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The Medical Letter®

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▶ Seasonal Influenza Vaccination: 2026-2027

Annual influenza vaccination is recommended for all persons ≥ 6 months old without a contraindication.¹⁻⁶ Influenza vaccines available this season in the US are listed in Table 3.

COMPOSITION — All influenza vaccines available in the US this season are trivalent: they contain two influenza A virus antigens and one influenza B virus antigen (see Table 1). Influenza A viruses are the primary cause of influenza-related morbidity and mortality, especially in older adults. Illness caused by influenza B viruses is usually more severe in children, especially those < 5 years old.

TIMING — In the US, vaccination against influenza should ideally be offered in September or October and continue to be offered as long as influenza viruses are circulating in the community. In most adults, serum antibody levels peak 1-2 weeks after vaccination. Vaccination in July or August may result in suboptimal immunity before the end of the influenza season, especially in persons ≥ 65 years old.^{1-3,7}

The CDC recommends that women who are in their first or second trimester of pregnancy during July or August delay vaccination, if possible, until September or October to ensure that their infants are protected throughout the influenza season. Vaccination during July or August can be considered for women who are in their third trimester.^{1,2} The American College of Obstetricians and Gynecologists (ACOG) recommends that pregnant women receive the vaccine at any time during pregnancy, preferably before the onset of influenza circulation in the community.⁵

Table 1. 2026-2027 Influenza Vaccine Composition¹

Egg-Based Vaccines

A/Missouri/11/2025 (H1N1)pdm09-like virus
A/Darwin/1454/2025 (H3N2)-like virus
B/Tokyo/EIS13-175/2025 (B/Victoria lineage)-like virus

Cell Culture-Based, Recombinant, and mRNA Vaccines

A/Missouri/11/2025 (H1N1)pdm09-like virus
A/Darwin/1415/2025 (H3N2)-like virus
B/Pennsylvania/14/2025 (B/Victoria lineage)-like virus

1. FDA. Influenza vaccine composition for the 2026-2027 U.S. influenza season. March 13, 2026. Available at: <https://bit.ly/4xk4fJs>. Accessed September 24, 2026.

Key Points: Seasonal Influenza Vaccination: 2026-2027

- ▶ Annual vaccination against influenza is recommended in the US for everyone ≥ 6 months old without a contraindication.
- ▶ Vaccination should ideally be offered in September or October and continue to be offered as long as influenza viruses are circulating in the community.
- ▶ Vaccination reduces the incidence of laboratory-confirmed influenza and the risk of serious complications and death associated with influenza illness.
- ▶ Use of a high-dose (*Fluzone High-Dose*), adjuvanted (*Fluad*), recombinant (*Flublok*), or mRNA (*mFLUSIVA*) vaccine is preferred for adults ≥ 65 years old.

Children 6 months to 8 years old who have received two lifetime doses of an influenza vaccine only need one dose this season. Those who require two doses should receive the first dose as early as possible so that the second dose can be given by the end of October (see Table 3, footnote 3). Vaccination in September or October is preferred for children who need only one dose, but administration in July or August can be considered.

EFFECTIVENESS — Influenza vaccination reduces the incidence of laboratory-confirmed influenza and the risk of serious complications and death associated with influenza illness.⁸⁻¹¹ The effectiveness of the seasonal vaccine in preventing influenza illness depends on several factors, including the match between the vaccine and circulating strains and the immunologic response of the recipient. Vaccine effectiveness is greatest when the match is close, but even when it is suboptimal, vaccination can substantially reduce the risk of influenza-related hospitalization and death.¹²⁻¹⁴

During the 2025-2026 influenza season in the US, vaccination reduced the risk of influenza-associated hospitalization by 41% in children and adolescents, 29% in adults 18-64 years

Note: CDC 2026-2027 Recommendations

Because a court order prevented the CDC's Advisory Committee on Immunization Practices (ACIP) from meeting earlier this year, they could not issue updated influenza vaccine recommendations for the 2026-2027 season. The CDC therefore continues to direct clinicians to its 2025-2026 guidance, including the recommendation that everyone age 6 months and older receive an annual influenza vaccine. To give clinicians clear advice for fall 2026, the AAP, AAFP, ACOG, and IDSA coordinated the release of their own guidance on influenza (see Table 2), COVID-19, and RSV vaccines. Each organization addressed the patients it serves, with recommendations meant to provide consistent direction while the federal advisory process remains paused.

