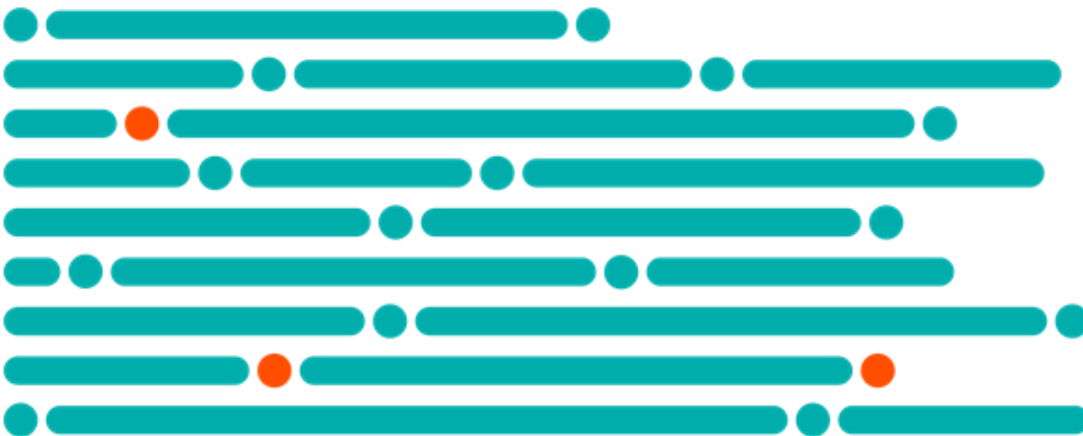


Seasonal influenza vaccine

Comparison chart
2022-2023 influenza season

Revised: February 2022



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About this guide

This guide provides information about the seasonal influenza vaccine products that are anticipated to be available during the 2022-2023 influenza season. It has been prepared using 2021-2022 product package inserts submitted by manufacturers to the US Food and Drug Administration (FDA) and housed within the [DailyMed database](#). For the 2022-2023 influenza season, all influenza vaccine formulations will be quadrivalent. Only Afluria will be available in a 0.25 mL (pediatric) prefilled syringe. Flucelvax is now indicated for use in patients ≥ 6 months of age (previously was ≥ 4 years of age). No other changes are expected. **The information contained in this guide is current as of February 2022.**

Table 1 shows the seasonal influenza vaccines that will be available for the 2022-2023 season by age category. Detailed product information can be found in Table 2.

Table 1. Product listing, by age category, of influenza vaccines that are anticipated to be available during the 2022-2023 season

Pediatric (<18 y; quadrivalent, inactivated, non-adjuvanted, injectable vaccines)	Pediatric and adult (quadrivalent, live, non-adjuvanted, intranasal vaccine)	Adult (≥ 18 y; quadrivalent, inactivated, non-adjuvanted, injectable vaccines)	Adult (≥ 65 y)
Afluria (Seqirus) <ul style="list-style-type: none"> • 0.25 mL (6-35 mo) • 0.5 mL (≥ 36 mo) Fluarix (GlaxoSmithKline) <ul style="list-style-type: none"> • 0.5 mL (≥ 6 mo) Flucelvax (Seqirus) <ul style="list-style-type: none"> • 0.5 mL (≥ 6 mo) Flulaval (GlaxoSmithKline) <ul style="list-style-type: none"> • 0.5 mL (≥ 6 mo) Fluzone (Sanofi Pasteur) <ul style="list-style-type: none"> • 0.5 mL (≥ 6 mo) 	FluMist (Astra Zeneca/Medimmune): 0.2 mL (2-49 y)	<ul style="list-style-type: none"> • Afluria (Seqirus): 0.5 mL • Fluarix (GlaxoSmithKline): 0.5 mL • Flublok (Sanofi Pasteur): 0.5 mL • Flucelvax (Seqirus): 0.5 mL • Flulaval (GlaxoSmithKline): 0.5 mL • Fluzone (Sanofi Pasteur): 0.5 mL 	<ul style="list-style-type: none"> • Flud (Seqirus): 0.5 mL (quadrivalent, inactivated injectable vaccine with adjuvant) • Fluzone HD (Sanofi Pasteur): 0.7 mL (HD, quadrivalent, inactivated injectable vaccine)

Abbreviations: FDA = Food and Drug Administration; HD = high-dose

Table 2. Anticipated seasonal influenza vaccines available for the 2022-2023 season: product comparison guide^a

