What is the nasal-spray flu vaccine (or LAIV)?
The nasal-spray flu vaccine (sometimes called LAIV for Live Attenuated Influenza) is a new flu vaccine that was licensed in 2003. It is different from the other licensed influenza vaccine (also called the “flu shot”) because it contains weakened live influenza viruses instead of killed viruses and is administered by nasal spray instead of injection.

How does the nasal-spray flu vaccine (LAIV) work?
The nasal-spray flu vaccine contains three different live (but weakened) influenza viruses. When the viruses are sprayed into the nose, they stimulate the body’s immune system to develop protective antibodies that will prevent infection by naturally occurring influenza viruses.

The live viruses in the nasal-spray flu vaccine (LAIV) are attenuated, cold-adapted, and temperature sensitive. What does this mean?
Attenuated means the viruses are weakened and will not cause severe symptoms often associated with influenza illness. Cold-adapted and temperature sensitive mean the viruses can grow in the nose and throat, but not in the lower respiratory tract where the temperature is higher.

How effective is the nasal-spray flu vaccine (LAIV)?
In one study among children aged 15 – 85 months, the nasal-spray flu vaccine (LAIV) reduced the chance of influenza illness by 92% compared with placebo. In a study among adults, the participants were not specifically tested for influenza. However, the study found 19% fewer severe febrile respiratory tract illnesses, 24% fewer respiratory tract illnesses with fever, 23 – 27% fewer days of illness, 13 – 28% fewer lost work days, 15 – 41% fewer health care provider visits, and 43 – 47% less use of antibiotics compared with placebo. As with the flu “shot”, LAIV does not entirely protect 100% of individuals vaccinated.

Who can be vaccinated with the nasal-spray flu vaccine (LAIV)?
LAIV is approved for use in healthy people between the ages of 2 and 49 years.

Who should NOT be vaccinated with the nasal-spray flu vaccine (LAIV)?
- People less than 2 years of age
- People 50 years of age and over
- People with a medical condition that places them in a high risk for complications from influenza, including those with:
  - chronic heart disease; or
  - lung disease, such as asthma or reactive airways disease; or
  - people with medical conditions such as diabetes or kidney failure; or
  - people with illnesses that weaken the immune system, or
  - who take medications that can weaken the immune system.
- Children or adolescents receiving aspirin
- People with a history of Guillain-Barré syndrome, a rare disorder of the nervous system
- Pregnant women
- People with a history of allergy to any of the components of LAIV or to eggs

Can the nasal-spray flu vaccine (LAIV) be given to patients when they are ill?
The nasal-spray flu vaccine (LAIV) can be given to people with minor illnesses (e.g., diarrhea or mild upper respiratory tract infection with or without fever). However, if nasal congestion is present that might limit delivery of the vaccine to the nasal lining, then delaying of vaccination until the nasal congestion is reduced should be considered.
Can people receiving the nasal-spray flu vaccine (LAIV) pass the vaccine viruses to others?
In clinical studies, transmission of vaccine viruses to close contacts has occurred only rarely. The current estimated risk of being infected with vaccine virus after close contact with a person vaccinated with the nasal-spray flu vaccine is low (0.6% - 2.4%). Because the viruses are attenuated and cold-adapted, infection is unlikely to result in influenza illness symptoms since the vaccine viruses have not been shown to mutate into typical or naturally occurring influenza viruses.

Can contacts of pregnant women and young infants get the nasal-spray flu vaccine (LAIV)?
Yes, it is safe for pregnant women and small infants to around someone who has been given the nasal-spray flu vaccine (LAIV) even right after the vaccine has been given. The CDC encouraged parents and care givers of young infants to receive a flu vaccine, including LAIV, to protect children too young to be given any flu vaccine.

Can contacts of people with weakened immune systems get the nasal-spray flu vaccine (LAIV)?
People who are in contact with others with severely weakened immune systems when they are being cared for in a protective environment (for example, people with bone marrow/stem cell transplants), should not get LAIV. People who have contact with others with lesser degrees of immunosuppression (for example, people with diabetes, people with asthma taking corticosteroids, or people infected with HIV) can get LAIV.

What side effects are associated with the nasal-spray flu vaccine (LAIV)?
In studies of people between the ages of 2 and 49, side effects were generally mild and temporary. In children, side effects may include runny nose, headache, vomiting, muscle aches, and fever. In adults, side effects may include runny nose, headache, sore throat, and cough. Fever is not a common side effect in adults receiving the nasal-spray flu vaccine (LAIV).

When should the nasal-spray flu vaccine (LAIV) be given?
The optimal time to receive influenza vaccine is usually before the influenza season. Children between the ages of 2 and 8 years who have never received influenza vaccine should receive the nasal-spray flu vaccine earlier because they need a second dose 4 weeks after the first dose.

Can people who received inactivated influenza vaccine (the flu shot) last year get the nasal-spray flu vaccine (LAIV) this year?
Yes, people who got inactivated influenza vaccine (the flu shot) last year can get the nasal-spray flu vaccine (LAIV) this year.

What do you mean when you say vaccine naïve?
Vaccine naïve is a term used to refer to children under 9 years of age who have who never received any type of influenza vaccine before or who received only 1 dose in their first year of vaccination. They should receive two doses this year, with single annual doses in subsequent years.

If a child under 9 years of age is getting influenza vaccine for the first time and requires two doses, does the same type of vaccine have to be used for both doses?
No, the first and second doses do not have to match; live or inactivated vaccine can be used for either dose. If inactivated influenza vaccine (the flu shot) is used first, then the nasal-spray flu vaccine (LAIV) should be given at least 4 weeks later. If the nasal-spray flu vaccine is used first, the second vaccine should be given 4 weeks later.

Does the nasal-spray flu vaccine (LAIV) contain thimerosal?
No, the nasal-spray flu vaccine (LAIV) does not contain thimerosal or any other preservative.
2008 FAQ Sheet
Questions & Answers:
The Nasal-Spray Flu Vaccine (FluMist)

Where can I find more information on LAIV (FluMist)?
If you have questions about influenza vaccination or FluMist, we encourage you to:
1. Call your doctor’s office.
3. Call our information line (211) starting August 29th from 8:00 a.m. to 8:00 p.m. Monday through Friday to ask questions.

What should I do if I believe my child is having a reaction to the administered dose of LAIV (FluMist)?
If this a life threatening issue:
1. Call 911
2. Seek immediate medical attention
If this is NOT a life threatening issue:
1. Contact your physician for assistance.
2. If you cannot reach your physician, call 211.
   a. A 211 operator will record your name, contact number, child’s name having reaction, child’s age, school child attends, child’s grade, and issue.
   b. The 211 operator will contact the Health Department and provide Health Department with the your name, contact number, child’s name having reaction, child’s age, school child attends, child’s grade, and issue.
   c. Health Department will then respond to you.

As a note: If your child experiences an adverse reaction to the vaccination and after you have sought appropriate help, please contact your physician or 211 so that a Vaccine Adverse Event Reporting System (VAERS) Sheet can be filled out. VAERS are routinely completed and sent to a national database to collect information about reactions from vaccines and medications. This information is used to guide the writing of product safety guidelines.