Table 2. Medical Society Recommendations by Subpopulation for 2026-2027 Influenza Vaccination¹**American Academy of Family Physicians (AAFP)²; persons ≥19 years old and healthcare personnel**

- ▶ All nonpregnant, immunocompetent persons ≥19 years old
- ▶ All healthcare personnel
- ▶ Preferential use of the high-dose, adjuvanted, recombinant, or mRNA vaccine in persons ≥65 years old

American Academy of Pediatrics (AAP)³; persons <19 years old

- ▶ All children ≥6 months old without a medical contraindication
- ▶ Any age-appropriate inactivated or recombinant vaccine should be used for immunocompromised children

American College of Obstetricians and Gynecologists (ACOG)⁴; pregnant women

- ▶ All patients who will be pregnant or breastfeeding during the influenza season and postpartum women who were not vaccinated during pregnancy
- ▶ The live-attenuated and mRNA vaccines are not recommended for use in pregnant women

Infectious Diseases Society of America (IDSA)⁵; persons who are immunocompromised

- ▶ All immunocompromised persons ≥6 months old
- ▶ Household members and close contacts of immunocompromised persons
- ▶ High-dose and adjuvanted vaccines may provide a greater immune response in immunocompromised individuals
- ▶ The live-attenuated vaccine is contraindicated for use in immunocompromised persons and should be avoided in close contacts of severely immunosuppressed persons

1. AAFP, AAP, ACOG, and IDSA partnered to publish recommendations by subpopulation in an effort to provide coordinated vaccination guidance in the absence of a functioning CDC Advisory Committee on Immunization Practices (ACIP) this influenza season. SA Fryhofer et al. JAMA 2026; September 2 (epub).

2. AAFP. Available at: <https://bit.ly/4gOVbaA>. Accessed September 24, 2026.

3. AAP Committee on Infectious Diseases. Pediatrics 2026 August 10 (epub).

4. ACOG. Available at: <https://bit.ly/4xVOXMe>. Accessed September 24, 2026.

5. K Belden et al. September 2, 2026. Available at: <https://bit.ly/4r6a00J>. Accessed September 24, 2026.

old, and 31% in adults ≥65 years old despite a poor match between circulating influenza A(H3N2) viruses and the corresponding vaccine strain (interim results).¹⁵

OLDER ADULTS — Older adults are at increased risk for severe influenza illness, hospitalization, and death. They may have a reduced immunogenic response to influenza vaccination compared to younger persons, and their antibody levels may decline more rapidly.¹⁶ Nevertheless, vaccination of older adults has been associated with a reduced risk of influenza-associated and respiratory hospitalization, recurrent hospitalization for ischemic heart disease, and in-hospital death.^{17,18}

Four vaccines, the high-dose inactivated vaccine (*Fluzone High-Dose*), the adjuvanted inactivated vaccine (*Fluad*), the recombinant vaccine (*Flublok*), and the mRNA vaccine (*mFLUSIVA*), have been shown to be more effective than

standard-dose inactivated vaccines in older adults. Few direct comparisons of these vaccines in older adults are available and there is insufficient evidence that any one is superior to any other.¹⁹

High-Dose Vaccine — *Fluzone High-Dose*, an inactivated vaccine that contains 4 times the amount of antigen included in standard-dose inactivated influenza vaccines, is FDA-licensed for use in persons ≥65 years old.

