

The flu vaccine: to vaccinate or not to vaccinate?

By Julie Zepp ND

Now that fall is upon us, the television ads and health region campaigns have begun, encouraging you to get “your flu shot”. I have been asked time and time again by people interested in maximizing their health, whether or not getting the flu vaccine might help or hinder this process. For this reason, I have decided to compile some information on the flu vaccine for interested individuals in order for you to make a more informed choice.

I suggest you read the following information, but if it seems a little daunting, at the very least be sure to check out the following pod cast, brilliantly put together by the Royal Canadian Air Farce:

http://www.cbc.ca/airfarce/vidplayer/AF_single_player.html?season13/051202m

The Canadian Naturopathic Association has put together a position paper in which they state some of the pros and cons of the flu vaccine. **This position paper can be read in full at the end of this article.** I will summarize the main points from this paper here along with some additional detailed information on the flu shot.

According to the Health Canada website (http://www.hc-sc.gc.ca/iyh-vsv/diseases-maladies/flu-grippe_e.html):

“Influenza is a respiratory infection caused by the influenza virus. Various strains of the virus circulate throughout the world year-round, causing local outbreaks. In Canada, flu season usually runs from November to April and an estimated 10-25% of Canadians may get the flu each year. Although most of these people recover completely, an estimated 4,000 to 8,000 Canadians, mostly seniors, die every year from pneumonia related to flu and many others may die from other serious complications of flu.

The influenza virus spreads through droplets that have been coughed or sneezed into the air by someone who has the flu. You can get the flu by breathing in these droplets through your nose or mouth, or by the droplets landing directly on your eyes. The flu virus is also found on the hands of people with the flu and on surfaces they have touched. You can become infected if you shake hands with infected persons or touch contaminated surfaces and transfer the virus to your own eyes, nose or mouth.

Flu vaccines have been around since the 1940s. The vaccine is made from fragments of inactivated influenza viruses, grown in fertilized hens' eggs and then purified. The flu viruses are capable of changing from year to year, so the composition of the vaccine has to be updated annually. This is why it is necessary to be immunized **each** fall. About 10 million doses of influenza vaccine are distributed annually in Canada each year during the flu season.

After you get a flu shot, your immune system produces antibodies against the strains of virus in the vaccine. The antibodies are effective for four to six months. When you are exposed to the influenza virus, the antibodies will help to prevent infection or reduce the severity of the illness.”

First of all, we can see that the risk of acquiring influenza in Canada is only 10-25%. Most people recover fully, and as the second paragraph outlines, the flu is an airborne pathogen, which means a strong immune system can readily fight the virus. Proper hygiene, including regular hand washing, also goes a long way in providing protection against the flu. It is also interesting to note that “flu vaccines have been around since the

1940s”... and we have now seen that each year, the influenza viruses become more and more deadly as they mutate. It is highly unlikely that these viruses would be as virulent as they are today, had it not been for the flu vaccine causing the mutations, though there are also multiple influences in our society today that further increase the rate of mutation. Some of these include the increasingly toxic environment we live in, increased population densities, lowered immune functions due to increasingly nutrient poor diets, and increased travel patterns causing people to be exposed to viruses they would not be without travel – among others.

. In the last paragraph, we can see that the influenza vaccination is not life long. The effects wear off in a few months. Natural protection is acquired when your body mounts an immune response to the ACTUAL virus, as opposed to the vaccine source of the virus offers a much longer window of protection against the flu.

What’s in a flu vaccine?

Every year flu viruses around the world are collected. About one year prior to a vaccine being available, three strains of potential viruses are selected based on researchers estimation on the likely strains that will affect a given area. These viruses are cultivated in laboratories using chicken eggs and are then deactivated using formaldehyde and sodium deoxycholate and/or polyethylene glycol p-isooctylphenyl ether (Triton X-100). The vaccines are then packaged. They often contain traces of the animal cells from which the viruses were obtained.

The Public Health Agency of Canada states the following with respect to making the flu vaccine (http://www.phac-aspc.gc.ca/media/nr-rp/2006/20060823-vac0607_e.html):

“The makeup of the vaccine is based on annual recommendations from the World Health Organization which are usually received in mid-February. Production starts soon after and usually takes about six months. Vaccine manufacturing is a biological process where manufacturers are dealing with a live, unpredictable virus. This means that there is always some potential for variation in the process. Time lines for the manufacturing and testing of the vaccine are also tight so challenges in the production process may result in unexpected delays.”

This statement indicates that the preparation of the flu vaccine is really a calculated “hit or miss” process. The “manufacturers are dealing with live, unpredictable virus” and although there are roughly 500 different viruses that can cause flu-like symptoms, it is only the top 3 that are chosen for the flu vaccination.

