

INTRODUCTION TO THE
**SANOFI PRODUCT
PORTFOLIO
2023-2024**

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LEARN MORE

 Influenza Vaccine
**Fluzone[®] High-Dose
Quadrivalent**

Flublok[®]
QUADRIVALENT
Influenza Vaccine

 **Fluzone[®]**
Quadrivalent
INFLUENZA VACCINE

Please click to see full [Important Safety Information](#). Please click to see full Prescribing Information for [Fluzone High-Dose Quadrivalent](#), [Flublok Quadrivalent](#), and [Fluzone Quadrivalent](#).

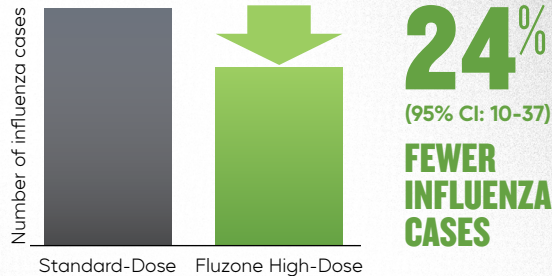
sanofi

THE FIRST AND ONLY HIGH-DOSE INFLUENZA VACCINE PROVEN TO PROVIDE SUPERIOR FLU PROTECTION^a COMPARED TO A STANDARD-DOSE INFLUENZA VACCINE¹⁻³



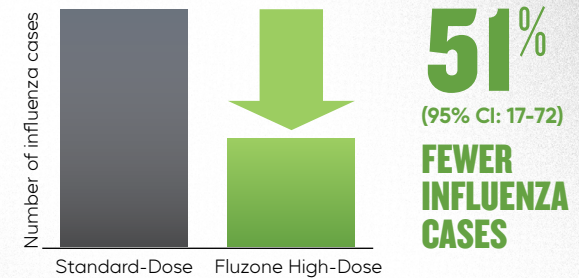
PRIMARY ENDPOINT:

Relative vaccine efficacy (rVE) against influenza due to ANY PCR-confirmed circulating strains^{1,2}



SECONDARY ENDPOINT:

rVE against influenza due to antigenically matched strains^{1,2}



1:1 randomized controlled trial

Fluzone High-Dose (Influenza Vaccine) trivalent formulation vs standard-dose Fluzone (Influenza Vaccine)

Subjects: 31,803 adults aged 65+

Influenza seasons: 2011-2012, 2012-2013

^aThe prespecified statistical superiority criterion for the primary endpoint (lower limit of 2-sided 95% CI of the vaccine efficacy of Fluzone High-Dose relative to Fluzone >9.1%) was met.¹ CI=confidence interval; PCR=polymerase chain reaction. Graphical representation is for illustrative purposes only.

The efficacy of Fluzone High-Dose is relevant to Fluzone High-Dose Quadrivalent since both vaccines are manufactured according to the same process and have overlapping compositions.¹

SOLICITED INJECTION-SITE REACTIONS AND SYSTEMIC ADVERSE REACTIONS WERE SLIGHTLY MORE FREQUENT

after vaccination with Fluzone High-Dose as compared with a standard-dose influenza vaccine. The most common injection-site reactions (>10%) were pain and erythema; the most common solicited systemic adverse events (>10%) were headache, myalgia, and malaise.⁴

In a randomized controlled trial (4:1:1) conducted in the 2017-2018 season between Fluzone High-Dose Quadrivalent (HD-QIV) and 2 Fluzone High-Dose Trivalent (HD-TIV) formulations in 2670 patients aged 65+, HD-QIV was as immunogenic as HD-TIV for geometric mean titers and seroconversion rates to strains common to formulations of the vaccines. HD-QIV exhibited a similar safety profile to HD-TIV. The most common reactions after HD-QIV administration were injection-site pain (41.3%), myalgia (22.7%), headache (14.4%), and malaise (13.2%).^{1,5}

Fluzone High-Dose Quadrivalent is a vaccine **indicated** for active immunization for the prevention of influenza disease caused by influenza A subtype viruses and type B viruses contained in the vaccine. Fluzone High-Dose Quadrivalent is approved for use in persons 65 years of age and older.

SELECT IMPORTANT SAFETY INFORMATION

Fluzone High-Dose Quadrivalent should not be administered to anyone who has had a severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine, including egg protein, or after previous dose of any influenza vaccine.

