For A HealthierYou
Quarterly Employee Health e-Newsletter
NASA Office of the Chief Health and Medical Officer
NASA Occupational Health www.ohp.nasa.gov
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The 2009 Novel Influenza A (H1N1) Vaccine

In the United States, seasonal influenza epidemic occurs during the late fall through early spring. The annual influenza vaccination is the most effective method for preventing influenza virus infection and its complications. All NASA Clinics offer vaccination services. Please contact your Center Clinic for information.

The outbreak of the 2009 novel influenza A virus (H1N1) remains a concern for the public health officials. The 2009 H1N1 strain has a different genetic makeup than the seasonal influenza. Therefore, the seasonal flu vaccine is ineffective against the H1N1 virus.

So far, the pandemic 2009 H1N1 virus causes mostly mild disease. Some will experience no symptoms at all and won't even know they were infected. Some will get extremely sick. If the CDC's estimated case numbers are close to accurate, pandemic H1N1 is turning out milder and less deadly than the average year of the seasonal flu where approximately 36,000 people die of complications from seasonal flu.

On September 15, 2009, the FDA approved four H1N1 Vaccines none of which contain adjuvants. All have been licensed by the FDA for use in the United States (US). Some versions of the vaccine – approved for use in other countries – relied on new cell-based vaccine manufacturing techniques, instead of the tried-and-true egg-based method, or on new chemicals called adjuvants to boost the effectiveness of the vaccine.

All vaccines have side effects and some people are understandably concerned about the side effects of the 2009 H1N1 vaccine. However, the 2009 H1N1 vaccine licensed for use in the US was manufactured using the exact same processes utilized to make the seasonal vaccine each year. Additionally, the 2009 H1N1 vaccine had to complete and pass all of the exact same testing as the seasonal flu vaccine does each year. It should be noted that nearly 100 million individuals are vaccinated in the US every year. It is impossible to say with certainty that nothing unexpected will happen but the CDC in collaboration with the FDA and other agencies are watching carefully to discover any such adverse events quickly and expeditiously.

The risk of side effects from obtaining the H1N1vaccine is considerably less than the pandemic virus itself, especially for the at-risk population. The Advisory Committee on Immunization Practices (ACIP), an advisory committee to the CDC, recommended that novel H1N1 flu vaccine be made available first to the following five groups:

- Pregnant women;
- Health care workers and emergency medical responders;
- People caring for infants < 6 mon;
- Children and young adults from 6 months to 24 years;
- People aged 25 to 64 years with underlying medical conditions (e.g. asthma, diabetes)

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The dosing regiments, the number of vaccines needed to reach immunity by developing antibodies to the virus, have been supported by preliminary data from the National Institutes of Health (NIH) and manufacturer sponsored studies and are as follows:

- Adults ≥18 years: 1 dose
- Children 10-17 years: 1 dose
- Children 6m-9 years: 2 doses

The four FDA approved H1N1 vaccines are 1) Sanofi Pasteur, Inc. 2) Novartis Vaccines and Diagnostics, Ltd. 3) CSL Ltd., and 4) Med Immune LLC.

Eventually, we hope most people will be vaccinated against H1N1. Odds are that the H1N1 will remain pandemic for a year or two, and will then become one of the influenza strains that circulate seasonally. If that happens, the pandemic H1N1 vaccine will become part of the seasonal flu vaccine. The greater number of people with antibodies against this disease, the safer we will all be. Of course people who have had the H1N1 flu already have these antibodies now and do not need to be vaccinated. Unfortunately, there is no reliable, cost-effective test that would enable us to screen these people out of a mass vaccination program.

Vaccine safety monitoring is an important component of the 2009 H1N1 response. The government is working hard to communicate vaccine safety information in a clear and transparent manner to healthcare providers, public health officials, and the public. They have established vaccine safety infrastructure to enhance the process, and the CDC will provide support to states and territories during 2009 H1N1 vaccination program.

Don't forget the seasonal flu vaccine. Look at your specific risk characteristic, speak with your physician, and obtain the vaccines when they are made available to you.

For up to date information please visit **www.nasahealthieryou.com** and click on **Health Alert** on the top left hand corner of the home page. This web portal is a Mayo Clinic product, a company world re-known and respected for their expertise in healthcare and medicine. NASA has purchased this product for the purpose of health education and promotion of its work force. To log in to the portal use **healthiernasa** as the unique identifier.

For vaccine information please visit 2009 H1N1 flu vaccine, inactivated 2009 H1N1 flu vaccine, live

Resources:
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Dr. Peter Sandman's article