In a randomized, double-blind trial in a total of 31,989 adults ≥65 years old, *Fluzone High-Dose* induced significantly greater antibody responses than a standard-dose inactivated influenza vaccine and was 24% more effective in preventing laboratory-confirmed influenza illness.²⁰

Use of a high-dose inactivated vaccine in adults ≥65 years old has been associated with a reduced risk of respiratory-related, cardiovascular-related, and all-cause hospitalization, and death compared to use of a standard-dose inactivated vaccine.²¹⁻²⁹

In patients with high-risk cardiovascular disease (recent MI or hospitalization for heart failure), a high-dose inactivated vaccine elicited greater humoral responses than standard-dose inactivated vaccines, but it did not significantly reduce all-cause mortality or cardiopulmonary hospitalizations.^{30,31} In a prespecified pooled analysis of two randomized controlled trials, use of a high-dose influenza vaccine in adults ≥65 years old with or without pre-existing cardiovascular disease significantly reduced hospitalizations for cardiovascular disease, respiratory disease, and heart failure compared to use of a standard-dose vaccine.³²

Adjuvanted Vaccine — *Fluad*, an adjuvanted inactivated influenza vaccine, is FDA-licensed for use in persons ≥65 years old. It contains MF59, an oil-in-water emulsion of squalene oil that increases the immune response by recruiting antigen-presenting cells to the injection site and promoting uptake of influenza virus antigens.

In a randomized trial in 7082 adults ≥65 years old, *Fluad* elicited significantly greater antibody responses than a nonadjuvanted, standard-dose inactivated vaccine.³³ In observational studies and randomized trials, older adults who received an adjuvanted inactivated vaccine were less likely to develop symptomatic influenza illness or to be hospitalized for influenza or pneumonia than those who received a nonadjuvanted, standard-dose inactivated vaccine.³⁴⁻³⁶

Recombinant Vaccine — *Flublok*, a recombinant influenza vaccine produced without use of influenza virus or chicken eggs, contains 3 times the amount of antigen included in

standard-dose inactivated influenza vaccines. It is FDA-licensed for use in persons ≥ 9 years old.

In a retrospective cohort study in 12.7 million adults ≥ 65 years old vaccinated during the 2019-2020 influenza season, the recombinant quadrivalent vaccine was more effective in preventing hospitalizations than a nonadjuvanted, standard-dose inactivated quadrivalent vaccine, an adjuvanted trivalent vaccine, or a high-dose trivalent vaccine.³⁷

In an observational study in more than 1.6 million adults 18-64 years old, the recombinant influenza vaccine was significantly more effective than standard-dose vaccines in preventing laboratory-confirmed influenza illness in those 50-64 years old.³⁸

mRNA Vaccine – *mFLUSIVA*, an mRNA-based vaccine, is FDA-licensed for use in adults ≥ 50 years old.³⁹ In a double-blind trial in 40,805 adults ≥ 50 years old during the 2024-2025 influenza season, the mRNA vaccine was significantly more effective than a standard-dose inactivated vaccine in preventing influenza illness. The relative efficacy of the mRNA vaccine was 26.6% in patients ≥ 50 years old and 27.4% in those ≥ 65 years old.⁴⁰

Choice of Vaccine in Older Adults – The CDC recommends that adults ≥ 65 years old receive either the high-dose, adjuvanted, or recombinant influenza vaccine (the mRNA vaccine was not licensed when their recommendations were issued); if none of these vaccines are available, any age-appropriate influenza vaccine should be given.^{1,2} The American Academy of Family Physicians (AAFP) recommends preferential use of the high-dose, adjuvanted, recombinant, or mRNA influenza vaccine in adults ≥ 65 years old.³ The American College of Cardiology (ACC) preferentially recommends use of the high-dose influenza vaccine for patients ≥ 65 years old with cardiovascular disease; they recommend the adjuvanted and recombinant vaccines as alternatives.⁴¹

PREGNANCY – Vaccination protects pregnant women against influenza-associated illness, which can be especially severe during pregnancy, and protects their infants for the first few months after birth (influenza vaccines are not licensed for use in infants < 6 months old). Protection of infants against influenza-related emergency department visits and hospitalizations is greatest in those born to mothers who were vaccinated during the third trimester.⁴²

Influenza vaccination during pregnancy is considered safe. In a meta-analysis of 31 studies, influenza vaccination in the first trimester was not associated with an increased risk of birth defects.⁴³ In a prospective cohort study, exposure to an influenza vaccine before or during pregnancy was

not associated with increased rates of miscarriage.⁴⁴ In a retrospective cohort study with a mean follow-up of 3.6 years, influenza vaccination during pregnancy was not associated with an increased risk of adverse early childhood health outcomes, including asthma, infections, neoplasms, or hearing or vision loss.⁴⁵ In another retrospective cohort study, maternal influenza vaccination was associated with reduced risks of low birth weight and preterm birth.⁴⁶

The CDC and ACOG recommend vaccinating pregnant women against influenza (see Timing section on page 161).^{2,5,47} The live-attenuated intranasal vaccine and the mRNA vaccine should not be used during pregnancy.