	Afluria	Fluad	Flucelvax	Fluarix	Flulaval	Fluzone (including HD)	Flublok	FluMist
Manufacturer/supplier	Seqirus	Seqirus	Seqirus	GlaxoSmithKline	GlaxoSmithKline	Sanofi Pasteur	Sanofi Pasteur	AstraZeneca/ MedImmune
Description	Quadrivalent, inactivated	Quadrivalent, inactivated (adjuvant)	Quadrivalent, inactivated	Quadrivalent, inactivated	Quadrivalent, inactivated	Quadrivalent, inactivated	Quadrivalent, recombinant	Live attenuated, intranasal
Manufacturing process	Egg-based	Egg-based	Cell culture: MDCK cells (egg free)	Egg-based	Egg-based	Egg-based	Cell culture: insect cells (egg free)	Egg-based
Product description	Clear, colorless to slightly opalescent suspension, with some sediment that resuspends upon shaking	Milky white suspension	Slightly opalescent suspension	Colorless, slightly opalescent suspension	Opalescent, translucent to off-white suspension; may sediment slightly (resuspends upon shaking)	Clear, slightly opalescent suspension (Fluzone and Fluzone HD)	Clear, colorless solution	Colorless to pale yellow suspension; clear to slightly cloudy
How supplied								
Prefilled syringe	0.25 mL (peds) 0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL (Fluzone) 0.7 mL (Fluzone HD)	0.5 mL	0.2-mL intranasal sprayer
Single-dose vial	–	–	–	–	–	0.5 mL (Fluzone)	–	–
Multidose vial	5 mL	–	5 mL	–	–	5 mL (Fluzone)	–	–
Latex	Latex-free	Latex-free	Latex-free	Latex-free	Latex-free	Latex-free	Latex-free	Latex-free
Mercury content (mcg) per 0.5-mL dose	PFS: None Multidose: 24.5	None	PFS: None Multidose: 25	None	None	PFS: None Multidose: 25	None	None
Ovalbumin content (mcg) per 0.5-mL dose	< 1	≤ 1	None	≤ 0.05	≤ 0.3	Information not provided by manufacturer	None	< 0.024 mcg per 0.2-mL dose
Formaldehyde content (mcg) per 0.5-mL dose	None	≤ 10	None	≤ 5	≤ 25	Fluzone: ≤ 100 Fluzone HD: ≤140	None	None
Antibiotics per 0.5-mL dose	Neomycin ≤ 81.8 ng, polymyxin B ≤ 14 ng	Neomycin (≤ 0.02 mcg by calculation), kanamycin (≤0.03 mcg by calculation)	None	May contain residual amounts of gentamicin (≤ 0.15 mcg)	None	None	None	Gentamicin (< 0.015 mcg/mL) per 0.2-mL dose

