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# Flu (influenza): For health professionals

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For health professionals

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## Key information

Influenza is a respiratory illness caused primarily by the influenza A and B viruses.

While most people recover within a week to 10 days, severe illness can occur. Some people are at a greater risk of influenza-related complications.

Getting vaccinated against influenza each fall reduces the risk of serious illness from influenza.

It is especially important for people to get the influenza vaccine to reduce:

- the morbidity and mortality associated with influenza
- pressure on the health care system during the respiratory virus season

The National Advisory Committee on Immunization (NACI) is an external advisory body to the Public Health Agency of Canada. NACI makes recommendations on the optimal use of vaccines available in Canada.

For advice regarding the administration of seasonal influenza vaccines and awareness resources for your patients, refer to:

- Statement on seasonal influenza vaccine for 2024–2025
- Influenza vaccines: Canadian Immunization Guide

- Risk groups for influenza-related complications
- Influenza awareness resources
- First Nations and Inuit seasonal influenza awareness materials

## Agent of disease

Influenza A and B are the main influenza viruses that cause seasonal outbreaks in humans.

Influenza A viruses are classified into subtypes based on 2 surface proteins:

1. hemagglutinin (HA)
2. neuraminidase (NA)

Of these, the influenza A viruses that have caused widespread human disease have been:

- 3 subtypes of HA (H1, H2 and H3)
- 2 subtypes of NA (N1 and N2)

Influenza B has evolved into 2 lineages:

1. B/Yamagata
2. B/Victoria

Over time, there can be subtle changes in the surface protein of influenza viruses. This is known as antigenic variation, or antigenic drift. It results in multiple strains within an influenza A subtype or B lineage. In most seasons, 1 or more of the circulating strains have changed from the previous year. This requires a reassessment and update of the vaccine formulation to keep the product matched to the circulating strains.

Another important phenomenon is the waning of immune responses to seasonal influenza vaccines over time. A yearly dose of influenza vaccine will help restore protective immunity.

Antigenic shift due to a reassortment of genes can also occur. This can cause an abrupt, major change in an influenza A virus. The resulting reassortment of the influenza viruses can become a pandemic influenza.

Learn more:

- [What health professionals need to know about pandemic influenza](#)
- [Canadian pandemic influenza preparedness: Planning guidance for the health sector](#)

## Recent changes in circulating influenza B lineage

The influenza B/Yamagata lineage has not been detected anywhere in the world since March 2020. Because of this, the World Health Organization has recommended removing B/Yamagata antigen as a component of inactivated and live attenuated influenza vaccines.

Due to these recent changes in epidemiology and global expert advice, NACI no longer has a preference between quadrivalent and trivalent influenza vaccine formulations.

More information on approved vaccines for the 2024–2025 influenza season can be found in:

- [Approved vaccines: Appendix B of the NACI statement on seasonal influenza vaccine for 2024-2025](#)

## Epidemiology of influenza

Influenza is among the top 10 leading causes of death in Canada.

According to Canadian data from before the COVID-19 pandemic, each year influenza causes approximately:

- 12,200 hospitalizations

- 3,500 deaths

Worldwide, it causes about:

- 1 billion infections
- 3 to 5 million cases of severe illness
- 290,000 to 650,000 deaths

## Transmission

Influenza is primarily spread when a person who is infected releases infectious respiratory particles of various sizes into the air. This happens, for example, when:

- coughing
- sneezing
- talking
- breathing

A person may become infected:

- when they inhale these infectious respiratory particles
- when infectious respiratory particles or secretions come into direct contact with their eyes, nose or mouth
- through contact with contaminated surfaces and objects

The incubation period of influenza is usually 2 days but can range from 1 to 4 days. Adults may be able to spread influenza to others from the day before symptoms start to approximately 5 days after symptoms start.

Children and people with weakened immune systems may be infectious for longer.

# Spectrum of clinical illness

Influenza virus infection causes a wide spectrum of illness, from asymptomatic to severe. Most people recover within a week or 10 days. However, severe illness can develop, which can result in hospitalization or death.

