

FREQUENTLY ASKED QUESTIONS ABOUT H1N1 AND SEASONAL FLU
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My Child has flu-like symptoms

My child has flu-like symptoms - when do I take them to see our pediatrician and when do we go to the Emergency Department or Urgent Care?

If you have a healthy child with flu-like symptoms, you probably do not need to see your doctor. For advice on how to care for your child with flu-like symptoms, please see the H1N1 fact sheet available at www.NationwideChildrens.org/H1N1. If you have questions or concerns, please call your doctor's office.

Warning signs that your child needs to go to the Emergency Department include:

1. Fast or difficult breathing
2. Complains of chest pain while breathing
3. Bluish or gray skin color
4. No urine (pee) in 12 hours
5. Severe or persistent vomiting
6. Not waking up or interacting as usual
7. Irritable and can't be comforted as usual

I heard children are not being tested to confirm they have H1N1 - why are all children not being tested?

The rapid flu test is not very good at detecting H1N1 (50% chance, meaning that half of children with H1N1 will have a false negative result). Because there is influenza in the community, the diagnosis can be made based on your child's symptoms.

There are more sensitive tests for influenza, but the test is more difficult to perform. Results will not be available for 24 hours, which is not useful for clinical management in the Emergency Department / Urgent Care. These tests cannot specify if the flu virus is 2009 H1N1 or a more routine seasonal influenza virus.

There is a test to determine if a patient has H1N1. It is performed by the Ohio Department of Health. The health department is following recommendations of the Centers for Disease Control and Prevention, and will only perform this test on hospitalized patients. It is not available for outpatients.

Should all children with flu-like symptoms be given Tamiflu?

Most children with influenza do not require Tamiflu. The vast majority of patients with any influenza (2009 H1N1 or seasonal influenza) recover without Tamiflu. Rest, drinking fluids, and over the counter medications for fever are important. Tylenol, Motrin, and

Advil treat body aches and fever. Do not take aspirin if you have flu-like symptoms unless specifically instructed by your doctor.

The CDC web site provides recommendations for the use of Tamiflu at <http://www.cdc.gov/h1n1flu/antiviral.htm>. In general, children with high risk factors for influenza complications should be treated. Tamiflu does not cure influenza. It reduces symptoms by 24 hours in outpatients if treatment is started within 48 hours of symptoms onset.

Children with high risk factors for influenza complications include:

1. Children < 5 years (especially if < 2 years of age)
2. Asthma
3. Chronic medical problems such as kidney disease, heart disease, cancer, or immune system disorders

Vaccines Q and A

What is influenza? Influenza is a type of virus that causes fevers and body aches. The aches are often very severe. Cough and headache are common. People with influenza are typically ill 5 to 7 days, and usually stay in bed because of the symptoms. Influenza is worse than a cold.

How important is an annual influenza vaccine? Influenza is the most common vaccine preventable death in the United States each year. In the United States, influenza causes 200,000 admissions each year, and approximately 40,000 deaths.

Why is the influenza vaccine needed each year? There are two types of influenza viruses (A and B). Each one of these types has hundreds of sub-types. Each year a different virus predominates, and the vaccine is made each year to prevent the strains most likely to circulate in the next year. Even if the same strain circulates two years in a row, the influenza shot provides good levels of protection for approximately 6 months.

What types of influenza vaccine are available? There is the traditional shot and a nasal spray. Both provide good protection against influenza. The shot contains killed virus. The nasal spray has live, weakened viruses. The nasal spray is approved for use in people 2 through 49 years of age, and should not be used in asthmatics.

Will the flu vaccine give me the flu? No. The vaccine does not cause influenza. The shot has killed viruses, which cannot infect people. The killed viruses cause the immune system to think the flu is present, and an immune response (protection) is made. Some people will have a sore arm and feel warm a few days after the shot. This is not influenza. These symptoms indicate the body is developing protection against the influenza virus.