According to the vaccine manufacturer GlaxoSmithKline (http://us.gsk.com/products/assets/us_fluarix.pdf) – the manufacturer of the vaccine for Canada (<http://www.who.int/csr/disease/influenza/manulist/en/index.html>); each 0.5 mL dose of the vaccine contains:

- 45 micrograms (mcg) hemagglutinin (HA), in the recommended ratio of 15 mcg HA of each of the following 3 strains: A/New Caledonia/20/99 (H1N1), A/Wisconsin/67/2005 (H3N2), and B/Malaysia/2506/2004.
- Octoxynol-10 (TRITON® X-100) ≤0.085 mg
- α-tocopheryl hydrogen succinate ≤0.1 mg
- polysorbate 80 (Tween 80) ≤0.415 mg.

- Hydrocortisone ≤ 0.0016 mcg
- Gentamicin sulfate ≤ 0.15 mcg
- Ovalbumin ≤ 1 mcg
- Formaldehyde ≤ 50 mcg
- Sodium deoxycholate ≤ 50 mcg
- Thimerosal is used at the early stages of manufacture and is removed by subsequent purification steps to a trace amount (≤ 1 mcg mercury per dose)

Which means you end up with not only egg residue (ovalbumin) in your arm, but also small amounts of formaldehyde, mercury, antibiotics (gentamicin sulfate, aka garamycin), steroids (hydrocortisone), and a form of polyethylene glycol – also found in antifreeze (octoxynol-10)! At least there is a little vitamin E (α -tocopheryl hydrogen succinate) in there, so it must be good for you, right?

Is it worth it?

Influenza affects millions of Canadians each year, most developing only a small number of symptoms. These symptoms include body aches, chills, fever, cough, sore throat, fatigue and headaches. The virus is self-limiting, meaning that symptoms will resolve on their own within two to three days and will be gone completely within a week. The main complication of the flu is pneumonia, which occurs only extremely rarely and in high risk individuals.

The research from Health Canada suggests that the flu vaccine that closely matches the current seasonal influenza strains only *temporarily* prevents the flu in healthy persons less than 65 years old about 70% of the time.

In individuals over 65 years of age the efficacy rate of the flu vaccine is reported to be less than 30%.

The following CAND paper provides a considerable amount of very valuable information to assist you in making your decision. Hopefully this article has given you a little food for thought and you will be able to make a more informed choice when deciding to line up for your flu shot. I can tell you that I certainly won't see you in line!

Don't forget that "a good defense is the best offense!" and the best way to protect yourself from the flu is to eat well, boost your immunity, get lots of rest – and if you do feel yourself coming down with a "bug" stay home and rest!

In health - Julie Zepp ND

Flu Vaccinations - Canadian Naturopathic Association

The Canadian Naturopathic Association believes it is in your best interest to become informed about your health and treatment options before making any decisions about your health. Review the following information to become better prepared to determine if the flu vaccination is the best option for you or family members.

Information on the influenza virus

- Millions of individuals develop the flu each year and only experience mild symptoms.
- There is a two day incubation period before symptoms of fever, cough, chills, sore throat, body aches, fatigue or headaches appear.
- Influenza virus spreads through coughing and sneezing, direct contact with contaminated surfaces and objects or unwashed hands.
- Flu symptoms usually subside after two to three days and disappear within a week.
- Once an individual has had the flu, their body will have produced antibodies that protect them from the same strain of virus for a prolonged period of time.
- Complications from influenza infection are very rare and may occur in individuals with an underlying medical condition, those greater than 65 years of age, and young children that have a predisposition to respiratory infections. Pneumonia is the primary complication of influenza and can result in hospitalization or death in those that are at extremely high risk for complications.

Information on the 'flu' vaccination

- The 'flu' vaccination, more correctly termed the *influenza vaccination*, is a vaccine against specific strains of the influenza virus.
- There are over 500 different viruses that can cause flu like symptoms. The vaccine is formulated from the three most common strains seen in the previous year.
- The influenza virus is constantly changing. A flu vaccine is only effective against the same strain of influenza virus used to develop the vaccine.
- It takes about two weeks after the flu shot to develop sufficiently high levels of antibodies to protect you from the influenza virus. These antibodies start to lose their effectiveness within a few months.
- According to Health Canada, the influenza vaccination is recommended for individuals at high risk for developing serious complications if they were to contract the influenza virus.
- High risk groups include all people aged 65 years or older, people with serious long-term health problems, diabetes, cancer, kidney disease, immunosuppressive disorders, children on long-term treatment with acetylsalicylic acid (ASA/ aspirin); as well as, health-care workers, residents / workers / volunteers of nursing homes, chronic-care facilities and retirement homes and women who will be more than 3 months pregnant during the influenza season.
- The research from Health Canada suggests that the flu vaccine that closely matches the current seasonal influenza strains *temporarily* prevents the flu in healthy persons less than 65 years old about 70% of the time.
- In individuals over 65 years of age the efficacy rate of the flu vaccine is reported to be less than 30%.
- 75% of individuals have prolonged (up to 2 days) soreness at the site of the injection.
- Children are at the greatest risk of side effects including: fever, body aches, allergic reactions and potentially a severe paralytic illness.
- There is a rare risk of allergic reaction in individuals with an allergy to eggs. Warning signs include: breathing difficulties, hoarseness, wheezing, hives, paleness, pronounced weakness, rapid heartbeat, or dizziness.

