



The Flu and You

There has been a lot of recent concern about the flu, particularly about a potential bird-flu pandemic and vaccination issues. We have received many questions about this and have prepared this handout to provide you will relevant information on these issues.

What exactly is the flu?

Flu, or influenza, is caused by a flu virus. This virus mutates easily, so every year there are different strains. Viruses are also the cause of most common colds, but the flu virus can cause more discomfort and complications. Influenza differs from the common cold because of additional symptoms including fever, chills, headache, body aches, and significant fatigue. Certain non-influenza viruses can also cause flu-like symptoms.

Deaths from complications of the flu are estimated to average 36,000/year in the US – mostly from susceptible populations (frail, elderly, or pediatric populations; immunocompromised patients; people with lung and heart diseases; and others). Some critics contend that the number of deaths per year by influenza are significantly inflated for several reasons, one of which is that death by pneumonia and influenza-like diseases are often mixed together with deaths by flu.

However, it should be mentioned that the lethal effect of influenza should not be underestimated. The 1918 category 5 influenza pandemic, also known as the Spanish flu, killed between 50 million to 100 million people, possibly more than the infamous bubonic plague (“Black Death”) that decimated between a third to two thirds of the population of Europe during the 1300s.

What kind of influenza vaccines are there?

There are actually two types of vaccines. The first type is an inactivated vaccine (that is, continues killed virus) that is given by injection to people 6 months and older. The second type of vaccine is a live attenuated variety (that is, weakened but alive viruses also called LAIV) called FluMist that is given intra-nasally to people who are not pregnant and between the ages of 2 to 49 years old. Both varieties of vaccines contain three types of virus that are chosen for that flu season. Viruses for both types of vaccines are grown in eggs.

What are the CDC recommendations for getting and not getting a flu shot?

According to the Centers for Disease Control and Prevention (CDC), while almost anyone can get a flu vaccination, there are particular people who are considered at high risk and should get vaccinated every year. These include:

1. **People at high risk for complications from the flu, including:**
 - Children aged 6 months until their 5th birthday,
 - Pregnant women,
 - People 50 years of age and older, and
 - People of any age with certain chronic medical conditions;
 - People who live in nursing homes and other long term care facilities.

2. **People who live with or care for those at high risk for complications from flu, including:**
 - Household contacts of persons at high risk for complications from the flu (see above)
 - Household contacts and out of home caregivers of children less than 6 months of age (these children are too young to be vaccinated)

- Healthcare workers.

The CDC and other sources also mention that there are people who should not be vaccinated without consulting a physician. These include:

- People who have a severe allergy to chicken eggs. Signs of an allergic reaction can include: difficulty breathing, hoarseness, wheezing, hives, paleness, pronounced weakness, rapid heartbeat, or dizziness.
- People who have had a severe reaction to an influenza vaccination in the past.
- People who developed Guillain-Barré syndrome (GBS) within 6 weeks of getting an influenza vaccine previously.
- Influenza vaccine is not approved for use in children less than 6 months of age.
- People who have a moderate or severe illness with a fever should wait to get vaccinated until their symptoms lessen. Flu vaccinations should also not be given to anyone with an acute respiratory infection or serious illness involving a fever.
- Individuals undergoing immunosuppressive therapy may not develop a normal immune response to an influenza vaccination. This include people taking high doses of systemic steroids.
- People with asthma and other chronic respiratory conditions, as well as people with immunosuppression issues should not receive LAIV. Persons with these disorders should receive inactivated influenza vaccine.

How effective is the influenza vaccine?

The purpose of an influenza vaccination is to prime your immune system to recognize and fight off the flu virus when you are exposed through normal avenues. By “priming” your immune system against it, you are less likely to develop flu symptoms. It takes about two weeks for the vaccination to take effect.

Flu viruses transform every year, and there are many strains. A team of experts predict what will be the 3 mostly likely strains for the coming season, and vaccines are made against these strains. If the guess is wrong, much less immunity is provided by the vaccination. The CDC has reported that in some flu seasons, the protection against the flu was as low as 14%. Also, the CDC reported that, in the 2003-2004 flu season, of the first 93 children who died from the flu, 60 had been vaccinated. Influenza vaccinations are not effective at all against the non-influenza viruses that cause flu-like symptoms.