EGG ALLERGY – The recombinant vaccine, the cell culture-based inactivated vaccine, and the mRNA vaccine do not contain egg protein. Other available influenza vaccines may contain trace amounts of egg protein (ovalbumin), but numerous studies have shown that persons with a history of egg allergy are not at increased risk for an adverse reaction to influenza vaccines that are propagated in eggs.⁴⁸

The CDC, the American Academy of Pediatrics (AAP), and the Joint Task Force on Practice Parameters of the American Academy of Allergy Asthma and Immunology and the American College of Allergy Asthma and Immunology state that persons with a history of egg allergy of any severity can receive any age-appropriate influenza vaccine without the need for additional safety measures.^{2,4,49}

IMMUNOCOMPROMISED PERSONS – The live-attenuated intranasal influenza vaccine should not be used in immunocompromised persons. Inactivated and recombinant influenza vaccines are generally considered safe for use in such persons, but the immune response may be reduced. Data on use of the mRNA vaccine in immunocompromised persons are limited.⁶

The Infectious Diseases Society of America (IDSA) states that the greater immune responses induced by the high-dose and adjuvanted influenza vaccines may be of particular importance in immunocompromised patients.⁶ In a randomized trial in solid-organ transplant recipients, vaccine response rates were higher with the high-dose and adjuvanted vaccines than with standard-dose inactivated vaccines.⁵⁰ The CDC states that the high-dose inactivated vaccine and the adjuvanted inactivated vaccine are additional options (but not preferred over other age-appropriate options) for solid-organ transplant recipients 18-64 years old who are receiving immunosuppressive therapy.^{1,2}

Separating the time of influenza vaccination from that of an immunocompromising intervention could be considered; recommendations for vaccination timing in select immunocompromised populations are available from the IDSA.⁶

Table 3. Seasonal Influenza Vaccines Available in the US for 2026-2027

Vaccine ¹	Available Formulations ²	Recommended Age ³	Cost ⁴
Standard-Dose Inactivated Trivalent (IIV3); Egg-based			
<i>Fluarix</i> (GSK)	0.5 mL syringe ⁵	≥6 months	\$20.30
<i>FluLaval</i> (GSK)	0.5 mL syringe	≥6 months	20.30
<i>Fluzone</i> (Sanofi)	0.5 mL syringe, 5 mL vial ^{6,7}	≥6 months	20.30
High-Dose Inactivated Trivalent (HD-IIV3); Egg-based			
<i>Fluzone High-Dose</i> (Sanofi) ⁸	0.5 mL syringe	≥65 years ⁹	106.90
Standard-Dose, Adjuvanted Inactivated Trivalent (aIIV3); Egg-based			
<i>Fluad</i> (Seqirus) ¹⁰	0.5 mL syringe ¹¹	≥65 years ⁹	106.90
Standard-Dose, Cell Culture-Based Inactivated Trivalent (ccIIV3)			
<i>Flucelvax</i> (Seqirus) ¹²	0.5 mL syringe	≥6 months	57.80
Recombinant Trivalent (RIV3)			
<i>Flublok</i> (Sanofi) ¹³	0.5 mL syringe	≥9 years	106.90
mRNA Trivalent			
<i>mFLUSIVA</i> (Moderna) ¹⁴	0.38 mL syringe	≥50 years	149.60
Live-Attenuated Trivalent (LAIV3); Egg-based			
<i>FluMist</i> (AstraZeneca) ¹⁵	0.2 mL intranasal sprayer ^{5,16,17}	2-49 years ¹⁸	26.20
<i>FluMist Home</i> ¹⁵			70.10 ¹⁹

