



**NEW YORK CITY DEPARTMENT OF HEALTH AND
MENTAL HYGIENE**

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Are Influenza Vaccines Safe? What You Need to Know

Has the vaccine against H1N1 influenza been adequately tested? Should I trust a vaccine that is so new?

The H1N1 vaccine is produced in exactly the same way that seasonal influenza vaccines are produced every year, and it has been tested in clinical trials. The vaccine itself is not new. It's a conventional influenza vaccine that happens to target the new H1N1 virus. There is no reason to think the side effects of H1N1 vaccine will differ from those of seasonal vaccines.

What do we know about the safety of influenza vaccines?

Influenza vaccines have been monitored and evaluated for safety for decades. Like any medical product, they can cause mild side effects, but serious reactions are extremely rare.

What is the difference between the flu shot and the nasal-spray vaccine?

Injectable vaccines ("flu shots") and the nasal-spray vaccines use different tools to trigger an immune response. Injectable vaccines use killed virus, whereas nasal vaccines use live, weakened virus that cannot invade the respiratory tract. Healthy people between 2 and 49 years old can receive the vaccine in either form. But pregnant or breastfeeding women, babies less than 2 years old, children with asthma and people with long-term health conditions should receive the shot instead of the spray. Talk to your doctor to determine which is best for you.

What are the most common side effects of flu shots?

- Soreness, redness or swelling at the site of injection
- Fever
- Aches
- Nausea

Minor side effects from the nasal spray may include:

- Stuffed or runny nose
- Aches
- Fever

How long do these side effects last?

They typically start soon after the vaccination and last a day or two.

I've heard that vaccines can cause fainting.

Fainting can occur after any type of vaccination and is most common among adolescents. By sitting or lying down for 15 minutes after receiving a vaccine, you can minimize the risk of fainting-related injuries.

Is mercury used as a preservative in influenza vaccines?

Most seasonal influenza vaccines contain thimerosal, a mercury-based preservative that prevents contamination. Thimerosal is also used in some cosmetics and eye drops. Thimerosal has not been shown to cause any health effects, but people who want to avoid thimerosal can still get vaccinated against seasonal and H1N1 influenza. Influenza vaccines, whether shots or sprays, contain thimerosal when packaged in multi-dose vials. Those packaged in single-dose vials do not contain thimerosal.

Is thimerosal dangerous to children?

The claim that thimerosal increases the risk of autism has been discredited. In 2004, an expert panel convened by the Institute of Medicine reviewed many studies looking into this theory and found no association between autism and thimerosal. Subsequent studies have reached the same conclusion.

Is it safe for pregnant women to receive vaccines that contain thimerosal?

Yes. In a study of more than 2,000 pregnant women who received influenza vaccines, researchers found no evidence linking thimerosal to pregnancy complications. Pregnancy increases a woman's risk of complications from influenza, so the benefits of vaccination far outweigh any theoretical risks thimerosal might pose.

Do any influenza vaccines contain adjuvants?

Adjuvants are ingredients added to some vaccines to boost their effectiveness. This year's seasonal and H1N1 influenza vaccines do not contain adjuvants.

Do influenza vaccines cause Guillain-Barre´ syndrome (GBS)?

GBS is a medical condition in which the body damages its own nerve cells, causing muscle weakness and sometimes paralysis. There was a very slight increase in GBS among people vaccinated against swine flu in 1976. Studies suggest that influenza vaccines may cause 1 additional case of GBS for every 1 million people vaccinated. The Food and Drug Administration, the Centers for Disease Control and Prevention and others will closely monitor reports of serious adverse events, including GBS, among people who get the 2009 H1N1 influenza vaccine.

Why do some people not feel well after getting the flu shot?

The most common side effect of the flu vaccine in adults is soreness at the spot where the shot was given. This is often a result of a person's immune system learning how to kill the viruses in the vaccine. The needle stick may also cause some soreness.

Why do some people who get vaccinated still get influenza-like illness?

- The person could have contracted influenza shortly before getting vaccinated or during the two-week period before the vaccine took full effect.
- The person could have contracted one of the non-influenza respiratory viruses that circulate during influenza season.
- The person could have contracted an influenza virus that wasn't covered by that year's vaccine. Many different influenza viruses circulate each year, and the seasonal vaccine can't always prevent all of them.

Can getting a flu shot give me influenza?

No, the virus used in injectable vaccine cannot cause influenza. It has been killed and cannot reproduce anywhere in the body. When researchers compared people receiving flu shots with people getting saltwater shots, the only symptoms unique to the vaccine

recipients were soreness in the arm and redness where the shot was given. There were no differences in body aches, fever, cough, runny nose or sore throat.

Can the nasal spray vaccine give you influenza?

Unlike the flu shot, the nasal spray flu vaccine does contain live viruses, but the viruses have been weakened. Although these “vaccine viruses” may linger awhile in the nostrils, they cannot invade the rest of the respiratory system to cause influenza.

Can people who get the nasal-spray vaccine pass weakened viruses to others?

The risk of transmitting a “vaccine virus” to close contacts is extremely low (somewhere between 0.6% and 2.4%). If someone does pick up the weakened virus from a recently-vaccinated person, that person will experience vaccination, not influenza.

Can the nasal-spray flu vaccine be given to patients when they are ill?

The nasal-spray flu vaccine can be given to people with minor illnesses (e.g., diarrhea or mild upper respiratory tract infection with or without fever). But people with nasal congestion should delay vaccination until it clears up.

Who should not get an influenza vaccine?

- Anyone who has a serious allergy to eggs
- Anyone who has had a serious allergic reaction or other problem after receiving an influenza vaccine in the past
- Anyone with an acute influenza-like illness (fever with cough or sore throat).
- Anyone with a history of Guillain-Barré Syndrome (GBS)

What are the signs of a serious allergic reaction to an influenza vaccine?

- Difficulty breathing
- Hoarseness or wheezing
- Swelling around the eyes or lips
- Hives
- Paleness or weakness
- Rapid heartbeat or dizziness

How should I handle a severe reaction to influenza vaccine?

If a person is experiencing significant side effects, call a doctor right away. Write down what happened and the date and time it happened. Ask the doctor, nurse or health department to file a Vaccine Adverse Event Report form. You can download the form at vaers.hhs.gov or obtain it by calling 800-822-7967 or 212-676-2288. If the person is severely ill, call 911 immediately.

How is the government monitoring the safety of influenza vaccines?

The Centers for Disease Control and Prevention and the Food and Drug Administration closely monitor the safety of all vaccines licensed for use in the United States, including seasonal influenza vaccines. The New York City Health Department is doing its own monitoring to help ensure that any rare side effects are detected as soon as possible.

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