A recently published research article published in the New England Journal of Medicine noted that many previous studies only looked at the effectiveness of influenza vaccines over one or a few seasons, which provided limited useful information. This study, which looked at a 10-year period, found a 27% reduction in the risk of hospitalization for pneumonia or influenza and a 48% reduction in the risk of death in elderly US patients who participated in influenza vaccinations. The researchers note that this finding, however, applies to elderly who are HMO-enrolled, community-dwelling seniors. In other words, it may not apply to the large number of elderly people who are poor, not members of an HMO, live in nursing homes, or are particularly frail.

This type of bias was the basis of this statement, published in the October 2007 issue of the highly-regarded Lancet Infectious Diseases, *“We conclude that frailty selection bias and use of non-specific endpoints such as all-cause mortality have led cohort studies to greatly exaggerate vaccine benefits. The remaining evidence base is currently insufficient to indicate the magnitude of the mortality benefit, if any, that elderly people derive from the vaccination programme.”* Despite noting that vaccination coverage rose from 15% in 1980 to 65% at time of publication, and that there has been no confirmation of any influenza-related mortality improvement since 1980, the authors still recommended that the elderly be vaccinated because they felt that such vaccinations are better than nothing.

There is virtually no research demonstrating value to children. A recent analysis in the British Medical Journal by the internationally renowned Cochrane Collaboration of worldwide influenza vaccine studies, concluded there is little scientific proof that inactivated influenza vaccine is safe and effective for children and adults. There are several reasons for this, including the inability to distinguish between influenza and illness that look or act like influenza and poor methodological quality. The article can be [found here](http://www.bmj.com/cgi/content/full/333/7574/912). (<http://www.bmj.com/cgi/content/full/333/7574/912>) Based in part on these findings, the National Vaccine Information Center called on the CDC to stop recommending annual flu shots for all infants and children until better structured studies have been conducted.

What are the possible side effects of using influenza vaccinations?

Side effects from the vaccination can include fever, fatigue, painful joints, and headache (i.e. flu-like symptoms). These can begin within 12 hours of the shot and last several days. Other reactions, that can affect the nervous system, can be more serious. Development of Guillain-Barré syndrome has been linked to influenza vaccinations. There have been empirical reports linking influenza vaccinations to chronic fatigue syndrome and fibromyalgia, or causing exacerbations in patients with these symptoms.

The LAIV nasal-spray flu vaccine (FluMist®) contains live flu virus and therefore has several constraints on who should use it. The CDC recommends that the following populations not receive this form:

- People less than 2 years of age
- People 50 years of age and over
- Health care workers or other persons who care for people with severely weakened immune systems
- People with a medical condition that places them at high risk for complications from influenza, including those with chronic heart or lung disease, such as asthma or reactive airways disease; people with medical conditions such as diabetes or kidney failure; or people with illnesses that weaken the immune system, or who take medications that can weaken the immune system
- Children less than 5 years old with a history of recurrent wheezing
- Children or adolescents receiving aspirin
- People with a history of Guillain-Barré syndrome, a rare disorder of the nervous system
- Pregnant women

The side effects for the FluMist are more numerous and can be more intense. For children, who are at greatest risk for side effects, these include runny nose, wheezing, headache, vomiting, muscle aches, and fever. For adults, these can include nasal discharge, headache, sore throat, and cough. FluMist, however, does not contain thiomersal or any other preservative.

Allegations about damage caused by vaccination is a complex subject that requires thorough investigation. While any medical intervention has the ability to cause harm, and the pharmaceutical industry has clearly participated in protecting their profit margin while failing to disclose the harm done by their products, all pharmacological interventions, including vaccinations, need to be evaluated in an objective fashion for each individual's unique circumstance.

Information available on the Internet concerning the advisability of vaccinating is often biased by proponents of either side of the debate and should not be accepted without thorough fact checking. For example, one highly publicized case involved the claims of Andrew Wakefield, MD, a gastrointestinal surgeon who generated a medical study suggesting a connection between the measles, mumps and rubella vaccine (MMR) given to young children and inflammatory bowel disease and autism. The study was later discredited and it has been alleged that Wakefield and attorney Richard Barr financially profited from the public backlash that resulted from the

implications of this study. A report on this case can be [found here](http://briandeer.com/mmr/lancet-summary.htm). (<http://briandeer.com/mmr/lancet-summary.htm>).

