

Influenza in children



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What is 'influenza'?

Influenza (or the 'flu') is a respiratory infection caused by influenza virus. A virus is a kind of germ that makes people sick. Sometimes people refer to other illnesses as 'flu', but in this document, 'flu' is used only as a short form for 'influenza'.

Influenza outbreaks occur every year, usually between November and April. Because influenza viruses change – often from year to year – immunity to (or protection from) influenza does not last long. That's why people can catch the flu more than once.

From time to time, there is a major change in the influenza virus such that no one is immune. When this happens, large numbers of people of all ages all around the world become sick with the flu within a few months. This is called an influenza 'pandemic'. Pandemics have occurred in 1889, 1918, 1957 and 1968. Experts are working to prevent a pandemic the next time there is a major change in the influenza virus.

The flu virus spreads quickly from person to person, especially where there are crowds or where people live, work or study close together. Children are most likely to be infected and are the major spreaders of influenza.

The flu strikes more quickly than a cold, and people who get it feel sicker. While children with colds usually have energy to play and keep up their daily routines, the flu usually keeps them in bed.

How influenza is spread

Influenza viruses are found in the nose and throat. Because children touch their noses, eyes and mouths often, put things in their mouths, and touch each other often during play, flu germs spread easily. There is also a lot of contact between parents or caregivers and children: holding hands, picking up, feeding, changing diapers and so on.

- The influenza virus may be spread through droplets in the air. These droplets come from the nose and mouth during coughing or sneezing, travel through the air, and reach the mouths or noses of others who are nearby (within a metre or so).
- A person with the flu transfers the virus to the hands when touching the nose or mouth, wiping

the nose, or coughing or sneezing, and may pass the virus directly to others by touching them.

- A person with the flu gets virus on the hands and then touches an object, such as a toy or furniture. Influenza viruses can live for several hours on toys, doorknobs, computer keyboards or other hard surfaces. The virus can be picked up on the hands of others who touch these same objects. People then get infected when they touch their eyes, nose or mouth.
- Caregivers may get the flu virus on their hands and then spread it between children by touching them.

How to recognize influenza

Influenza usually begins with sudden fever, chills and shakes, headache, muscle aches, extreme tiredness, dry cough and sore throat. Loss of appetite is common. People with the flu generally feel very sick and want to stay in bed.

Although children with the flu may have many of the same symptoms as adults, there are some differences:

- Newborns and infants may have a high fever that can't be explained, and no other signs.
- Young children usually have temperatures over 39.5°C and may have febrile seizures (convulsions).
- Flu is an important cause of croup (an infection of the throat and vocal cords), pneumonia (lung infection) and bronchiolitis (infection of the tiny airways that lead to the lungs) in young children.
- Stomach upsets, vomiting, diarrhea and abdominal (stomach) pain are more common in younger children. Earaches and red eyes are also more common.
- In some cases, muscle swelling can lead to severe leg or back pain.

Most healthy people recover from the flu without any serious problems. Fever and muscle aches usually last only 2 to 4 days, but cough and tiredness may go on for 1 to 2 weeks or more.

In rare cases, influenza may affect the brain, causing prolonged seizures, confusion or unresponsiveness. In

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rare cases, it may affect the heart. Influenza may also weaken the immune system and lead to bacterial infections of the ear, lung or sinuses.

Influenza is more severe in children under 2 years of age and in children with certain chronic conditions.

When to call a doctor

Contact your doctor or take your child to an emergency department if your child:

- has signs of influenza and has lung or heart disease, has an illness or is taking treatment that affects the immune system, takes acetylsalicylic acid (ASA or Aspirin) regularly for a medical condition or has any other chronic illness requiring regular medical care;
- is less than 3 months old and has a rectal temperature over 38.5°C;
- has trouble breathing when resting, is wheezing, has chest pain when breathing or is coughing up bloody sputum (phlegm or saliva);
- drinks very little fluid and has not urinated at least every 6 h when awake;
- has vomiting for more than 4 h, or has severe diarrhea;
- is constantly irritable and will not calm down;
- is listless, not interested in playing with toys or unusually sleepy; or
- still has a fever and is not feeling better after 5 days or was feeling better and suddenly develops a new fever.

Take your child immediately to a hospital emergency department or call 911 if your child:

- has severe trouble breathing or blue lips;
- is limp or unable to move;
- is hard to wake up or does not respond;
- has a stiff neck;
- seems confused; or
- has a seizure (convulsion/fit).

Treating influenza: What parents can do

- Keep your child as comfortable as possible and encourage rest. If he has fever, dress him in lightweight clothing and keep the room temperature around 20°C.
- Offer cool fluids often. Extra fluids are needed to

replace those lost in sweat. If your child's urine is darker than usual, she needs to drink more.

