

The 2022–2023 flu season is here, with many parts of the country already experiencing extraordinary levels of influenza activity and confirmed influenza infection, as tracked by the Centers for Disease Control and Prevention (CDC) [Weekly US Map: Influenza Summary Update](#).

**It is important to tell your patients that you STRONGLY RECOMMEND annual influenza vaccination for ALL people 6 months and older who do not have contraindications.**

Even if a patient has declined a vaccination in the past, this season's increased flu activity should help them reconsider their decision to get vaccinated this season. To assist you in these conversations, the American Academy of Family Physicians (AAFP) provides basic guidance and the dosing schedule to address your patients' questions about the different types of flu vaccines available this season.

## RECOMMENDATION

Give inactivated influenza vaccine, recombinant influenza vaccine, OR live attenuated influenza vaccine

### Annual vaccination for ALL persons $\geq 6$ months who do not have contraindications

- All persons  $\geq 9$  years should receive one dose of flu vaccine annually.
- Children 6 months to 8 years who have NOT previously received  $\geq 2$  doses of influenza vaccine, or the number of prior doses is unknown, should receive two doses of influenza vaccine,  $\geq 4$  weeks apart.
- Children 6 months to 8 years who have previously received  $\geq 2$  doses of influenza vaccine need only one dose. The two previous doses do not need to have been given during the same season or consecutive seasons or be the same vaccine product. Two doses are recommended even if the child turns 9 years between the receipt of dose one and dose two.
- Vaccination for travelers to the Southern Hemisphere may be appropriate from April to September, corresponding to the influenza season there.
- **Adults aged  $\geq 65$  years preferentially receive any one of the following higher dose or adjuvanted influenza vaccines: quadrivalent high-dose inactivated influenza vaccine (HD-IIV4), quadrivalent recombinant influenza vaccine (RIV4), or quadrivalent adjuvanted inactivated influenza vaccine (alIIV4).**

## VACCINES

The standard dose contains 15 micrograms ( $\mu\text{g}$ ) of each vaccine hemagglutinin (HA) antigen (60  $\mu\text{g}$  for quadrivalent) per 0.5 milliliters (mL). The high dose contains 60  $\mu\text{g}$  of each vaccine HA antigen (240  $\mu\text{g}$  total). The recombinant contains 45  $\mu\text{g}$  of each vaccine HA antigen.

Vaccine Name	Vaccine Type	Description
IIV4: Afluria <sup>®</sup> , Fluarix <sup>®</sup> , FluLaval <sup>®</sup> , FluZone <sup>®</sup>	Inactivated, quadrivalent Standard dose	Egg based and egg grown
ccIIV4: Flucelvax <sup>®</sup>	Inactivated, quadrivalent Standard dose	Cellular derived; WHO seed stains (not egg-based), and the virus is grown in cell cultures rather than chicken eggs
RIV4: Flublok <sup>®</sup>	Recombinant, quadrivalent Higher dose	RIV4 has three times the HA antigen amount and is derived from the WHO sequence; no neuraminidase (NA) antigen and no egg adaptations
IIV4HD: FluZone <sup>®</sup> High-Dose	Inactivated, quadrivalent Higher dose	High dose, egg-based Four times the antigen dose for better immunity in adults $\geq 65$ years
alIIV4: Fluad <sup>®</sup>	Adjuvanted inactivated	Adjuvanted for better immunity in adults $\geq 65$ years; egg based
LAI4: FluMist <sup>®</sup>	Live attenuated, intranasal, quadrivalent Dose comparable to IIV standard dose	Cold adapted; intranasal, egg based Healthy, non-pregnant persons 2–49 years without high-risk medical conditions that predispose to influenza complications <ul style="list-style-type: none"> <li>• NOT for contacts of severely immunocompromised persons</li> <li>• NOT for pregnant people</li> <li>• NOT for children or adolescents receiving concomitant aspirin- or salicylate-containing medications</li> <li>• NOT for children aged 2–4 years who have received a diagnosis of asthma or who have had a wheezing episode in the preceding 12 months</li> </ul>

## Influenza Vaccine Options By Age

Age	IIV4*	ccIIV4	LAI4	RIV4	allIV4	IIV4-HD
6 months - 17 years	X*	X	X**			
18 - 49 years	X	X	X	X		
50 - 64 years	X	X		X		
> 65 years	X	X		X	X	X
Egg free	No	Yes	No	Yes	No	No

IIV4 = Inactivated influenza vaccine; cc = Cell culture; RIV = Recombinant influenza vaccine; allIV = Adjuvanted inactivated influenza vaccine; LAIV = Live attenuated influenza vaccine

\* All available brands of IIV4 vaccines (Afluria, Fluarix, FluZone, and FluLaval) are licensed for children 6-35 months. For Afluria, the dose in this age group is 0.25 mL. For Fluarix and FluLaval, the dose is 0.5 mL. For FluZone, either 0.25 mL or 0.5 mL can be used in this group.

\*\* FluMist Quadrivalent (AstraZeneca) is licensed for people 2-49 years.

## HIGH-RISK INDICATIONS

### ALL persons $\geq 6$ months should be vaccinated unless contraindications exist

The information in this section reviews persons with poor outcomes if infected with influenza. The list below of high-risk groups is NOT in order of priority; all groups should be vaccinated. [See the CDC for additional information.](#)

#### High-risk groups:

- Children  $< 24$  months
- All adults  $> 65$  years
- Women who are or will be pregnant during the influenza season up to two weeks after the end of pregnancy
- Persons with asthma, neurologic and neurodevelopment conditions (including stroke), blood disorders (e.g., sickle cell disease), chronic lung disease (including chronic obstructive pulmonary disease [COPD] and cystic fibrosis), endocrine disorders (including diabetes), heart disease (e.g., congestive heart failure), kidney disease, liver disorders, metabolic disorders, endocrine disorders (including diabetes)
- Persons with immunosuppression due to any cause (including HIV, cancer, or medications, including long-term steroid use)
- Residents of nursing homes or other long-term care facilities
- Persons  $< 19$  years on long-term aspirin or salicylate therapy
- People with extreme obesity ( $BMI \geq 40$ )
- Non-Hispanic Blacks, Latinx, Native Americans, and Alaskan natives

[See the CDC for recommendations during vaccine shortages.](#)