Please click to see full [Important Safety Information](#).

Please click to see full [Prescribing Information](#) for Fluzone High-Dose Quadrivalent.

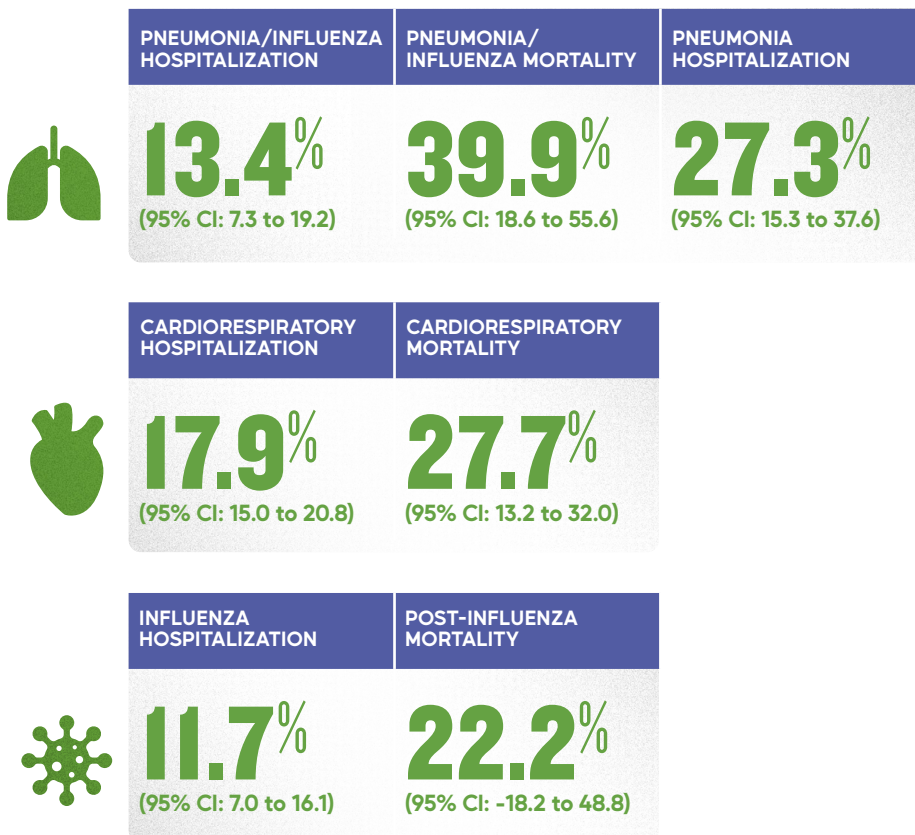
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References: 1. Fluzone High-Dose Quadrivalent. Prescribing Information. Sanofi Pasteur Inc. 2. DiazGranados CA, Dunning AJ, Kimmel M, et al. Efficacy of high-dose versus standard-dose influenza vaccine in older adults. *N Engl J Med*. 2014;371(7):635-645. doi:10.1056/NEJMoa1315727 3. Sanofi Pasteur Inc. Data on file, 2021. 4. Falsey AR, Treanor JJ, Tornieporth N, Capellan J, Gorse GJ. Randomized, double-blind controlled phase 3 trial comparing the immunogenicity of high-dose and standard-dose influenza vaccine in adults 65 years of age and older. *J Infect Dis*. 2009;200(2):172-180. doi:10.1086/599790 5. Chang LJ, Meng Y, Janosczyk H, Landolfi V, Talbot HK; for the QHD00013 Study Group. Safety and immunogenicity of high-dose quadrivalent influenza vaccine in adults ≥65 years of age: a phase 3 randomized clinical trial. *Vaccine*. 2019;37(39):5825-5834. doi:10.1016/j.vaccine.2019.08.016

META-ANALYSIS: 10 YEARS OF REAL-WORLD EVIDENCE IN PREVENTING MORE INFLUENZA COMPLICATIONS THAN STANDARD-DOSE INFLUENZA VACCINES¹



POOLED rVE (95% CI) AGAINST INFLUENZA-RELATED OUTCOMES^a



Fluzone High-Dose (Influenza Vaccine) trivalent formulation vs standard-dose influenza vaccines¹

