

Quadrivalent Flu Vaccines

What State and Local Immunization Programs Need to Know

The 2013-2014 pre-booking period for flu vaccine has begun. Limited supplies of quadrivalent flu vaccine will be available this flu season. This document contains information about the quadrivalent flu vaccines that may be helpful to consider as you pre-book.

What are quadrivalent flu vaccines?

Recently, the Food and Drug Administration (FDA) approved the use of **quadrivalent** (four-virus) flu vaccines, which offer protection against four different influenza viruses: two A viruses and two B viruses.

Influenza A and B viruses cause the majority of influenza illness almost every autumn and winter in the United States. Flu vaccines have been used in the U.S. for more than 50 years, and since the early 1980s have been **trivalent** (three-virus) vaccines. Trivalent means the vaccine protects against three different influenza viruses: two A viruses and one B virus.

What is the benefit of quadrivalent vaccines?

The seasonal influenza vaccine already included one influenza B virus. Having another B virus in the quadrivalent vaccine, it may provide people with broader protection against the influenza B viruses that circulate and cause illness each flu season. Influenza B viruses are divided into two distinct lineages: the B/Yamagata lineage, and the B/Victoria lineage. Influenza B viruses from both lineages tend to circulate at the same time globally. These two B virus lineages are different from one another, and a vaccine that protects against one of the lineages is unlikely to provide protection against the other.

It is challenging to predict each February (when the vaccine formulation for the United States is decided on for the next flu season) which B virus lineage is likely to predominate and cause the most illness that autumn and winter. Adding a second B virus to the vaccine means there is a greater chance that the vaccine will protect against circulating B viruses.

What types of quadrivalent flu vaccines may be available?

Limited amounts of quadrivalent vaccines are expected to be available as a nasal spray and a flu shot. In February 2012, the FDA approved FluMist[®] Quadrivalent, a quadrivalent live, attenuated nasal spray (LAIV) vaccine. The nasal spray contains live, but attenuated (weakened) influenza viruses and is given as a spray into the nose. In December 2012, FDA approved Fluarix[®] Quadrivalent, a quadrivalent inactivated influenza vaccine (flu shot). Fluarix[®] Quadrivalent contains killed influenza viruses and is given by injection with a needle, usually in the arm.

When will quadrivalent flu vaccines be available?

Both FluMist[®] Quadrivalent and Fluarix[®] Quadrivalent vaccines will be available for the 2013-2014 flu season. For the 2013-2014 flu season, the nasal spray vaccine will only be available as a quadrivalent vaccine, while the flu shot will be available as both a quadrivalent vaccine and a trivalent vaccine.

What should I do if I can't order quadrivalent vaccines?

Don't delay ordering flu vaccine if you want quadrivalent and it isn't available. Most of the flu vaccine offered this year will be trivalent; **quadrivalent vaccine is expected to be in short supply.** (While all nasal spray vaccine is expected to be quadrivalent, this makes up only a small portion of total vaccine availability.) As the 2012-2013 flu season has shown, it is important to pre-book vaccine as soon as it is available. Trivalent vaccine offers important protection from flu, so don't delay ordering if only trivalent is available.

Who can get vaccinated with quadrivalent flu vaccines?

FluMist[®] Quadrivalent (nasal spray) is approved for healthy* people 2 through 49 years of age who are not pregnant. Fluarix[®] Quadrivalent (shot) is approved for individuals 3 years of age and older. The chart below shows the different types of vaccines that are licensed as of the date of this document publication and who should get them. Additional information will be provided at <http://www.cdc.gov/flu> as it becomes available.

Vaccine Type	Description	Trivalent Vaccine (protects against 3 flu viruses)	Quadrivalent Vaccine (protects against 4 flu viruses)
Live, Attenuated, Influenza Vaccine	Nasal spray that contains live, weakened influenza virus	Not available	Healthy* people ages 2 through 49 who are not pregnant
Inactivated Influenza Vaccine	Injection shot that contains killed influenza virus	6 months and older**	3 years and older***

* "Healthy" means people who do not have an underlying medical condition--like asthma, diabetes, or heart and lung disease--that makes complications from the flu more likely. See the following link to learn more about who can be vaccinated with LAIV: <http://www.cdc.gov/flu/about/qa/nasalspray.htm#vaccinated>.

** There are several different brands of trivalent inactivated vaccine, and they are approved for different ages. Check product information for the approved ages for each product.

*** As of February 2013, only one brand of quadrivalent inactivated vaccine is FDA-approved, thus limited supplies are expected; it is for persons aged 3 years and older.

Who should not get quadrivalent flu vaccines?

As with any flu vaccine, anyone who has had an allergic reaction following flu vaccination in the past should talk to their doctor before receiving the quadrivalent vaccine. People who are moderately or severely ill with or without fever should usually wait until they recover before getting a flu vaccine. People with a mild illness can usually get the vaccine. For a complete list of who should and should not vaccinate, visit <http://www.cdc.gov/flu/protect/whoshouldvax.htm>.

Are quadrivalent vaccines safe and effective?

The safety and effectiveness of the quadrivalent flu vaccine in flu shot and nasal spray forms is similar to trivalent influenza vaccine. Hundreds of millions of people have safely received seasonal flu vaccines. The quadrivalent vaccine is made using the same processes and facilities that are used to make licensed trivalent seasonal influenza vaccines.

Most people generally do not experience any side effects from the flu shot. When side effects do occur, they are usually mild. The most common side effects from the flu shot are soreness, redness, tenderness or swelling where the shot is given. Low-grade fever, headache and muscle aches also may occur. The nasal spray flu vaccine is also well tolerated and the most commonly reported side effects after receiving it are mild and include runny nose, nasal congestion and cough.