Influenza symptoms usually include the sudden onset of:

- fever
- cough
- myalgias

Other common symptoms include:

- chills
- fatigue
- headache
- sore throat
- loss of appetite
- nasal congestion

In some people, especially children, nausea, vomiting and diarrhea may occur.

Some groups are at greater risk of hospitalization and complications, such as:

- worsening of chronic health conditions
- heart complications
- pneumonia and respiratory failure
- death

Symptoms of influenza can be similar to symptoms of other respiratory illnesses, and may require the use of laboratory testing to confirm clinical suspicion.

Learn more:

- [COVID-19 signs, symptoms and severity of disease: A clinician guide](#)
- [Respiratory syncytial virus \(RSV\): For health professionals](#)
- [RSV vaccines: Canadian Immunization Guide](#)

## Risk groups for influenza-related complications

The people at high risk of influenza-related complications or hospitalization include:

- adults 65 years of age and older
- all children younger than 6 years of age
- pregnant people
- adults and children with the following chronic health conditions:
  - cardiac or pulmonary disorders
  - diabetes mellitus and other metabolic diseases
  - cancer and other immunocompromising conditions due to underlying disease or therapy
  - renal disease
  - anemia or hemoglobinopathy
  - neurologic or neurodevelopmental conditions
  - people with a BMI of 40 and over
  - children up to 18 years of age undergoing treatment for long periods with acetylsalicylic acid (ASA)
- people of any age who are residents of nursing homes and other chronic care facilities

- Indigenous Peoples

The following NACI statement elaborates on people at high risk of influenza-related complications and for whom influenza vaccination is particularly important:

- Particularly important vaccine recipients: NACI statement on seasonal influenza vaccine for 2024–2025

## Prevention and control

Annual influenza vaccination is the most effective way to prevent influenza illness and its complications.

Every year, NACI issues a statement on seasonal influenza vaccines. It informs immunization programs and health care providers regarding the use of these vaccines based on current data available.

NACI recommends an influenza vaccine for all people in Canada aged 6 months and older who do not have contraindications to the vaccine.

When children 6 months to less than 9 years of age receive an influenza vaccine for the first time, they should be given 2 doses a month apart. Afterwards, children only need 1 influenza vaccine dose each fall. If the influenza vaccine is given for the first time to an individual 9 years of age or older, only 1 dose is recommended for that year.

To reduce the morbidity and mortality associated with influenza, immunization programs should especially focus on people 6 months of age and older who are:

- at high risk of influenza-related complications
- capable of transmitting influenza to those at higher risk, including:
  - health care and other care providers in facilities and community settings



- household contacts (adults and children) of individuals at high risk of influenza-related complications, including:
  - infants less than 6 months old
  - members of a household expecting a newborn during influenza season
- those providing regular child care to children younger than 6 years of age
- those providing services in closed or relatively closed settings to those at high risk, such as a ship's crew

These immunization programs should also focus on people who:

- provide essential community services
- are directly involved in culling operations of poultry infected with avian influenza
  - for more information, see the [NACI banner on outbreaks of highly pathogenic avian influenza](#)

Health care providers should offer an authorized vaccine to eligible people 6 months of age and older when it becomes available in the fall. Decisions about the timing of vaccination programs and vaccines available in a given jurisdiction are made by provinces and territories considering:

- local influenza activity
- programmatic factors

It is preferable to administer influenza vaccines before the onset of the influenza season. It generally takes 2 weeks for immunity to develop after vaccination. Delayed administration may result in lost opportunities to prevent infection from exposures that occur prior to vaccination. However, vaccination may still be offered until the end of the season.