Subjects: ~34 million adults aged 65+ included in 15 published studies

10 influenza seasons: Identified studies were conducted over 2009-2010 to 2018-2019 influenza seasons

- 7 seasons were A (H3N2) predominant
- 3 seasons were A (H1N1) predominant
- 3 seasons were antigenically mismatched

Study funding was provided by Sanofi Pasteur and the authors were employees of Sanofi Pasteur

Study Limitations¹:

- High degree of statistical heterogeneity observed
- Unmeasured confounders could affect the results
- Most outcomes of the reviews were not lab-confirmed and do not necessarily represent strain-specific vaccine effectiveness
- The between-studies weighting may lead to overall results that are statistically significant while sub-analyses have wider CI

^aSelect endpoints are presented here. Influenza-like illness, all-cause hospitalizations, and all-cause mortality were also evaluated.

SELECT IMPORTANT SAFETY INFORMATION

Appropriate medical treatment and supervision must be available to manage possible anaphylactic reactions following administration of the vaccine.

Please click to see full [Important Safety Information](#).

Please click to see full [Prescribing Information](#) for Fluzone High-Dose Quadrivalent.

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Reference: 1. Lee JKH, Lam GKL, Shin T, Samson SI, Greenberg DP, Chit A. Efficacy and effectiveness of high-dose influenza vaccine in older adults by circulating strain and antigenic match: an updated systematic review and meta-analysis. *Vaccine*. 2021;39(suppl 1):A24-A35. doi:10.1016/j.vaccine.2020.09.004

FLUZONE HIGH-DOSE IS THE ONLY INFLUENZA VACCINE WITH:

4X ANTIGEN

with 60 micrograms (mcg) hemagglutinin (HA) vs 15 mcg HA in a standard-dose influenza vaccine¹

PROVEN EFFICACY^a

in preventing more influenza than a standard-dose influenza vaccine in a randomized controlled efficacy trial^{1,2}

10 YEARS OF REAL-WORLD EVIDENCE^b

demonstrating a reduction in influenza-related complications, including hospitalizations³

^aProven superiority in a clinical trial between Fluzone High-Dose (Influenza Vaccine) trivalent formulation and a standard-dose influenza vaccine.²

^bIncludes 10 years of evidence (2009-2019) with Fluzone High-Dose trivalent formulation.³

PRODUCT SNAPSHOT




National Drug Code

Carton (49281-0123-65)²
 Unit (49281-0123-88)²

CPT^c Code

90662⁴

Product Presentation

-  Single-dose, 0.7-mL prefilled syringe²
-  10 prefilled syringes per carton²
-  For intramuscular injection only²

- Covered by Medicare Part B and by most Medicare Advantage Plans with no copay
- Acquisition and administration fees are covered under Medicare Part B with no copay or deductible

^cCPT=current procedural terminology.

SELECT IMPORTANT SAFETY INFORMATION

If Guillain-Barré syndrome has occurred within 6 weeks following previous influenza vaccination, the decision to give Fluzone High-Dose Quadrivalent should be based on careful consideration of the potential benefits and risks.

Please click to see full [Important Safety Information](#). Please click to see full [Prescribing Information](#) for Fluzone High-Dose Quadrivalent.

References: **1.** DiazGranados CA, Dunning AJ, Kimmel M, et al. Efficacy of high-dose versus standard-dose influenza vaccine in older adults. *N Engl J Med.* 2014;371(7):635-645. doi:10.1056/NEJMoa1315727 **2.** Fluzone High-Dose Quadrivalent. Prescribing Information. Sanofi Pasteur Inc. **3.** Lee JKH, Lam GKL, Shin T, Samson SI, Greenberg DP, Chit A. Efficacy and effectiveness of high-dose influenza vaccine in older adults by circulating strain and antigenic match: an updated systematic review and meta-analysis. *Vaccine.* 2021;39(suppl 1):A24-A35. doi:10.1016/j.vaccine.2020.09.004 **4.** Seasonal influenza vaccines pricing. Centers for Medicare and Medicaid Services. January 4, 2023. Accessed May 5, 2023. <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Part-B-Drugs/McrPartBDrugAvgSalesPrice/VaccinesPricing>



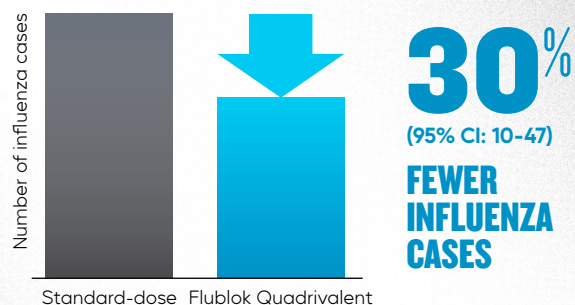
For illustrative purposes only.

