease usually starts with a sudden onset of fever and headache. A stiff neck may be present and later a red rash often develops. Nausea and vomiting also can occur but alone are not sufficient to suggest meningococcal disease. In newborns and small infants, the classic findings of fever, headache and neck stiffness may be absent or difficult to detect, and the infant may show only extreme listlessness, irritability, poor feeding and sometimes vomiting. In severe cases, as the disease progresses, both infants and older patients may have seizures and decreased alertness advancing to coma.

Who is most susceptible to meningococcal disease?

Meningococcal disease is primarily a disease of young children. About 50 percent of cases occur in infants and children younger than 4 years of age. Adults at increased risk of meningococcal disease include those who have recently been brought together as a group and housed under crowded living conditions, such as in barracks or institutions. College freshmen, particularly those living in dormitories, are at modestly increased

risk. Household contacts of cases, which are at greatest risk of meningococcal disease, have only about 3 to 10 chances in 1,000 of developing the disease. Most persons are not susceptible to meningococcal disease because they have had prior exposure and have become immune.

In Illinois, the five-year median (2002-2006) for meningococcal disease is approximately 46 cases a year. Fewer than 10 percent of all meningococcal disease cases are fatal. Death occurs more often in meningococemia (as high as 17 percent) than in meningococcal meningitis (approximately 7 percent).

How is meningococcal disease treated?

Cases of meningococcal disease require immediate medical treatment by a physician. The diagnosis is usually made by growing bacteria from a sample of blood or spinal fluid. The spinal fluid is obtained by performing a spinal tap, in which a needle is inserted into an area in the lower back where fluid in the spinal canal is readily accessible. Intravenous penicillin or other antibiotics are used to treat infected persons.

How can meningococcal disease be prevented?

Risk of transmission of meningococcal infection can be reduced by practicing good hygiene. Persons should cover their noses and mouths when sneezing or coughing and discard used tissues promptly. Wash hands thoroughly following exposure to respiratory secretions. To avoid exposure, persons should not share cigarettes, straws, cups, glasses, toothbrushes or eating utensils. Eating and drinking utensils can be used by others only after they have been washed.

It is recommended that household contacts and others who have had close personal contact with infected persons receive a short course of certain antibiotics, which kill bacteria living in throat secretions. Since the recommendations for use of preventive antibiotics vary according to the specific situation, it is best to consult a physician or local health department for advice. Even if an antibiotic is taken, close contacts should be observed and any sign of disease promptly evaluated by a physician.

Meningococcal vaccine is effective on certain types of *Neisseria meningitidis* but is only recommended when there is a high incidence of cases in a limited geographic area and for persons traveling to countries where epidemics are in progress.

It is recommended that health care providers routinely vaccinate person's age 11 to 18 years with meningococcal vaccine to improve vaccination coverage in this age group. College freshmen living in dormitories are at increased risk for meningococcal disease and, if not previously vaccinated, they should be vaccinated before entering college.

Resources

- [Meningococcal Disease Brochure for Students and Their Parents \(/sites/default/files/OHP_Publications_Meningococcal_Disease_Brochure.pdf\)](/sites/default/files/OHP_Publications_Meningococcal_Disease_Brochure.pdf)

Menu Link:

[Diseases A-Z \(/topics-services/diseases-and-conditions/diseases-a-z-list\)](/topics-services/diseases-and-conditions/diseases-a-z-list)

Protecting health, improving lives.