For people 6 months of age and older, the administration of the seasonal influenza vaccine can be given:

- at the same time as other vaccines **or**
- at any time before or after other vaccines

To help prevent the spread of influenza, health care providers can:

- receive influenza vaccine themselves to help prevent transmitting influenza to their patients
- discuss the benefits and possible side effects of the influenza vaccine with patients, as well as the risks of not being vaccinated
- use every opportunity to administer the influenza vaccine, even after the start of influenza activity in the community
- give recommended vaccines at the same visit, including influenza, COVID-19, RSV, and pneumococcal vaccines, as required
- inform patients about maintaining up-to-date vaccinations
- encourage the use of personal protective measures to reduce and prevent the spread of influenza, COVID-19 and other respiratory viruses, which can include:
  - staying home when sick or infected
  - wearing a well-constructed, well-fitting mask when appropriate
  - improving indoor ventilation when possible
  - cleaning hands regularly
  - covering coughs and sneezes
  - regularly cleaning and disinfecting high-touch surfaces and objects

Further clinical guidance about vaccination, including vaccine administration advice and additional safety considerations, can be found in the Canadian Immunization Guide.

Learn more:

- [Approved vaccines: Appendix B of the NACI statement on seasonal influenza vaccine for 2024-2025](#)
- [Risk groups for influenza-related complications](#)

- [Key immunization information: Canadian Immunization Guide](#)
- [Respiratory infectious diseases: How to reduce the spread with personal protective measures: Respiratory infectious diseases](#)
- [COVID-19: Prevention and risks](#)

# Treatment

Most people with influenza will become only mildly ill and will not require hospitalization or antiviral medication.

Antiviral medications to reduce influenza morbidity and mortality are recommended for people with influenza symptoms in high-risk groups or who are severely ill.

Individuals who have symptoms of influenza and are recommended to receive antiviral medications do not need laboratory confirmation of influenza to receive the medication.

The most commonly used influenza antiviral medication for the treatment and prevention of influenza is oseltamivir, which is given orally.

Antiviral medication should be given as soon as possible and optimally within 48 hours of symptom onset. They can also be given beyond 48 hours in some specific circumstances.

For information on the clinical management of influenza, consult the following guidance:

- [2023 update on influenza: Management and emerging issue](#)  
([Association of Medical Microbiology and Infectious Disease Canada](#)).

# Surveillance

## FluWatch surveillance

FluWatch, Canada's national influenza surveillance system, monitors the spread of influenza and influenza-like illnesses (ILI). It is a multicomponent surveillance system where the different components are used to provide a comprehensive weekly assessment and summary of influenza activity in Canada. The weekly report includes information on circulating influenza strains and the extent to which they match the strains in the influenza vaccines and the proportion of tested strains that are resistant to antivirals.

For the latest information on influenza activity in Canada, refer to:

- [FluWatch reports](#)

Primary care physicians, nurse practitioners and registered nurses can become FluWatch sentinel practitioners.

For more information, refer to:

- [FluWatch Sentinel Practitioner ILI Surveillance Program](#)

You may also encourage your patients to help track influenza and COVID-19 through the following:

- [Become a FluWatcher](#)

## International surveillance

For current international influenza activity, refer to:

- [World Health Organization's FluNet](#)

# FluWatch sentinel practitioner program for health professionals

If you're a physician, nurse practitioner or registered nurse who is involved in primary care, you can become a FluWatch sentinel practitioner.

The Sentinel Primary Care Influenza-like Illness Surveillance Program is FluWatch's primary source for outpatient flu data in Canada.

To sign up, email [fluwatch-epigrippe@phac-aspc.gc.ca](mailto:fluwatch-epigrippe@phac-aspc.gc.ca).

Learn more:

- [FluWatch Sentinel Practitioner Influenza-like Illness Surveillance Program](#)

## Webinar on fall and winter respiratory illnesses

Each fall, the Public Health Agency of Canada releases a fall and winter respiratory illnesses webinar for health care professionals. This webinar series is aimed at updating health care providers on the prevention and treatment of respiratory illnesses during the fall and winter seasons.

Access current webinar and presentation materials:

- [Vaccination webinars and webcasts for health professionals: Influenza](#)

## Related links

- [Vaccines and immunization](#)
- [Find flu vaccine clinics across Canada](#)
- [National case definition: Laboratory-confirmed influenza](#)

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