PROVEN TO PREVENT MORE INFLUENZA IN ADULTS AGED 50+ COMPARED TO A STANDARD-DOSE QUADRIVALENT INFLUENZA VACCINE^{1,2}

Flublok[®]
QUADRIVALENT
Influenza Vaccine

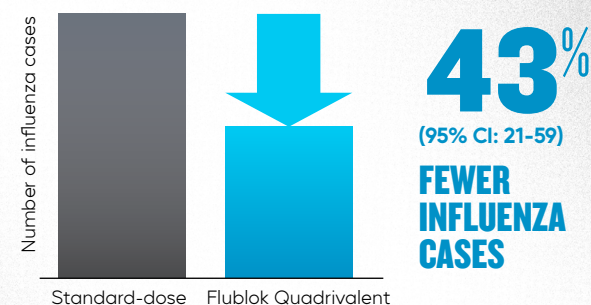
PRIMARY ENDPOINT:

rVE against influenza due to ANY PCR-confirmed circulating strains^{1,2}



SECONDARY ENDPOINT:

rVE against influenza due to ANY culture-confirmed circulating strains^{1,2}



1:1 randomized controlled trial

Flublok Quadrivalent vs standard-dose inactivated quadrivalent influenza vaccine (Fluarix Quadrivalent)

Subjects: ~9000 adults aged 50+

Influenza season: 2014-2015

Characteristics: A (H3N2) predominant and antigenically mismatched

SAFETY IN ADULTS 50+

In a randomized controlled trial in adults 50 years of age and older, the most common ($\geq 10\%$) injection-site reactions were tenderness (34%) and pain (19%); the most common ($\geq 10\%$) solicited systemic adverse reactions were headache (13%) and fatigue (12%).¹

Graphical representation is for illustrative purposes only.

Flublok Quadrivalent is a vaccine **indicated** for active immunization against disease caused by influenza A subtype viruses and influenza type B viruses contained in the vaccine. Flublok Quadrivalent is approved for use in persons 18 years of age and older.

SELECT IMPORTANT SAFETY INFORMATION

Flublok Quadrivalent should not be administered to anyone who has had a severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine.

Please click to see full [Important Safety Information](#). Please click to see full [Prescribing Information](#) for Flublok Quadrivalent.

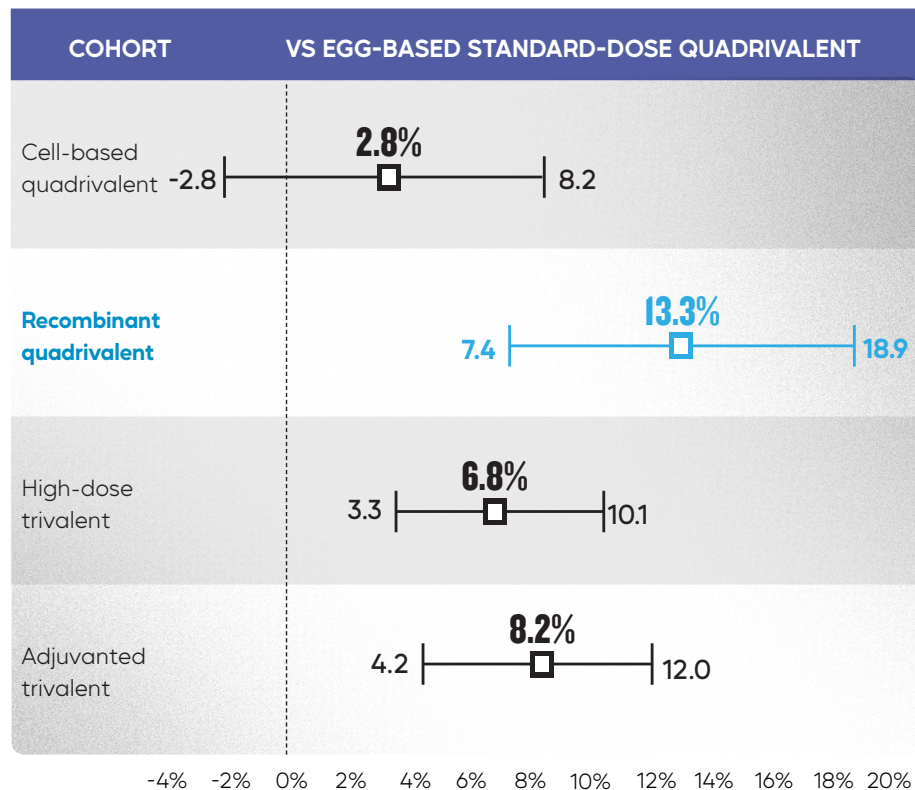
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References: 1. Flublok Quadrivalent. Prescribing Information. Protein Sciences Corporation. 2. Dunkle LM, Izikson R, Patriarca P, et al; PSC12 Study Team. Efficacy of recombinant influenza vaccine in adults 50 years of age or older. *N Engl J Med*. 2017;376(25):2427-2436. doi:10.1056/NEJMoa1608862