1. All inactivated vaccines, the recombinant vaccine, and the mRNA vaccine are given by IM injection. The live-attenuated vaccine is given intranasally.
2. Single-dose, prefilled syringes are sold in boxes of 10. The *Fluzone* 5-mL multidose vial is available as a package of one; a maximum of 10 doses can be withdrawn from a single vial. *FluMist* is available in cartons containing one intranasal sprayer.
3. Children 6 months to 8 years old who are being vaccinated for the first time, whose vaccination history is not known, or who had not received at least 2 lifetime doses of an influenza vaccine before July 1, 2026 should receive 2 doses at least 4 weeks apart this season. The first dose should be given as soon as possible after the vaccine becomes available so that the second dose can be given by the end of October. Children in this age group who received ≥2 doses of an influenza vaccine at any time before July 1, 2026 require only 1 dose.
4. Approximate WAC for one dose. Cost for one prefilled syringe for *Fluzone*. WAC = wholesaler acquisition cost or manufacturer's published price to wholesalers; WAC represents a published catalogue or list price and may not represent an actual transactional price. Source: AnalySource® Monthly. September 5, 2026. Reprinted with permission by First Databank, Inc. All rights reserved. ©2026. www.fdbhealth.com/policies/drug-pricing-policy.
5. May contain residual amounts of gentamicin sulfate.
6. Contains thimerosal.
7. The dose is either 0.25 mL or 0.5 mL for children 6-35 months old and 0.5 mL for those ≥3 years old. The 0.25-mL prefilled syringes are no longer available.
8. Contains 60 mcg of hemagglutinin antigen from each strain, compared to 15 mcg in standard-dose inactivated vaccines.
9. The CDC states that the high-dose vaccine and the adjuvanted vaccine are additional options in solid-organ transplant recipients 18-64 years old who are receiving immunosuppressive therapy (without a preference over other age-appropriate inactivated or recombinant vaccines).
10. Contains MF59, an oil-in-water emulsion of squalene oil.
11. May contain residual amounts of neomycin and kanamycin.
12. Uses mammalian cells for replication rather than hen eggs.
13. Contains 45 mcg of hemagglutinin antigen from each strain, compared to 15 mcg in standard-dose inactivated vaccines.
14. Contains three mRNA strands (12.5 mcg of each strand) encoding hemagglutinin glycoproteins of two influenza A viruses and one influenza B virus.
15. *FluMist* can be administered by a healthcare provider or at home (*FluMist Home*) by the patient (for patients 18-49 years old) or a caregiver (for patients 2-17 years old).
16. Each 0.2-mL dose contains 106.5-107.5 FFU (fluorescent focus units) of live-attenuated influenza virus reassortants from each strain.
17. Each single-use sprayer delivers one 0.2-mL intranasal dose (given as 0.1 mL in each nostril). If nasal congestion that could impair vaccine delivery to the nasal mucosa is present, an injectable vaccine should be used instead. If use of an injectable vaccine is unacceptable, influenza vaccination should be delayed.
18. Per the CDC, the live-attenuated intranasal vaccine is contraindicated for use in pregnant women, persons who are immunocompromised, persons with active communication between the cerebrospinal fluid (CSF) and oropharynx, nasopharynx, nose, or ear or any other cranial CSF leak, persons with cochlear implants, children 2-4 years old who have asthma or have had a wheezing episode within the previous 12 months, persons with anatomic or functional asplenia, children or adolescents taking aspirin or salicylate-containing therapy, close contacts of severely immunocompromised persons who require a protected environment, or patients treated with oseltamivir or zanamivir within the previous 48 hours, peramivir within the previous 5 days, or baloxavir marboxil within the previous 17 days. Use of influenza antiviral drugs <2 weeks after administration of the intranasal live-attenuated vaccine could inhibit replication of the vaccine virus, reducing the vaccine's effectiveness. Some medical conditions (e.g., renal impairment) may require a longer interval between the antiviral drug regimen and administration of *FluMist*. Patients of any age with asthma may be at increased risk of wheezing after administration of *FluMist*.
19. A fee of \$8.99 is added for shipping and processing.