	Afluria	Fluad	Flucelvax	Fluarix	Flulaval	Fluzone (including HD)	Flublok	FluMist												
A (H1N1) per 0.5-mL dose	15 mcg HA	15 mcg HA (MF59 adjuvant)	15 mcg HA	15 mcg HA	15 mcg HA	Fluzone: 15 mcg HA Fluzone HD: 60 mcg HA	45 mcg HA	Each 0.2-mL dose contains 10 ^{6.5-7.5} fluorescent focus units of live attenuated influenza strain for each of the 4 strains: A (H1N1), A (H3N2), B (Yamagata), and B (Victoria).												
A (H3N2) per 0.5-mL dose	15 mcg HA	15 mcg HA (MF59 adjuvant)	15 mcg HA	15 mcg HA	15 mcg HA	Fluzone: 15 mcg HA Fluzone HD: 60 mcg HA	45 mcg HA													
B strain 1 per 0.5-mL dose	15 mcg HA	15 mcg HA (MF59 adjuvant)	15 mcg HA	15 mcg HA	15 mcg HA	Fluzone: 15 mcg HA Fluzone HD: 60 mcg HA	45 mcg HA													
B strain 2 per 0.5-mL dose	15 mcg HA	15 mcg HA (MF59 adjuvant)	15 mcg HA	15 mcg HA	15 mcg HA	Fluzone: 15 mcg HA Fluzone HD: 60 mcg HA	45 mcg HA													
Approved population	≥ 6 mo	≥ 65 y	≥ 6 mo	≥ 6 mo	≥ 6 mo	Fluzone: ≥ 6 mo Fluzone HD: ≥ 65 y	≥ 18 y	2-49 y												
Pregnancy recommendations per ACIP^b	<p>Pregnant women are at increased risk of severe illness due to influenza; those who contract influenza may be at increased risk for adverse pregnancy outcomes, including preterm labor and delivery.</p> <p>ACIP and the American College of Obstetricians and Gynecologists recommend that all women who are pregnant or who might be pregnant or postpartum during the influenza season receive an influenza vaccine.</p> <p>Pregnant women who receive an influenza vaccine should be enrolled in that vaccine product's pregnancy exposure registry (specified in package inserts).</p> <p>Reminder: neither Fluad nor Fluzone HD are approved for use in persons < 65 y.</p>							Contraindicated in pregnancy												
Dosing	<p>General dosing recommendations for injectable vaccine (refer to individual vaccine information for more information). Children aged 6 mos through 8 y require 2 doses of influenza vaccine administered a minimum of 4 wks apart during their first season of vaccination for optimal protection. Both doses should be administered even if the child turns 9 y of age between receipt of dose 1 and dose 2. Children > 9 y require only 1 dose of influenza vaccine for the season. (source: ACIP recommendations, 2021-2022 influenza season)</p> <table border="0"> <thead> <tr> <th>Age</th> <th>Dose</th> <th>Schedule</th> </tr> </thead> <tbody> <tr> <td>6-35 mo</td> <td>1 or 2 doses; Afluria pediatric (0.25 mL) or Flulaval/Fluarix/Fluzone/Flucelvax (0.5 mL)^c</td> <td>If 2 doses, administer at least 4 wks apart (same seasonal vaccine)</td> </tr> <tr> <td>36 mo-8 y</td> <td>1 or 2 doses; 0.5 mL each^c</td> <td>If 2 doses, administer at least 4 wks apart (same seasonal vaccine)</td> </tr> <tr> <td>≥ 9 y</td> <td>1 dose; 0.5 mL</td> <td>–</td> </tr> </tbody> </table>						Age	Dose	Schedule	6-35 mo	1 or 2 doses; Afluria pediatric (0.25 mL) or Flulaval/Fluarix/Fluzone/Flucelvax (0.5 mL) ^c	If 2 doses, administer at least 4 wks apart (same seasonal vaccine)	36 mo-8 y	1 or 2 doses; 0.5 mL each ^c	If 2 doses, administer at least 4 wks apart (same seasonal vaccine)	≥ 9 y	1 dose; 0.5 mL	–	≥ 18 y: Give a single 0.5 mL dose	<p>2-8 y: Give 1 or 2 doses of 0.2 mL each</p> <p>If 2 doses, administer at least 1 mo apart</p> <p>9-49 y: Give 1 dose of 0.2 mL</p> <p>Each 0.2-mL dose should be divided equally between both nostrils (0.1 mL per nostril)</p>
Age	Dose	Schedule																		
6-35 mo	1 or 2 doses; Afluria pediatric (0.25 mL) or Flulaval/Fluarix/Fluzone/Flucelvax (0.5 mL) ^c	If 2 doses, administer at least 4 wks apart (same seasonal vaccine)																		
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	Afluria	Fluad	Flucelvax	Fluarix	Flulaval	Fluzone (including HD)	Flublok	FluMist
Contraindications	History of severe allergic reactions (eg, anaphylaxis) to any component of vaccines, including egg protein, or to a previous dose of any influenza vaccine (Afluria, Fluad)		Severe allergic reaction (eg, anaphylaxis) to any component of the vaccine	History of severe allergic reactions (eg, anaphylaxis) to any component of vaccines, including egg protein, or following a previous dose of any influenza vaccine (Fluarix, FluLaval, Fluzone)			Severe allergic reaction (eg, anaphylaxis) to any component of the vaccine	Severe allergic reaction to any component of the vaccine, including egg protein, or after a previous dose of any influenza vaccine; avoid in children 2-17 y who are receiving aspirin-containing therapy
Warnings/ precautions	<ul style="list-style-type: none"> If GBS has occurred within 6 wk of receipt of a prior influenza vaccine, the decision should be based on potential benefits and risk Vaccination may not protect all vaccine recipients Appropriate treatment and supervision must be available to manage possible anaphylactic reactions following administration 							
	<ul style="list-style-type: none"> Syncope can occur in association with injectable vaccines. Procedures should be in place to avoid falling injury and to restore cerebral perfusion following syncope. Immunosuppressed individuals may have a reduced immune response to the influenza vaccine. 							In trials, risks of hospitalization and wheezing were increased in children < 2 y; children < 5 y with recurrent wheezing and individuals of any age with asthma may also be at increased risk of wheezing. FluMist has not been studied in immunocompromised patients.
	--	--	--	As with other IM injections, administer with caution in individuals with bleeding disorders, such as hemophilia or anticoagulant therapy, to avoid risk of hematoma following injection.	--	--	--	--