2019-2020: RECOMBINANT INFLUENZA VACCINE WAS ASSOCIATED WITH SIGNIFICANTLY FEWER INFLUENZA HOSPITAL ENCOUNTERS COMPARED WITH STANDARD-DOSE INFLUENZA VACCINES¹

Flublok[®]
QUADRIVALENT
Influenza Vaccine

EFFEKTIVE AGAINST INFLUENZA HOSPITAL ENCOUNTERS (95% CI)^{1,a}



Design: Retrospective observational cohort

Population: 12.7 million adults aged 65+ HD-IIV3=~7.1 million; aIIV3=~2.5 million; IIV4=~1.5 million; cIIV4=~0.8 million; RIV4=~0.6 million

Data Source: Medicare fee-for-service claims

Author Affiliations: US Food and Drug Administration, Centers for Medicare and Medicaid Services

Study Limitations¹:

- Lack of access to virological case confirmation may have led to underestimation of the magnitude of differences
- Residual confounding by unmeasured covariates could have affected results
- The observation period was cut off at the end of February to avoid potential bias from the overlap between influenza season and the escalation of the COVID-19 pandemic in the US

2019-2020 Season Characteristics¹:

- Influenza A (H1N1) and influenza B Victoria were predominating strains with no significant circulation of influenza A (H3N2)
- An H1N1 strain with an amino acid change emerged late in the season and likely did not substantially affect the vaccine efficacy during the study period
- Trivalent vaccines contained the influenza B Victoria lineage

^aThe data shown is 1 of 3 primary analyses. Two additional primary analyses were conducted: 2 vaccine analyses comparing cIIV4 with IIV4 and RIV4 with IIV4.¹

aIIV3=egg-based adjuvanted trivalent; cIIV4=cell-cultured standard-dose quadrivalent; HD-IIV3=egg-based high-dose trivalent; IIV4=egg-based standard-dose quadrivalent; RIV4=recombinant quadrivalent.

SELECT IMPORTANT SAFETY INFORMATION

Appropriate medical treatment and supervision must be available to manage possible anaphylactic reactions following administration of the vaccine.

Please click to see full [Important Safety Information](#). Please click to see full [Prescribing Information](#) for Flublok Quadrivalent.

**VIEW PRODUCT
 SNAPSHOT**

Reference: 1. Izurieta HS, Lu M, Kelman J, et al. Comparative effectiveness of influenza vaccines among US Medicare beneficiaries ages 65 years and older during the 2019-2020 season. *Clin Infect Dis*. 2020;73(11):e4251-e4259. doi:10.1093/cid/ciaa1727

Flublok[®] QUADRIVALENT Influenza Vaccine

KEY ATTRIBUTES:

UNIQUE RECOMBINANT DNA TECHNOLOGY¹

3X THE ANTIGEN

45 mcg of hemagglutinin (HA)
vs 15 mcg of HA in a standard-dose
influenza vaccine²

PROVEN EFFICACY

to prevent more influenza when
compared with a standard-dose
quadrivalent influenza vaccine in
a clinical trial of adults 50+²

DEMONSTRATED TO REDUCE INFLUENZA-RELATED HOSPITAL ENCOUNTERS

in adults aged 65+ compared with
standard-dose influenza vaccines³

PRODUCT SNAPSHOT




National Drug Code

Carton (49281-0723-10)¹
Unit (49281-0723-88)¹

CPT[®] Code

90682⁴

Product Presentation

-  Single-dose, 0.5-mL prefilled syringe¹
-  10 prefilled syringes per carton¹
-  For intramuscular injection only¹

¹CPT=current procedural terminology.