USE WITH OTHER VACCINES — Any influenza vaccine can be given at the same time as a **COVID-19 vaccine**, but they should be administered in separate arms. The CDC states that coadministration of a **respiratory syncytial virus (RSV)** vaccine with other adult vaccines during the same visit is acceptable. RSV and influenza antibody titer levels are somewhat lower with coadministration than with sequential administration (~1 month apart).⁵¹ The AAFP recommends offering the influenza, **COVID-19**, and **RSV** vaccines at the same office visit.³

Inactivated and **recombinant** influenza vaccines can be administered concomitantly or sequentially with live, inactivated, or recombinant vaccines. The **live-attenuated** intranasal influenza vaccine can be given simultaneously with inactivated or other live vaccines; other live vaccines not administered simultaneously should be given at least 4 weeks later. Because of limited safety data on concurrent use of 2 or more **adjuvanted** vaccines, use of a nonadjuvanted influenza vaccine may be considered when another adjuvanted vaccine (e.g., *Shingrix*, *Heplisav-B*) is administered concurrently. No data are available on administration of the **mRNA** influenza vaccine with other vaccines.

USE WITH INFLUENZA ANTIVIRALS — Any inactivated or recombinant influenza vaccine can be administered to persons receiving antiviral drugs for treatment or chemoprophylaxis of influenza. Use of oseltamivir (*Tamiflu*, and generics) or zanamivir (*Relenza*) within 48 hours before, peramivir (*Rapivab*) within 5 days before, or baloxavir marboxil (*Xofluza*) within 17 days before administration of the live-attenuated intranasal influenza vaccine could inhibit replication of the vaccine virus, reducing its effectiveness. Persons who receive any of these antiviral drugs during these specified times or within 2 weeks after administration of the live-attenuated vaccine should be revaccinated with an inactivated or recombinant influenza vaccine.

ADVERSE EFFECTS — Influenza vaccination has been associated with Guillain-Barré syndrome, but the absolute risk is very low (about 1-2 additional cases per million persons vaccinated), and influenza infection itself has been associated with the syndrome (about 17 cases per million patients hospitalized with influenza).⁵² In a prospective cohort study in patients with diabetes, influenza vaccination was associated with hyperglycemia, but serum glucose levels returned to baseline 2 days after vaccination.⁵³ Except for soreness at the injection site, adverse reactions to **inactivated** influenza vaccines are uncommon. In clinical trials, the **high-dose** vaccine caused more injection-site reactions than standard-dose vaccines. Pain and tenderness at the injection site also occurred more frequently with an **adjuvanted** influenza vaccine than with a nonadjuvanted

vaccine. Injection-site pain, fatigue, headache, and myalgia occurred more frequently with the **mRNA-based** influenza vaccine than with a standard-dose inactivated vaccine. Myocarditis and pericarditis have been reported rarely with mRNA COVID-19 vaccines, primarily in adolescent and young adult males following the second dose⁵⁴; no cases of myocarditis/pericarditis were reported with the mRNA-based influenza vaccine in clinical trials.

The most common adverse reactions associated with the **live-attenuated** intranasal vaccine are runny nose, nasal congestion, fever, and sore throat. The vaccine may increase the risk of wheezing, especially in children <5 years old with recurrent wheezing and in persons of any age with asthma. Persons who receive the live-attenuated vaccine may shed the vaccine-strain virus for a few days after vaccination, but person-to-person transmission has been rare, and serious illness resulting from transmission has not been reported. Nevertheless, the CDC recommends that persons who care for severely immunocompromised patients in protected environments avoid contact with such patients for 7 days after receiving the live-attenuated vaccine.^{1,2}

In January 2026, the FDA required manufacturers to update the labels of influenza vaccines to include a warning about an increased risk of febrile seizures within the first day following vaccination in children 6 months to 4 years of age. The update was based on two postmarketing observational studies that reported a small, but statistically significant increase in the risk of febrile seizure within the first day post-vaccination compared to the risk within 8 to 63 days post-vaccination.^{4,55,56} ■

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