	Afluria	Fluad	Flucelvax	Fluarix	Flulaval	Fluzone (including HD)	Flublok	FluMist
Drug interactions	Insufficient data for concurrent administration with other vaccines. Administer at different injection sites as other vaccines.	Insufficient data for concurrent administration with other vaccines. Administer at different injection sites as other vaccines. Immunosuppressive therapies, including corticosteroids, may reduce immune response.	Not specified in PI.	Generally, insufficient data for concurrent administration with other vaccines. Administer at different injection sites as other vaccines. Fluarix was administered concomitantly with Zoster Vaccine Recombinant in an open-label trial, with no evidence for interference in antibody response. Immunosuppressive therapies, such as antimetabolites, alkylating agents, cytotoxic drugs, and HD corticosteroids, may reduce immune response.	Insufficient data for concurrent administration with other vaccines. Administer at different injection sites as other vaccines. Immunosuppressive therapies, such as antimetabolites, alkylating agents, cytotoxic drugs, and HD corticosteroids, may reduce immune response.	Not specified in PI.	Data evaluating the concomitant administration of Flublok Quadrivalent with other vaccines are not available.	Avoid aspirin-containing therapy for 4 wk in children and adolescents through 17 y. Antiviral drugs active against influenza A and/or B viruses may reduce effectiveness if administered 48 h before or within 2 wk after vaccine. Safety and immunogenicity unknown with concomitant administration of inactivated or live vaccines or other intranasal products.

	Afluria	Fluad	Flucelvax	Fluarix	Flulaval	Fluzone (including HD)	Flublok	FluMist
Adverse reactions – Pediatrics	<p>6-35 mo: Local: injection-site pain, redness Systemic: irritability, diarrhea, loss of appetite</p> <p>3 to < 5 y: Local: injection-site pain, redness Systemic: malaise, fatigue, diarrhea</p> <p>5-8 y: Local: injection-site pain, redness, swelling Systemic: headache</p> <p>9-17 y: Local: injection-site pain, redness, swelling Systemic: headache, myalgia, malaise, fatigue</p>	<i>Not approved</i>	<p>6 mo-3 y Local: injection-site tenderness, erythema, ecchymosis Systemic: irritability, sleepiness, diarrhea, changes in eating habits.</p> <p>2-8 y: Local: injection-site pain, tenderness, erythema, induration, ecchymosis Systemic: sleepiness, headache, fatigue, irritability, loss of appetite</p> <p>9-17 y: Local: injection site-pain, erythema, induration Systemic: headache, fatigue, myalgia</p>	<p>6-35 mo: Local: injection-site pain, redness Systemic: irritability, appetite loss, drowsiness</p> <p>3-17 y: Local: injection-site pain, redness, swelling</p> <p>3-5 y: Systemic: drowsiness, irritability, appetite loss</p> <p>6-17 y: Systemic: fatigue, myalgia, headache, arthralgia, gastrointestinal symptoms</p>	<p>6-35 mo: Local: injection-site pain Systemic: irritability, drowsiness, appetite loss</p> <p>3-17 y: Local: injection-site pain</p> <p>3-4 y: Systemic: irritability, drowsiness, loss of appetite</p> <p>5-17 y: Systemic: myalgia, headache, fatigue, gastrointestinal symptoms</p>	<p><u>Fluzone</u> 6-35 mo: Local: injection-site pain or tenderness, erythema, swelling Systemic: irritability, abnormal crying, malaise, drowsiness, appetite loss, myalgia, vomiting, fever</p> <p>3-8 y: Local: injection-site pain, erythema, swelling Systemic: myalgia, malaise, headache</p> <p><u>Fluzone HD</u> <i>Not approved</i></p>	<i>Not approved</i>	<p>2-6 y: fever over 100°F</p> <p>2-17 y: runny nose, nasal congestion, sore throat</p>