For illustrative purposes only.

SELECT IMPORTANT SAFETY INFORMATION

If Guillain-Barré syndrome has occurred within 6 weeks following previous influenza vaccination, the decision to give Flublok Quadrivalent should be based on careful consideration of the potential benefits and risks.

Please click to see full [Important Safety Information](#). Please click to see full [Prescribing Information](#) for Flublok Quadrivalent.

References: **1.** Flublok Quadrivalent. Prescribing Information. Protein Sciences Corporation. **2.** Dunkle LM, Izikson R, Patriarca P, et al; PSC12 Study Team. Efficacy of recombinant influenza vaccine in adults 50 years of age or older. *N Engl J Med.* 2017;376(25):2427-2436. doi:10.1056/NEJMoa1608862 **3.** Izurieta HS, Lu M, Kelman J, et al. Comparative effectiveness of influenza vaccines among US Medicare beneficiaries ages 65 years and older during the 2019-2020 season. *Clin Infect Dis.* 2020;73(11):e4251-e4259. doi:10.1093/cid/ciaa1727 **4.** Seasonal influenza vaccines pricing. Centers for Medicare and Medicaid Services. January 4, 2023. Accessed May 5, 2023. <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Part-B-Drugs/McrPartBDrugsAvgSalesPrice/VaccinesPricing>

HELP PROTECT PERSONS 6+ MONTHS WITH THE 4-STRAIN DEFENSE OF FLUZONE QUADRIVALENT¹



PRODUCT SNAPSHOT

PRESENTATION ¹	CARTON ¹	UNIT ¹	CPT [®] CODE ²
0.5-mL prefilled syringe	(49281-0423-50)	(49281-0423-88)	90686
5-mL multidose vial	(49281-0639-15)	(49281-0639-78)	90687 (0.25-mL dose) 90688 Covered by most health plans

ADMINISTRATION

For intramuscular use only.¹

^a – " Indicates information is not applicable.

^cCPT=current procedural terminology.

^bThe schedule can be completed as two 0.25-mL doses \geq 4 weeks apart, two 0.5-mL doses \geq 4 weeks apart, or any combination of 2 doses (either 0.25 mL or 0.5 mL) administered \geq 4 weeks apart.

^cTo determine if 1 or 2 doses are required, refer to Advisory Committee on Immunization Practices annual recommendations on prevention and control of influenza with vaccines.

Fluzone Quadrivalent is a vaccine **indicated** for active immunization for the prevention of influenza disease caused by influenza A subtype viruses and type B viruses contained in the vaccine. Fluzone Quadrivalent is approved for use in persons 6 months of age and older.

SELECT IMPORTANT SAFETY INFORMATION

Fluzone Quadrivalent should not be administered to anyone who has had a severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine, including egg protein, or after previous dose of any influenza vaccine.

Please click to see full [Important Safety Information](#). Please click to see full [Prescribing Information](#) for Fluzone Quadrivalent.

References: 1. Fluzone Quadrivalent. Prescribing Information. Sanofi Pasteur Inc. 2. Seasonal influenza vaccines pricing. Centers for Medicare and Medicaid Services. January 4, 2023. Accessed May 5, 2023. <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Part-B-Drugs/McrPartBDrugsAvgSalesPrice/VaccinesPricing>

DOSAGE AND SCHEDULE¹

AGE	VACCINATION STATUS	DOSE	SCHEDULE
6 months through 35 months	Not previously vaccinated with influenza vaccine or unknown vaccination history	Two doses, either 0.25 mL or 0.5 mL ^b	Administer at least 4 weeks apart
	Previously vaccinated with influenza vaccine	One or two doses, ^c either 0.25 mL or 0.5 mL ^b	If two doses, administer at least 4 weeks apart
36 months through 8 years	Not previously vaccinated with influenza vaccine or unknown vaccination history	Two 0.5 mL doses	Administer at least 4 weeks apart
	Previously vaccinated with influenza vaccine	One or two 0.5 mL doses ^c	If two doses, administer at least 4 weeks apart
9 years and older	–	One 0.5 mL dose	–

Prior to vaccination, always refer to the current Advisory Committee on Immunization Practices annual recommendations on prevention and control of influenza with vaccines.



