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Influenza Vaccine Indications and Administration for the 2008–09 Season

Influenza Vaccine Recommendations

Annual influenza vaccination is the most effective method for preventing influenza virus infection and its complications.¹ Influenza vaccine should be provided to all persons who want to reduce the risk of becoming ill with influenza or of transmitting it to others; particular emphasis should be placed on vaccinating people in the specific target groups listed in Table 1.

Table 1. Influenza Vaccination Target Groups

<p>General Age-Based Recommendations</p> <ul style="list-style-type: none"> All children aged 6 months–18 years (with continued emphasis on children aged 6–59 months and older children with conditions that place them at increased risk for complications) All persons aged ≥50 years <p>Persons at risk for medical complications</p> <ul style="list-style-type: none"> Children and adolescents aged 6 months–18 years receiving long-term aspirin therapy (to decrease their risk of developing Reye syndrome) Women who will be pregnant during the influenza season Adults and children who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological or metabolic disorders (including diabetes mellitus) Adults and children who have immunosuppression, including immunosuppression caused by medications or by human immunodeficiency virus Adults and children who have any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions, or that can increase the risk for aspiration Residents of nursing homes and other chronic-care facilities <p>Persons who live with or care for persons at high risk for complications</p> <ul style="list-style-type: none"> Health care personnel Healthy household contacts (including children) and caregivers of children aged ≤5 years and adults aged ≥50 years, with particular emphasis on vaccinating contacts of children aged <6 months Healthy household contacts (including children) and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza
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Types of Influenza Vaccine

Trivalent inactivated influenza vaccine (TIV) and live, attenuated influenza vaccine (LAIV) are available in the United States. Both types of vaccine are efficacious, include the same influenza antigens, and initially are grown in eggs. For additional information on the use of these two vaccines, see companion Epidemiology *Bulletin* No. 19 and the ACIP recommendations.^{1,2}

Primary Changes and Updates in 2008 ACIP Recommendations

The primary changes in the 2008 recommendations include:

- Annual vaccination of all children aged 5–18 years (beginning now, if feasible, but no later than the 2009–10 season);
- Annual vaccination of children aged 6 months–4 years and older children with conditions that place them at increased risk;
- Use of either TIV or LAIV when vaccinating healthy persons aged 2–49 years. (Children aged 6 months–8 years should receive 2 doses if they have not been vaccinated previously or have received only 1 dose in their first year of vaccination.)

Additional Recommendations

- Influenza vaccine should not be given to people known to have anaphylactic hypersensitivity to eggs or other components of the vaccine. More detailed information on TIV- and LAIV-specific contraindications may be found in the manufacturer package inserts or companion Epidemiology *Bulletin* No. 19.²
- Health care providers should carefully check the vaccine they use to ensure that the product age-group indication includes the age of the person being immunized (Table 2).
- Health care providers should begin offering influenza vaccine as soon as it is available and throughout the season. The Alaska Immunization Program will begin distributing Fluzone[®] and FluMist[®] vaccines in early October.
- Health care providers should submit clinical specimens from persons with symptoms compatible with influenza to the Alaska State Virology Laboratory in Fairbanks (907-474-7017) for free viral culture. This allows characterization of circulating influenza subtypes and strains and enhances our ability to detect novel strains of influenza.

References

- Centers for Disease Control and Prevention. Prevention and Control of Influenza. MMWR 2008;57(No. RR-7): 1-60. Available at: <http://www.cdc.gov/mmwr/PDF/rr/r5707.pdf>
- Alaska Section of Epidemiology. TIV and LAIV Influenza Vaccines for the 2008-09 Season. *Bulletin* No. 19, September 22, 2008. Available at: http://www.epi.alaska.gov/bulletins/docs/b2008_19.pdf

Table 2. Approved Influenza Vaccines for Different Age Groups — United States, 2008–09 Season

Vaccine*	Brand Name	Manufacturer	Presentation	Age Group	Mercury Content (µg Hg/0.5 mL dose)	# of Doses	Route
TIV	Fluzone [®]	sanofi pasteur	0.25 mL pre-filled syringe	6–35 mos	0	1 or 2 [†]	Intramuscular [§]
			0.5 mL pre-filled syringe	≥36 mos	0		
			0.5 mL vial	≥36 mos	0		
			5.0 mL multi-dose vial	≥6 mos	25		
TIV	Fluvirin [®]	Novartis Vaccine	5.0 mL multi-dose vial	≥4 yrs	24.5	1 or 2 [†]	Intramuscular [§]
			0.5 mL pre-filled syringe	≥4 yrs	<1.0		
TIV	Fluarix [®]	GlaxoSmithKline	0.5 mL pre-filled syringe	≥18 yrs	<1.0	1	Intramuscular [§]
TIV	FluLaval TM	GlaxoSmithKline	5.0 mL multi-dose vial	≥18 yrs	25	1	Intramuscular [§]
TIV	Afluria [®]	CSL Biotherapies	0.5 mL pre-filled syringe	≥18 yrs	0	1	Intramuscular [§]
			5.0 mL multi-dose vial	≥18 yrs	25		
LAIV [¶]	FluMist ^{®**}	MedImmune	0.2 mL sprayer	2–49 yrs	0	1 or 2 ^{††}	Intranasal

* TIV: Trivalent Inactivated Influenza Vaccine. LAIV: Live Attenuated Influenza Vaccine.

A 0.5 mL dose of TIV contains 15 µg each of A/Brisbane/59/2007 (H1N1)-like, A/Brisbane/10/2007 (H3N2)-like, and B/Florida/4/2006-like antigens.

† Two doses administered at least 1 month apart are recommended for children aged 6 months–8 years who are receiving TIV for the first time. Those children who received only 1 dose in their first year of vaccination should receive 2 doses in the following year.

§ For adults and older children, the recommended vaccination site is the deltoid muscle. The preferred site for infants and young children is the anterolateral aspect of the thigh.

¶ A 0.2 mL dose of LAIV contains 10^{6.5-7.5} fluorescent focal units of live attenuated influenza virus reassortants of each of the same three strains shown above (*) for TIV.

** FluMist is shipped refrigerated and stored in the refrigerator at 35°F–46°F (2°C–8°C). The dose is 0.2 mL, divided equally between each nostril. Providers should carefully screen children for asthma or wheezing. (See package insert for additional information.)

†† Two doses administered at least 4 weeks apart are recommended for children aged 2–8 years who are receiving LAIV for the first time, and those who only received 1 dose in their first year of vaccination should receive 2 doses in the following year.