	Afluria	Fluad	Flucelvax	Fluarix	Flulaval	Fluzone (including HD)	Flublok	FluMist
Adverse reactions – Adults	<p>≥ 18 y: Local: injection-site pain Systemic: headache, myalgia</p>	<p>> 65 y: Local: injection-site pain Systemic: headache, fatigue</p>	<p>18-64 y: Local: injection-site pain, erythema, and induration. Systemic: headache, fatigue, myalgia</p> <p>≥ 65 y: Local: injection-site pain and erythema</p>	<p>≥ 18 y: Local: injection-site pain Systemic: myalgia, fatigue, headache</p>	<p>≥ 18 y: Local: injection-site pain Systemic: headache, fatigue, myalgia, arthralgia</p>	<p><u>Fluzone</u></p> <p>≥ 18 y: Local: injection-site pain Systemic: myalgia, headache, malaise</p> <p><u>Fluzone HD</u></p> <p>≥ 65 y: Local: injection-site pain Systemic: myalgia</p>	<p>18-49 y: Local: injection-site pain and tenderness Systemic: headache, fatigue, myalgia, arthralgia</p> <p>≥ 50 y: Local: injection-site pain and tenderness Systemic: fatigue, headache</p>	<p>18-49 y: runny nose, nasal congestion, sore throat</p>
Date on PI	7/2021	7/2021	10/2021	7/2021	7/2021	Fluzone: 7/2021 Fluzone HD: 7/2021	7/2021	8/2021

Abbreviations: ACIP = Advisory Committee on Immunization Practices; GBS = Guillain-Barré syndrome; HA = hemagglutinin; HD = high-dose; MDCK = Madin-Darby canine kidney cells; PFS = prefilled syringe; PI = package insert.

^a Information contained in this table is taken from the 2021-2022 package insert unless otherwise indicated.

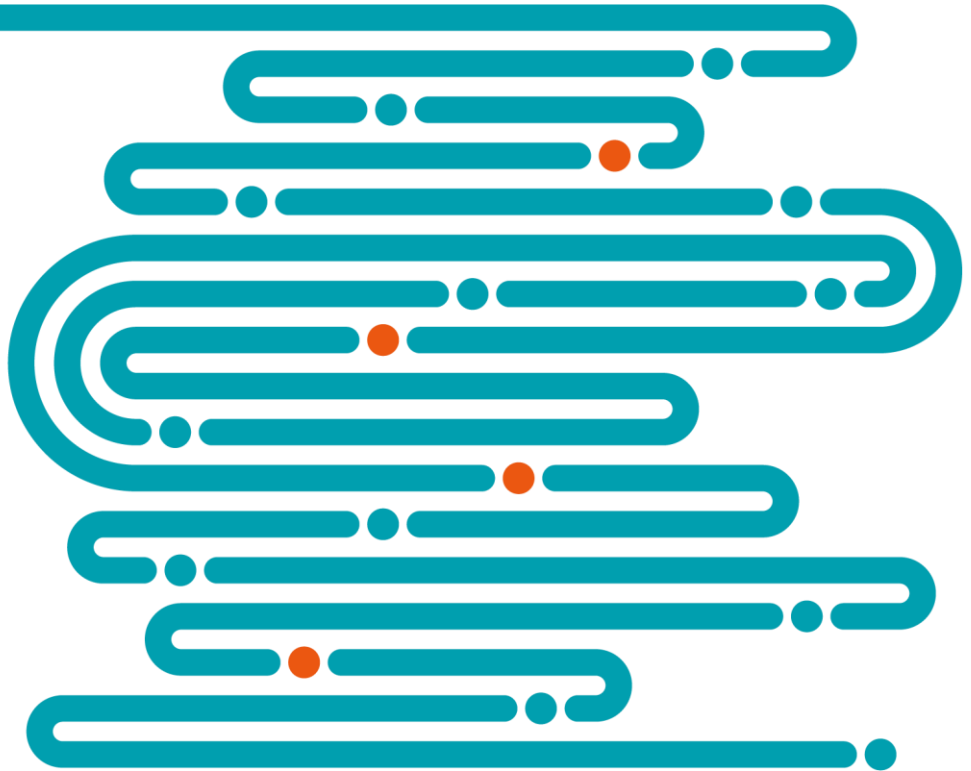
^b Traditional letter-based US Food and Drug Administration pregnancy risk categories have been phased out per regulatory guidance. Refer to the most current seasonal influenza vaccination guidelines for more information on influenza vaccination during pregnancy.

^c One or two doses depends on vaccination history based on the ACIP [annual recommendations](#). Refer to current seasonal influenza vaccination guidelines for more information. Fluzone is approved to be given as either a 0.25 mL or a 0.5 mL dose in children aged 6 mos to 35 mos. Fluzone is no longer supplied in a 0.25 mL prefilled syringe. Healthcare practitioners wishing to administer a 0.25 mL dose with Fluzone will need to use the Fluzone single-dose vial.

Revised: February 2022



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