Q & A with Dr. Sandy Arnold, Infectious Disease

Common Questions from Health Care Workers about the H1N1 Vaccine

Why is it important for health care workers to receive the H1N1 vaccination?

Because of their contact with patients or infective material from patients, health care workers are at risk for exposure to and possible infection with the H1N1 virus. Health care workers are in a position where, if infected, they could transmit this infection to vulnerable patients (very young children, the elderly, patients with underlying health conditions putting them at higher risk for complications). The first and most important step to prevent the flu is to get vaccinated. Vaccination stimulates an immune response using a killed or weakened virus that uses the body's own defense mechanisms to prevent infection.

If I've been exposed to the H1N1 virus, am I already immune to this flu?

Anyone who has definitely had the H1N1 2009 influenza is likely immune to the virus and does not require the H1N1 vaccine. However, this can only be known for certain if you were tested for the H1N1 flu and the test was positive.

If you had influenza-like illness, but were not tested, the vaccine is recommended to ensure protection against the H1N1 virus. Even if you have had influenza (but did not know with certainty), the H1N1 vaccine is safe and should help boost the immune response to the virus.

H1N1 is a dangerous virus because it is a new strain and people have not built up immunity to it yet. It is particularly dangerous because it might exacerbate other underlying conditions, but also appears to be more dangerous in otherwise healthy children and young adults, especially pregnant women.

How can I be sure that this new vaccine is safe? How was it tested?

This vaccine was prepared in exactly the same manner in the same facilities that seasonal influenza vaccine is prepared every year. Influenza viruses constantly mutate to avoid our immunity. This means that each year influenza experts from around the world have to examine the flu viruses that are circulating and try to predict which viruses will dominate the following year. Frequently this means putting a slightly different virus in the vaccine than the virus(es) from previous years. This is why new vaccine is prepared every year and we need to get a flu shot every year. The H1N1 virus is the "new" virus in the vaccine this year (just manufactured separately after seasonal vaccine was produced– see next question). There is no reason to believe that the characteristics of this vaccine are any different than seasonal influenza vaccine. Seasonal influenza vaccine is an extremely safe vaccine.

Why wasn't this vaccine part of the "regular" seasonal influenza vaccine?

The influenza strains to be included in the seasonal ("regular") flu vaccine are selected several months ahead of the flu season, because vaccine viruses only grow slowly in the laboratory. The H1N1 flu virus was not detected until after this year's seasonal flu vaccine strains had been selected and development of that vaccine was already underway.

Have there been any severe adverse side effects from the H1N1 vaccine?

The H1N1 vaccine was tested in a relatively small number of individuals, mainly to determine how many doses of vaccine would be needed to achieve protective immunity (since people born after 1957 have no pre-existing immunity to this virus). In the limited data that has been released, the reactions seen were similar to those seen with many vaccines, including seasonal influenza vaccine, notably injection site swelling, redness and pain, fever and headache. Severe reactions were rare. There were not enough people in these studies to detect rare adverse events. It is important to note that many common adverse events will occur in individuals in the time period following a vaccination purely by chance; thus, simply because an event occurs following a vaccine does not mean it was caused by the vaccine.

Is there a chance I could develop Guillain Barre Syndrome from this vaccine?

According to the Centers for Disease Control and Prevention (CDC) only one study has shown any association between flu vaccines and GBS, and that study suggested that only one person out of 1 million vaccinated persons may be at risk of GBS associated with the vaccine. There is no reason to expect an increased number of cases of GBS in recipients of the H1N1 vaccine (or the seasonal flu vaccine) than in those individuals who do not get the vaccine. The most common triggers for Guillain Barre Syndrome are infections, especially gastrointestinal infection with Campylobacter jejeuni. GBS can occur following natural influenza infection as well.

I've been treated with Tamiflu® for Influenza – do I still need the vaccine?

Yes, you should still be vaccinated. Tamiflu® and Relenza® are anti-viral medicines that prevent infection following exposure or treat infection once symptoms have started. Antiviral drugs do not give long-term protection against influenza like that provided by vaccines. If you have had documented influenza infection in the last few months (by a positive test for influenza) then you do not need the vaccine. If you were treated for influenza-like illness or received the drug to prevent influenza following a known exposure then it is very important that you receive the vaccine.

Is the vaccine safe for pregnant women?

There is no reason to believe there would be unusual risks for pregnant women. Seasonal influenza vaccine is recommended for pregnant women because it is well known that pregnancy can put otherwise healthy women at risk for severe complications from influenza. H1N1 virus is no different. The CDC has prioritized pregnant women to be among the first to be vaccinated because the H1N1 flu has proved to be very dangerous to pregnant women. As of Oct. 1, 28 pregnant women in the United States had died from H1N1 swine flu and 100 pregnant women had been hospitalized in intensive care.

Is it safe to get the vaccine if I'm breastfeeding my baby?

It is not only safe to get the vaccine if you are breastfeeding but it is the best way to protect your baby from the swine flu. Children younger than 6 months of age do not receive the flu vaccine because it does not produce a good immune response. The best way to protect these very young and vulnerable children is to vaccinate the adults and older children around them to produce a "cocoon" of protection.

Should everyone get the vaccine, or only those in high-risk groups?

Everyone, 6 months of age or older, should be immunized against the novel H1N1 influenza virus (and against seasonal influenza) unless they meet one of the specific exclusion criteria listed below:

- Children younger than 6 months of age (because the vaccine does not produce a good immune response, not because it is dangerous)
- Anyone with a severe allergy to chicken eggs or anyone who is allergic to any of the components of the influenza vaccines
- Anyone with a history of Guillain-Barré syndrome

Anyone who is moderately or severely ill is advised to wait until they recover to receive the vaccine. However, for those with a mild cold or other illness, there is usually no need to wait.

What are the risks of not getting the vaccine?

While most people who acquire influenza infection have an uncomplicated infection, it is important to know that many who have become severely ill from H1N1 virus since last spring have been young, otherwise healthy individuals who are usually not at the highest risk of severe outcomes from influenza infection. In other words, there is no way to predict who will have a severe reaction to this virus, and using Tamiflu or Relenza will not prevent all severe infections and complications. The only way to reduce the risk of infection is to be vaccinated.