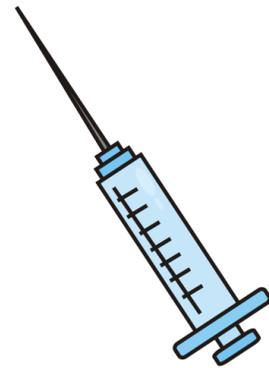


October 2016

## It's flu season! Let's Get Ready

It is known and supported by evidence that flu vaccine helps protect HCWs as well as the patients they care for, especially within seniors and long-term care residences. In fact, this is why the National Advisory Committee for Immunization (NACI) considers it an essential component of the standard of care for every worker or volunteer who attends any area of a health care setting - whether it be the bedside, administration, laundry or the kitchen.



Most people know that influenza is a common but serious viral infection of the respiratory system that can lead to hospitalization and death, even among otherwise “healthy” people.

It is also known - and underscored by results of randomized controlled clinical trials conducted in geriatric and long-term care settings - that disease transmission between infected HCWs and their vulnerable patients can result in significant morbidity and mortality. Thus, the goal of annual immunization is to help prevent harm to HCWs and the people they care for.

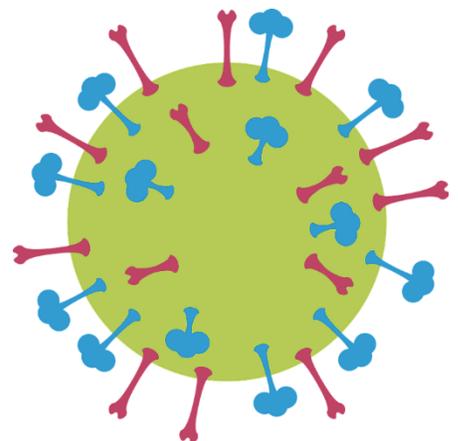
### Some flu facts

About 5-10 percent of adults and 20-30 percent of children are infected with influenza annually, and it is ranked as one of the top 10 leading causes of death in Canada.

Immunization has been shown to reduce physician visits, hospitalizations and deaths in high-risk individuals.

Spread mainly by droplets produced when talking, sneezing or coughing from up to about 6 feet away (and inhaled) droplet-contaminated surfaces can also be a source of transmission.

People are reminded that transmission can occur one day before symptoms develop and up to five-to-seven days after becoming sick. Or, viruses may be spread by the “asymptomatic infected.”



## Flu Vaccines...

- Cannot / do not cause the flu because they're made with either killed or weakened viruses.
- Induce adaptive immunity by providing immunological memory. This ensures that when the body is exposed to "live virus," immune memory cells rapidly reactivate into immune effector cells that fight off the virus and protect the host.
- Protect against the influenza viruses that research indicates will be most common during the upcoming season.
- Trivalent vaccines are made to protect against three flu viruses: Influenza A (H1N1) and (H3N2), as well as influenza B.
- Quadrivalent vaccines protect against four viruses (the same viruses as the trivalent) and an additional B virus.
- Are safe. Serious problems from the flu vaccine are extremely rare.
- The most common side effect a person is likely to experience is short-term (up to two days) soreness at the injection site.

## What types of influenza vaccines are available in Canada?

### Inactivated (or killed virus) influenza vaccines (Trivalent or Quadrivalent)

- Trivalent vaccines available in Canada: Unadjuvanted: IM administered (TIV)
  - **Agriflu** (Novartis)
  - **Fluviral**®
  - **Fluzone**® (Sanofi Pasteur)
  - **Influvac**® (BGP Pharma ULC, Note: products may still be labeled Abbott)
  - **Vaxigrip**® (Sanofi Pasteur)
- Quadrivalent vaccines available in Canada: Unadjuvanted : IM administered (QIV)
  - **Flulaval**® Tetra (GlaxoSmithKline)
  - **Fluzone**® Quadrivalent (Sanofi Pasteur)

### Adjuvated, Inactivated Influenza Vaccine (Trivalent ): IM Administered

- Inactivated vaccines which contain the adjuvant MF59  
NOTE: An adjuvant is something that is added to inactivated vaccines to enhance immune response
  - **Fluad**® (Novartis)
  - **Fluad Pediatric**™ (Novartis)

