



PHYSICIANS' BULLETIN

1997-98 Flu Immunization Recommendations Issued

The recommended vaccine for the coming flu season contains protection against A/Bayern/07/95-like (H1N1), A/Wuhan/359/95-like (H3N2), and B/Beijing/184/93-like hemagglutinin antigens. Although the current vaccine can contain one or more antigens used in previous years, immunity declines during the year following vaccination. Therefore, a history of vaccination for the previous season does not preclude the need to be revaccinated.

In general, the United States Public Health Service recommends that anyone who wishes to reduce his or her risk of acquiring influenza should be immunized.

Target Groups

Specifically, the following groups should be encouraged to receive protection:

1. Persons ≥ 65 years of age (County Health Services will follow California guidelines and provide state-supplied vaccine to persons ≥ 60 years)
 2. Residents of nursing homes and other chronic-care facilities
 3. Adults and children with chronic disorders of the pulmonary or cardiovascular systems, including children with asthma
 4. Adults and children who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies (including anemia) or immunosuppression (including immunosuppression caused by medications)
 5. Women who will be in the second or third trimester of pregnancy during the influenza season.
- Children and teenagers (6 months-18 years) who are receiving long-term aspirin therapy

7. Groups potentially capable of transmitting influenza to high-risk persons
 - a. Physicians, nurses and other personnel in both hospital and outpatient care settings
 - b. Employees of nursing homes and chronic-care facilities who have contact with patients or residents
 - c. Providers of home health care to persons at high risk (e.g., visiting nurses, volunteer workers)
 - d. Household members (including children) of persons in high-risk groups

Special Groups

In general, persons with HIV should be immunized as a prudent precaution. Administration of influenza vaccine is considered safe at any stage of pregnancy. Influenza vaccine does not affect the safety of breastfeeding for mothers or infants. Breastfeeding does not adversely affect immune response and is not a contraindication for vaccination. Physicians should consider influenza vaccine for persons traveling to the tropics at any time of the year or to the Southern Hemisphere from April to September. Children at high risk may receive influenza vaccine at the same time as other routine vaccinations.

Who Should Not Be Immunized

1. Persons known to have anaphylactic hypersensitivity to eggs (see Side Effects below). However, those who also are at higher risk for complications of influenza may benefit from vaccine after appropriate allergy evaluation and desensitization.
2. Adults with acute febrile illnesses usually should not be vaccinated until their symptoms have abated. However, minor illnesses with or without fever should not contraindicate flu vaccine, particularly among children with a mild upper respiratory tract infection or allergic rhinitis (American Academy of Pediatrics, *The Red Book*, 1991).

(continued)

Recommended Influenza Vaccine* Dose By Age, 1997-98

| Age Group | Product† | Dosage | No. of Doses | Route§ |
|-------------|----------------------|--------|--------------|--------|
| 6-35 months | Split virus only | 0.25mL | 1 or 2¶ | IM** |
| 3-8 years | Split virus only | 0.50mL | 1 or 2¶ | IM |
| 9-12 years | Split virus only | 0.50mL | 1 | IM |
| >12 years | Whole or split virus | 0.50mL | 1 | IM |

* Contains 15µg each of A/Bayern/07/95-like (H1N1), A/Wuhan/359/95-like (H3N2), and B/Beijing/184/93-like hemagglutinin antigens in each 0.5mL. For the A/Bayern/07/95-like, A/Wuhan/359/95-like, and B/Beijing/184/93-like antigens, U.S. manufacturers will use the antigenically equivalent strains A/Johannesburg/82/96 (H1N1), A/Nanchang/933/95 (H3N2) and B/Harbin/07/94 because of their growth properties. Manufacturers include: Connaught Laboratories, Inc. (Fluzone® whole or split); Evans Medical Ltd. (an affiliate of Medeva Pharmaceuticals, Inc.) (Fluvirin™ purified surface antigen vaccine); and Wyeth-Ayerst Laboratories (Flushield™ split). For further product information call Connaught, (800) 822-2463; Evans/Medeva, (800) 932-1950 or Wyeth-Ayerst, (800) 358-7443.

† Because of the lower potential for causing febrile reactions, only split-virus vaccines should be used for children. They may be labeled as "split," "subvirion," or "purified-surface-antigen" vaccine. Immunogenicity and side effects of split- and whole-virus vaccines are similar among adults when administered at the recommended dosage.

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

¶ Two doses administered at least 1 month apart are recommended for children <9 years of age who are receiving influenza vaccine for the first time.

** Intramuscular.

Side Effects and Adverse Reactions

Because influenza vaccine contains only noninfectious viruses, it cannot cause influenza. Sometimes a person will complain that the influenza immunization gave him/her "the flu". Recent placebo-controlled trials suggest that in elderly persons and healthy young adults, split-virus influenza vaccine is NOT associated with higher rates of systemic symptoms (e.g., fever, malaise, myalgia, or headache) when compared with placebo injections. The reported incidence of those systemic symptoms in the week following immunization was essentially the same in both the placebo and the influenza groups (Nichol, KL: *Arch Intern Med* 1996; 156: 1546-50).

Soreness for up to two days at the injection site occurs in fewer than one-third of persons vaccinated and is the most common side effect. Children and others who have not had exposure to the influenza virus antigens contained in the vaccine may infrequently have systemic symptoms of headache, myalgia, fever beginning six to twelve hours after vaccination and persisting for one to two days.

Immediate, presumably allergic, reactions (such as hives, angioedema, allergic asthma, or systemic anaphylaxis) occur rarely. These reactions probably result from sensitivity to some vaccine component, most likely residual egg protein. The protocol for vaccination developed by Murphy and Strunk (*Journal of Pediatrics* 1985; 106:931-3) may be considered for patients with egg allergies and medical conditions that place them at increased risk of influenza infection or its complications.

Timing of Influenza Vaccine Activities

Beginning each September (when vaccine for the upcoming influenza season becomes available)

persons at high risk who are seen by health-care providers for routine care or as a result of hospitalization should be offered influenza vaccine. Opportunities to vaccinate persons at high risk for complications of influenza should not be missed. Physicians should note that the optimal time for organized vaccination campaigns for persons in high-risk groups is the period from the beginning of October through mid-November. In the United States, influenza activity generally peaks between late December and early March. High levels of influenza activity infrequently occur in the contiguous 48 states before December. Administering vaccine too far in advance of the influenza season should be avoided in facilities such as nursing homes, because antibody levels might begin to decline within a few months of vaccination. Vaccination programs can be undertaken as soon as current vaccine is available if regional influenza activity is expected to begin earlier than December.

Children <9 years of age who have not been vaccinated previously should receive two doses of vaccine at least 1 month apart to maximize the likelihood of a satisfactory antibody response to all three vaccine antigens. The second dose should be administered before December, if possible. Vaccine should be offered to both children and adults up to and even after influenza virus activity is documented in a community.

Amantadine and Rimantadine, Antiviral Agents for Influenza A

Note: To receive a copy of the federal Centers for Disease Control and Prevention's recommendations about these two antiviral drugs and their use in preventing or treating influenza in certain persons, please call 692-8661. Current recommended dosages and related information may be found in the table on page 3 of this bulletin.