IMPORTANT SAFETY INFORMATION FOR FLUZONE® QUADRIVALENT (INFLUENZA VACCINE), FLUBLOK® QUADRIVALENT (INFLUENZA VACCINE), AND FLUZONE® HIGH-DOSE QUADRIVALENT (INFLUENZA VACCINE)

Fluzone Quadrivalent, Flublok Quadrivalent, and Fluzone High-Dose Quadrivalent should not be administered to anyone who has had a severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine (including egg protein for Fluzone Quadrivalent and Fluzone High-Dose Quadrivalent). In addition, Fluzone Quadrivalent and Fluzone High-Dose Quadrivalent should not be administered to anyone who has had a severe allergic reaction after previous dose of any influenza vaccine.

Appropriate medical treatment and supervision must be available to manage possible anaphylactic reactions following administration of the vaccine.

If Guillain-Barré syndrome has occurred within 6 weeks following previous influenza vaccination, the decision to give Fluzone Quadrivalent, Flublok Quadrivalent, and Fluzone High-Dose Quadrivalent should be based on careful consideration of the potential benefits and risks.

If Fluzone Quadrivalent, Flublok Quadrivalent, and Fluzone High-Dose Quadrivalent are administered to immunocompromised persons, including those receiving immunosuppressive therapy, the immune response may be lower than expected.

Vaccination with Fluzone Quadrivalent, Flublok Quadrivalent, and Fluzone High-Dose Quadrivalent may not protect all recipients.

Syncope (fainting) has been reported following vaccination with Fluzone Quadrivalent. Procedures should be in place to avoid injury from fainting.

For Fluzone Quadrivalent, in children 6 months through 35 months of age, the most common injection-site reactions were pain or tenderness, erythema, and swelling; the most common solicited systemic adverse reactions were irritability, abnormal crying, malaise, drowsiness, appetite loss, myalgia, vomiting, and fever. In children 3 years through 8 years of age, the most common injection-site reactions were pain, erythema, and swelling; the most common solicited systemic adverse reactions were

myalgia, malaise, and headache. In adults 18 years and older, the most common injection-site reaction was pain; the most common solicited systemic adverse reactions were myalgia, headache, and malaise.

For Flublok Quadrivalent, in adults 18 through 49 years of age, the most common injection-site reactions were tenderness and pain; the most common solicited systemic adverse reactions were headache, fatigue, myalgia, and arthralgia. In adults 50 years of age and older, the most common injection-site reactions were tenderness and pain; the most common solicited systemic adverse reactions were headache and fatigue.

For Fluzone High-Dose Quadrivalent, in adults 65 years of age and older, the most common injection-site reaction was pain; the most common solicited systemic adverse reactions were myalgia, headache, and malaise.

For Fluzone Quadrivalent, Flublok Quadrivalent, and Fluzone High-Dose Quadrivalent, other adverse reactions may occur.

Before administration, please see full Prescribing Information for [Fluzone Quadrivalent](#), [Flublok Quadrivalent](#), or [Fluzone High-Dose Quadrivalent](#).

To order Fluzone Quadrivalent, Flublok Quadrivalent, or Fluzone High-Dose Quadrivalent, call 1-800-VACCINE (1-800-822-2463) or contact your Sanofi Vaccines Specialist.

Fluzone Quadrivalent and Fluzone High-Dose Quadrivalent are manufactured and distributed by Sanofi Pasteur Inc.

Fluzone Quadrivalent (CPT[®] code 90685, 90686, 90687, 90688) and Fluzone High-Dose Quadrivalent (CPT code 90662) are covered benefits under Medicare Part B.

Flublok Quadrivalent is manufactured by Protein Sciences Corporation, a Sanofi company, and distributed by Sanofi Pasteur Inc. Flublok Quadrivalent (CPT code 90682) is a covered benefit under Medicare Part B.

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