## Live attenuated influenza vaccine (or weakened virus)

- A quadrivalent intranasal live (weakened virus) vaccine is authorized for use in Canada
- Weakened (also called attenuated) strains of the influenza virus are unable to cause influenza in people with healthy immune systems
- The strains are also cold-adapted and temperature sensitive so that they replicate in the nasal mucosa rather than in the lower respiratory tract
  - Flumist® Quadrivalent (AstraZeneca) live attenuated vaccine

NACI recommends that TIV or QIV, instead of LAIV, should be used for HCWs providing care to individuals with immune compromising conditions, unless the HCW will only accept LAIV. If a HCW or other person receives LAIV and is providing care to individuals with severe immune compromising conditions (defined as hospitalized and requiring care in a protected environment), they should wait two weeks following receipt of LAIV before continuing to provide care to such individuals.

## Who should get the flu vaccine?

The National Advisory Committee on Immunization (NACI) recommends influenza vaccine for all Canadians aged six months and older. In particular, those at high risk of experiencing influenza-related complications and/or hospitalization, as well as HCWs who are capable of transmitting influenza to patients at high risk.

Children who have been previously immunized with the influenza vaccine as well as adults should receive one dose each year. And children six months to less than nine years of age (who have never received the vaccine before) should be given two doses with at least four weeks in between each dose.

If a person is suffering from a serious acute illness, influenza vaccine should not be administered until symptoms have subsided, but for those with minor illnesses, (with or without fever), flu vaccine should not be delayed.

## Who is considered at “high-risk” of experiencing influenza-related complications?

- Pregnant women
- Adults and children with the following chronic conditions:
  - Cardiac or pulmonary disorders
  - Diabetes mellitus and other metabolic diseases
  - Cancer, immune compromising conditions (due to disease, therapy, or both)
  - Renal disease
  - Anemia or hemoglobinopathy
  - Neurologic or neurodevelopment conditions
  - Morbid obesity (BMI  $\geq$  40)
  - Children and adolescents (age 6 months to 18 years) undergoing treatment for long periods of acetylsalicylic acid, because of the potential increase of Reye’s syndrome associated with influenza
- Residents of nursing homes and other chronic care facilities
- People  $\geq$  65 years of age
- All children 6 months to 5 years of age
- Aboriginal peoples

## What are the symptoms of the flu?

Influenza is unique in its rapid onset of symptoms, most commonly fever (>40° C/104° F), cough and myalgia within a few hours. Other possible symptoms include headache, chills, fatigue, loss of appetite, and sore throat. In some people (more commonly in children), nausea, vomiting and diarrhea may occur. For most, symptoms resolve within 7-10 days. High-risk individuals may have a longer duration of symptoms and/or develop further complications, such as bacterial pneumonia or hospitalization.

## What are the contraindications of the influenza vaccine?

Anyone who has experienced the following should not receive another influenza immunization:

- Anaphylactic reaction to a previous dose of the influenza vaccine or any vaccine component
- Developed Guillain-Barre Syndrome (GBS) within six weeks of receiving an influenza vaccine
- Additional contraindications specifically for the live-attenuated influenza vaccine include:
  - Children less than 2 years of age
  - Individuals with severe asthma
  - Children 2-17 years of age who are receiving aspirin or aspirin-containing therapy
  - Pregnant women
  - Individuals with immune compromising conditions (due to underlying disease, therapy or both)

**Egg allergic individuals** may receive a full dose of either the trivalent or quadrivalent inactivated influenza vaccines without a prior influenza vaccine skin test in any setting where the vaccine is typically administered. Immunizers should be prepared to respond to an emergency. Due to lack of study regarding its safety at this time, the live-attenuated influenza vaccine should not be administered to egg allergic individuals.

All influenza vaccines approved for use in Canada are considered safe to use in **latex allergic individuals**.

## What are the most common side effects caused by the influenza vaccines?

All types of influenza vaccines have been proven to have safe and stable adverse event profiles. The most common side effects of the intramuscularly administered vaccines include mild and transient injection site reactions (such as soreness, redness, and swelling). The live attenuated intranasal vaccine occasionally causes nasal congestion and runny nose. Systemic reactions to influenza vaccines, which are more common in adults 60 and older, include headache, malaise, myalgia, fatigue, arthralgia and fever.

Newsletters are available at: [medicalartsparmacy.ca](http://medicalartsparmacy.ca)

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