- Your child may not want to eat. Offer small, nutritious meals.
- Monitor your child's temperature. For pain relief, muscle aches or fever with temperature higher than 38.5°C, use acetaminophen (eg, Tylenol, Tempra and Panadol). Ibuprofen (eg, Advil and Motrin) may be used for children over six months old. Use the dose and schedule recommended on the package or by your doctor or pharmacist. Do not give acetylsalicylic acid (ASA [eg, Aspirin]) or any cold medicine with it, to children or teenagers with influenza because it can lead to brain and liver damage (Reye syndrome).
- 'Over-the-counter' cough and cold medicines (which don't need a doctor's prescription) should not be given to children younger than 3 years of age unless prescribed by your doctor. Ask your doctor or pharmacist before giving over-the-counter medicines to a child under 12 years of age or anyone who is taking other medicines or has a chronic illness. Read label instructions carefully and do not take more than recommended.
- Coughing helps to clear mucus from the chest. For an older child with a frequent, dry cough that prevents sleeping, a product with dextromethorphan may help, but studies have shown that these products don't have much benefit. Decongestants and antihistamines won't stop coughing.
- If an infant is having trouble feeding because of a stuffed nose, use a rubber suction bulb to clear the mucus. Use saline nose drops or saline nose spray if the mucus is very thick. The spray goes well into the nasal passages and may be more effective than the drops.
- A cool mist humidifier will make a child with a stuffed nose more comfortable. Clean and dry the humidifier thoroughly to prevent bacterial or mould contamination. Hot water vaporizers are not recommended because of the risk of burns.
- Medicated nose drops or sprays provide only brief relief and should not be used for more than 2 to 3 days because nasal congestion can actually get worse. These should not be used in children under 6 years of age. Decongestants taken by mouth are not very effective and can cause rapid heartbeat or insomnia in children. Antihistamines are not effective for influenza.

- Influenza cannot be treated with antibiotics. Antibiotics should be used only when children develop bacterial complications, such as ear infection or pneumonia.
- Gargling with warm water will ease a sore throat. For children 3 years or older, sucking on sugarless hard candy or lozenges containing honey, herbs or pectin also helps. Throat lozenges containing medications that numb the throat (dyclonine, benzocaine, hexylresorcinol, menthol and phenol) should not be used by young children because these may affect their ability to swallow.

Antiviral medications

If your child has lung or heart disease, an illness that affects the immune system or some other chronic condition that requires regular medical attention and you think that the child may have influenza, call your doctor right away. Your doctor may prescribe an antiviral drug. Amantadine (Symmetrel), oseltamivir (Tamiflu) and zanamivir (Relenza) are antiviral medications that can fight influenza viruses. These drugs may also be prescribed for healthy persons with severe influenza. They must be taken within 48 h of the first symptoms to be effective.

Preventing influenza through immunization

Influenza can be prevented through immunization. Most people who are vaccinated will not get influenza. People who do get it will have a less serious case. Because new influenza strains turn up yearly, you have to get the vaccine every year. The influenza vaccine only prevents influenza. It does not prevent infections with other respiratory viruses that people sometimes call the 'flu'. The flu shot cannot cause the flu.

The influenza vaccine ('flu shot') is available in the fall and provides protection for the influenza season (November to April). The vaccine takes about 2 weeks from the time it is given to provide full protection. Children younger than 9 years old need 2 shots (4 weeks apart) the first year they are immunized. The current influenza vaccine does not work in children younger than 6 months old.

The Canadian Paediatric Society recommends that all children 6 months to 23 months old, as well as older children with certain chronic conditions, get a flu shot each year. Parents, older siblings, others living

in the home and caregivers of children younger than 2 years of age should also receive the vaccine to prevent them from getting the infection and passing it on to younger children. The Canadian Paediatric Society has developed a fact sheet on the flu vaccine (visit <www.caringforkids.cps.ca>).

Make sure your child has also received all of the other recommended vaccines. These will help prevent some of the complications of the flu, such as bacterial infections of the ears or lungs.

What parents can do to prevent spreading influenza

- Handwashing is the most important way to reduce the spread of flu:
 - Wash your hands after being in direct contact with someone who has a respiratory infection.
 - Wash your own hands and your child's hands after wiping your child's nose.
 - Wash your hands after coughing, sneezing or wiping your nose.
 - When water and soap are not available, use premoistened hand wipes or alcohol-based hand rinses. Keep hand rinses out of reach of children because they may be harmful if swallowed.
 - Wash your hands after touching objects handled by someone who has influenza.
- Teach children to cover their noses and mouths with tissues when sneezing or coughing, to put used tissue in a wastebasket immediately, and to wash their hands after wiping their nose or handling tissues.
- If a family member has the flu, clean surfaces (such as toys, bathroom taps and doorknobs) after the ill person has touched them.
- If your child attends daycare, tell the caregiver if you think your child has influenza. Keep your child at home, away from daycare or school, until the fever is gone and she is feeling better. When both parents work outside the home, plan ahead by making arrangements for when your child becomes ill.

Source: Canadian Paediatric Society Infectious Diseases and Immunization Committee, 2005.

This information should not be used as a substitute for the medical care and advice of your physician. There may be variations in treatment that your physician may recommend based on individual facts and circumstances.

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Canadian Paediatric Society, 2305 St Laurent Boulevard, Ottawa, Ontario K1G 4J8,
telephone 613-526-9397, fax 613-526-3332, Web site www.cps.ca