Is it safe for pregnant women to receive the flu vaccine? Yes. Pregnant women may receive the flu shot. The nasal spray is not approved for use in pregnant women.

Does influenza vaccine cause autism? No. Multiple studies have shown that vaccines do not cause autism. Autism Speaks, an advocacy group for patients with autism, notes on their web site that “researchers have still not found a definitive link between” autism and vaccines.

I heard that an article in the New England Journal of Medicine said that the flu shot is better than the spray, is that true?

The *New England Journal of Medicine* article compared the flu shot to flu spray, and determined the shot was the better vaccine. Our recommendation is that either method of receiving the vaccine is effective and you should have no hesitancy to take the flu spray to protect yourself and your family. There are several studies that have evaluated both forms of the influenza vaccine proving that the vaccines are effective. The bottom line is that both vaccines are effective and will protect you. Other articles suggest the flu spray is superior to the flu shot.

I understand the benefits of persons who have weaker immune systems getting the flu shot annually. My question is will getting annual flu vaccines in an otherwise healthy person weaken their immune system in the long run and therefore make them more likely to come down with the flu once they start taking the flu vaccine every year?

There is no evidence that repeated influenza vaccines will decrease the immune system response. Multiple doses of influenza vaccine in the same year actually improves the level of protective antibodies. If you have antibodies against a specific influenza virus, you are protected against future infections with that strain. It doesn't matter if the antibodies are from the vaccine or natural infection. The only vaccine in the US that can decrease the antibody response after multiple doses is a polysaccharide meningococcal vaccine - that is why doses must be spaced by at least 5 years. Fortunately, there is now a better meningococcal vaccine that does not have this problem.

Is there evidence that influenza vaccine prevents the flu? Yes. Multiple studies have shown that vaccination decreases the chance of having influenza. No vaccine is 100% effective, but if a person still catches the flu despite the vaccine, symptoms are usually much more mild. Studies across the world have shown that influenza vaccine decreases the number of cases of flu.

Does the influenza vaccine contain squalene? Not in the United States. Squalene is used in Europe as an adjuvant (material in vaccine to give better protection). There are false rumors that squalene is dangerous. In the United States, the only adjuvants licensed are based on aluminum. Human livers produce squalene, and there is no evidence that this substance is dangerous.

What is thimerisol? Is it safe? Thimerisol is a preservative used to keep vaccines free of bacterial contamination. It was in all vaccines, but in 2001 it was removed from all vaccines except multi-dose influenza vaccines. Some groups believed thimerisol caused autism, but several large studies prove that this is not true. There is no evidence that thimerisol causes any harm to humans. In fact, contact lens saline solution in the 80's and early 90's used thimerisol as a preservative! Thimerisol does contain mercury (ethyl mercury). This is not the dangerous form of mercury (methyl mercury).

Does the flu vaccine cause Guillain-Barre Syndrome? Guillain-Barre Syndrome is an autoimmune (body attacks itself) process that follows infections. In the 1970's an increased number of Guillain-Barre cases were noted after a mass influenza campaign. Studies now show that the risk of having Guillain-Barre after a flu vaccine is 1 case for every million (1,000,000) people who are vaccinated. Guillain-Barre is such a rare disease that it is not possible to know if there is a true association with the flu vaccine. Influenza infections (not the vaccine strain) can also trigger Guillain-Barre.

H1N1-specific questions

Will seasonal influenza vaccine protect against the 2009 H1N1 strain? No. The 2009 H1N1 strain appeared after influenza vaccine was made for this flu season.

How is the 2009 H1N1 strain different from regular flu? The number of deaths and hospitalizations worldwide is similar to seasonal influenza. The difference is that 2009 H1N1 causes more hospitalizations in children and young adults compared to regular flu, which usually causes the most disease in the elderly.

Is the H1N1 vaccine a new vaccine? While the vaccine contains a new strain of virus, companies are using the same technique to grow the virus in egg cultures. This technology is over 40 years old.