Reported concerns and contraindications to the flu vaccine.

- According to the manufacturer of the vaccines, the flu vaccination should NOT be given to persons with an acute respiratory infection or with any other active infection or serious febrile (fever) illness.
- Vaccination is also not recommended for individuals who develop anaphylactic type reactions (hives, swelling of the mouth and throat, difficulty breathing, hypotension and shock) when they eat eggs. Immunization should be avoided in patients with an active neurological disorder until they are stabilized.
- The normal immune response following influenza vaccination may not develop properly in individuals undergoing immunosuppressive therapy. This includes those taking high doses of systemic steroids.
- Thimerosal, a mercury containing compound, is commonly used as a preservative in flu vaccines.
- There is a mild risk of a paralytic disorder called Guillain-Barre Syndrome.

Points to consider before making a decision on flu prevention.

- If you already have had the influenza virus this year, your body will have developed antibodies to the influenza virus. Antibodies, developed by the body, when one has actually had the flu are more robust than antibodies from the flu vaccine and will protect one for a longer time.
- The selection of the influenza strains that make up the vaccine is a hypothesis or guess. There is no way of knowing what strains will be the most prevalent in any given season.
- The flu vaccine only promotes temporary (about 2 months) immunity to the viral strains or closely related viral strains contained in the vaccine.
- The only way to acquire natural and long term immunity to a strain of the influenza virus is to recover naturally from the flu.
- The process that is used to destroy the viruses and create the vaccines often uses formaldehyde, heavy metals (mercury) and chemicals. There are concerns and need for more extensive research about the effect that these substances have on the human body and the lack of long term safety associated with their use, especially with the potential for increased risks that yearly vaccinations might entail.
- Vaccinations prevent the body from naturally responding to external pathogens like viruses and bacteria. Individuals who regularly maintain a strong healthy immune system will protect themselves from any adverse effects of the flu, will build permanent immunity and will decrease the potential for developing unknown side effects from long term exposure to vaccinations.

The flu vaccination was developed by the allopathic (conventional) health care system to decrease the risk of contracting the influenza virus. However, the best way of preventing any flu or complications from any flu is through prevention. The main focus of prevention needs to be on daily healthy habits that ensure an optimum immune system and overall health. A strong immune system is the most effective prevention strategy against the flu or any other virus.

If you have additional questions or concerns, please discuss these with your Naturopathic Doctor or other health practitioner.

General Guidelines

The best protection from infectious diseases is a robust immune system and daily healthy habits. Some general recommendations for maintaining a strong immune system include:

Optimize the strength of your immune system by addressing outstanding health concerns with your Naturopathic Doctor or other health care provider.

- work with your Naturopathic Doctor to identify the daily healthy regime or additional supplement is best for your health;
- address health concerns, supporting the healing power of the body, as they arise;
- regular health care visits will assist you in identifying any underlying health concerns and regular blood work will indicate the health of your immune system.

Maintain optimal nutrient intake and a strong digestive function by:

- eating 5 - 10 servings of fresh fruit and vegetables daily;
- including garlic, onions, thyme and oregano in your cooking to boost the immune system and fight off viruses;
- avoiding sugar, caffeine and alcohol; substances that reduce immune system function;
- keeping hydrated by drinking 6 - 8 glasses of water per day. Because, people drink less in the winter, additional metabolic stress is placed on the liver, kidneys and the colon; and
- avoiding overeating, because it takes more energy to digest the food and can negatively impact the functioning of other body systems.

General healthy guidelines:

- thoroughly wash your hands with soap and water regularly and avoid close contact with anyone who is not well. If you have flu like symptoms, spend more time at home to rest and limit exposure to others;
- wear adequate clothing. Limit the amount of exposed skin when outside temperatures are low and during the change of season, err on the side of being well dressed versus chilled;
- obtain adequate rest and sleep;
- exercise on a daily basis. Stretching, walking, swimming, working out at a health club, yoga or even dancing on a regular basis will assist in maintaining a healthy body;
- spend five to ten minutes a day focusing on your breathing, spend twice as long on the exhalation as the inhalation;
- practice stress reduction exercises like meditation, massage, or acupuncture as stress depresses the immune system; and
- If you develop flu-like symptoms, stay home, limit exposure to others and allow your body time to recover.

If you develop flu-like symptoms, consult your Naturopathic Doctor or health care provider. For further information contact the Canadian Naturopathic Association at 416-496-8633 or www.naturopathicassoc.ca