Despite this, Dr. Wakefield and his collaborator, Hugh Fudenberg, MD, are often cited as experts on the issue of damage caused by vaccinations. For example, one commonly found example on many websites is this one: *“Hugh Fudenberg, MD, an immunogeneticist and biologist with nearly 850 papers published in peer review journals, has reported that if an individual had five consecutive flu shots between 1970 and 1980 (the years studied), his/her chances of getting Alzheimer's Disease is ten times higher than if they had zero, one, or two shots.”* No independent, scientific verification of this statement could be found. What can be found are Dr. Fudenberg's claims to cure autistic children using unusual methods and the record of his being stripped of his medical license by the South Carolina Medical board for unethical practices, including prescribing controlled substances for himself and his staff.

What about the negative things I have been hearing about the components of influenza vaccines?

Influenza vaccines have been reported to contain substances including ethylene glycol (also used as antifreeze), phenol (a disinfectant), formaldehyde (used as a preservative), aluminum, benzethonium chloride (used as an antiseptic) and mercury (in the form of thiomersal). The ingredients of flu vaccines continue to change over time, so it is difficult to make definitive statements about any particular batch of flu vaccine.

Perhaps the most controversial component in flu vaccines is thiomersal, formerly and still commonly known in the US as thimerosal, an organomercury compound that is used as a preservative in multi-dose flu vaccine vials. According to the CDC, “all routinely recommended licensed pediatric vaccines that are currently being manufactured for the U.S. market, with the exception of influenza vaccine, contain no thimerosal or only trace amounts. Thimerosal preservative-free influenza vaccines are available, but in limited quantities.” The use of this preservative is controversial because some critics of the vaccine allege that there is a connection between thiomersal and autism. More information is easily found online. Here is a sample of an article that supports the link between autism and thiomersal (<http://www.newstarget.com/011764.html>) and one that does not support the link. (<http://slate.com/id/2123647/>)

What about the anti-flu drugs?

According to Dr. Bill Caradonna, a naturopathic physician and pharmacist, there are four prescription anti-viral drugs available for flu treatment once you get the flu. The benefit is low – about 1 days shortening in symptom duration, and the drugs must be started within 48 hours of symptom onset. Flu complications have seen some reduction with drug use. Three of these drugs, including Tamiflu, can be prescribed to prevent getting the flu if there is an outbreak that has a high exposure potential, for example, staff working in institutions or health care workers, but correct timing of the dosage is problematic. Viral resistance to some of the drugs has already been seen.

The FDA approved Relenza in spite of a negative recommendation from its scientific advisory committee in February, 1999. It has since been shown to cause lung damage and is not recommended for people with breathing difficulties (the type of people who might especially need extra support if they get the flu).

Amantadine has a high incidence of central nervous system side effects in elderly populations. This drug is also used to treat Parkinson's disease. Other side effects of these drugs can include gastrointestinal distress and... flu-like symptoms.

What is the difference between influenza and Bird-Flu?

Currently, the Avian flu spreads from birds to humans only with close contact between the two. The concern is that the virus may mutate and be able to spread from human to human. The symptoms from the bird flu seem to be much more severe than regular influenza, so there is greater potential for deaths. There is wide difference of opinion in the scientific community as to whether a pandemic will result.

What natural health treatments do you offer to prepare for the coming flu season?

The best defense against influenza is prevention. This means giving attention to personal hygiene, lifestyle habits, and methods that promote a strong immune system. Eating a healthy diet, reducing stress, eliminating sugar and simple carbohydrate intake, taking a good quality multivitamin, exercising, and get adequate rest are the first line measures. Frequent hand washing and avoiding hand to nose/mouth contact is extremely useful. For people who need them, we can recommend a number of supplements that can be used for long-term immune system support.

Influenzinum 9c is a homeopathic formulation of the same strains found in the flu shots. It has been shown to prime the immune system against the flu while causing few, if any, side effects. This remedy and a similar homeopathic medicine, Oscillicoccinum, have been used for decades with excellent results. The 1918 Spanish Flu pandemic was treated successfully by homeopathic physicians, resulting in a death rate that was lower than conventional doctors of the time. Homeopathic treatment has an excellent track record of treating flu symptoms effectively.

If you do get the flu or flu-like symptoms, we feel the best approach is to augment what we stated above with short-term immune boosting or anti-viral products that we have available at our center. We would caution you that mass-produced, commercial products vary widely in their effectiveness. It is also imperative that, with whatever medication or supplement you choose to take, that you take it as directed and at the proper dosage.

We want to thank Bill Caradonna, N.D for his contribution to developing this patient handout.