

Influenza Basics

Influenza (or flu) is a contagious respiratory disease caused by a virus. Some of the symptoms associated with the flu include: fever, cough, runny nose, headaches, muscle or body aches, sore throat, and fatigue. It is very easy to confuse a cold for the flu, or vice versa. Although they do have similar symptoms, "...flu symptoms such as fever, body aches, extreme tiredness, and dry cough are more common and intense," (Centers for Disease Control and Prevention [CDC], 2010). Adults with colds are more likely to have a runny nose and cough rather than the severe symptoms listed above. The flu also tends to develop into more serious problems, like pneumonia, bacterial infections, or hospitalization (CDC, 2010).

How the Flu Spreads

The CDC (2011a) states, "...flu viruses spread mainly by droplets made when people with flu cough, sneeze, or talk." These microscopic droplets can fly up to 3 feet and enter the mouth or nose of a nearby person. The flu can also spread by direct contact, which can include shaking hands or sharing a variety of items (water bottles, utensils, hair brushes, pens, etc.). Most adults can spread the virus one day before they experience any symptoms and up to seven days after becoming sick. By washing hands frequently with either soap and water or hand sanitizer, the chances of becoming infected will be reduced. However, the best way to avoid the flu is by getting vaccinated.

Vaccinations

The flu vaccine is developed based upon scientific predictions of the three most common strains of influenza for that particular year. Once administered, the vaccine takes about two weeks before antibodies start developing. Antibodies are part of the immune response and function to "fight" viruses in the body. The vaccination for flu can be administered via an injection or the nasal spray.

The Flu Shot

The flu shot is an inactivated vaccine containing a killed virus and is given by injection. There are three different flu shots available: a regular flu shot approved for people ages 6 months and older, an intradermal flu shot, and a high-dose flu shot (CDC, 2011a).

The intradermal flu shot is new for the 2011/2012 flu season and is approved for adults between the ages of 18 and 64. The intradermal vaccine is injected into the skin rather than the muscle. The needle is 90% smaller and the vaccine requires 40% fewer antigen to be as effective as the regular flu shot (CDC, 2011c). This vaccine may be helpful for those who do not like needles.

The high-dose flu shot is also new for the 2011/2012 flu season and is approved for adults over the age of 65. It contains four times the amount of antigen as compared to a regular flu shot. Older adults have a weakened immune system, which can increase the risk for severe illness from the flu. Their bodies also have a decreased ability to generate an immune response after a flu shot. The extra antigen in the high-dose shot helps older adults have a better immune response to fight off the flu (CDC, 2011b).

Side effects from the flu shot are minor and may include soreness, redness, or swelling at the site of injection, low grade fever, and aches. Side effects generally last for 1 to 2 days after receiving the vaccination (CDC, 2011a).

The Nasal Spray

The nasal spray contains a vaccine with live, weakened flu viruses. This type of vaccine is sometimes called LAIV, which stands for Live Attenuated Influenza Vaccine. The CDC (2011a) states, "The viruses in the nasal spray vaccine do not cause the flu. LAIV is approved for use in healthy people 2 through 49 years of age who are not pregnant." People who

should not get the LAIV vaccine include: people with chronic heart disease, chronic lung disease, diabetes, or kidney failure; people with weakened immune systems; and people who take medications which weaken the immune system (CDC, 2011a).

Side effects from the nasal spray may include runny nose, sore throat, headache, and cough in adults. Children will experience a different set of side effects, which can include a runny nose, wheezing, headache, vomiting, muscle aches, and fever (CDC, 2011a).

Who Should Get Vaccinated

Anyone over the age of 6 months should get the flu vaccine. However, vaccination is especially important for some specific high-risk groups. Pregnant women, children younger than 5, people ages 50 and older, people with certain chronic medical conditions, people in long-term care facilities, health care workers, household members and caregivers living with someone at high risk for flu complications, and caregivers for children under the age of 6 months are all in the high-risk group (CDC, 2011a). Some children under the age of nine will need two doses to be fully protected (Immunization Action Coalition [AIC], 2011).

Although college students are not listed as a high-risk group, it is still very important for them to get vaccinated. Because students are living in dorms and apartments, they are almost always in close contact with roommates and/or other students. The close proximity makes it easier for the flu to spread from person to person. Students who get vaccinated will be protecting themselves against the flu, along with reducing doctor visits, antibiotic use, missed classes, missed work days, and academic performance impairment (Potter, 2012).

Who Should Not Get Vaccinated

There are certain groups of people who will need to check with a physician before getting a flu vaccination. These groups include people who have a severe allergy to chicken eggs, people who have had a severe reaction to a flu vaccine, children under the age of six months, people who have a moderate or severe illness with a fever, and people with a history of Guillain-Barre Syndrome (CDC, 2011a).

UMD Health Services

UMD Health Services partners with the pharmacy school every fall to offer a flu clinic. For a minimal cost (less than \$5), students and staff can get vaccinated against the flu. Health Services offers the regular flu shot, but appointments can also be made to get the nasal spray.

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