

Individuals using assistive technology may not be able to fully access the information contained in this file. For assistance, please send an e-mail to: ocod@fda.hhs.gov and include 508 Accommodation and the title of the document in the subject line of your e-mail.

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use Fluzone® High-Dose safely and effectively. See full prescribing information for Fluzone High-Dose.

**Fluzone High-Dose (Influenza Vaccine)
Suspension for Intramuscular Injection
2018-2019 Formula
Initial US Approval: 2009**

INDICATIONS AND USAGE

Fluzone High-Dose is a vaccine indicated for active immunization for the prevention of influenza disease caused by influenza A subtype viruses and type B virus contained in the vaccine. (1)

Fluzone High-Dose is approved for use in persons 65 years of age and older. (1)

DOSAGE AND ADMINISTRATION

- For intramuscular use only

A single 0.5 mL dose for intramuscular injection in adults 65 years of age and older. (2.1)

DOSAGE FORMS AND STRENGTHS

Suspension for injection in prefilled syringe (gray plunger rod), 0.5 mL. (3)

FULL PRESCRIBING INFORMATION: CONTENTS*

- [INDICATIONS AND USAGE](#)
- [DOSAGE AND ADMINISTRATION](#)
 - Dose and Schedule
 - Administration
- [DOSAGE FORMS AND STRENGTHS](#)
- [CONTRAINDICATIONS](#)
- [WARNINGS AND PRECAUTIONS](#)
 - Guillain-Barré Syndrome
 - Preventing and Managing Allergic Reactions
 - Altered Immunocompetence
 - Limitations of Vaccine Effectiveness
- [ADVERSE REACTIONS](#)
 - Clinical Trials Experience
 - Post-Marketing Experience
- [DRUG INTERACTIONS](#)

CONTRAINDICATIONS

Severe allergic reaction to any component of the vaccine, including egg protein, or after previous dose of any influenza vaccine. (4)

WARNINGS AND PRECAUTIONS

- If Guillain-Barré syndrome (GBS) has occurred within 6 weeks following previous influenza vaccination, the decision to give Fluzone High-Dose should be based on careful consideration of the potential benefits and risks. (5.1)

ADVERSE REACTIONS

- In adults ≥ 65 years of age, the most common injection-site reaction was pain ($>30\%$); the most common solicited systemic adverse events were myalgia, malaise, and headache ($>10\%$). (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Sanofi Pasteur Inc., Discovery Drive, Swiftwater, PA 18370 at 1-800-822-2463 (1-800-VACCINE) or VAERS at 1-800-822-7967 or www.vaers.hhs.gov.

USE IN SPECIFIC POPULATIONS

Safety and effectiveness of Fluzone High-Dose has not been established in pregnant women. (8.1)

See [17 PATIENT COUNSELING INFORMATION](#) and FDA – approved patient labeling.

Revised: XXXXX

8 USE IN SPECIFIC POPULATIONS

- Pregnancy
- Pediatric Use
- Geriatric Use

11 DESCRIPTION

12 CLINICAL PHARMACOLOGY

- Mechanism of Action

13 NON-CLINICAL TOXICOLOGY

- Carcinogenesis, Mutagenesis, Impairment of Fertility

14 CLINICAL STUDIES

- Immunogenicity of Fluzone High-Dose in Adults 65 Years of Age and Older
- Efficacy of Fluzone High-Dose in Adults 65 Years of Age and Older

15 REFERENCES

16 HOW SUPPLIED/STORAGE AND HANDLING

- How Supplied
- Storage and Handling

17 PATIENT COUNSELING INFORMATION

*Sections or subsections omitted from the full prescribing information are not listed.

1 **FULL PRESCRIBING INFORMATION:**

2 **1 INDICATIONS AND USAGE**

3 Fluzone® High-Dose is a vaccine indicated for active immunization for the prevention of
4 influenza disease caused by influenza A subtype viruses and type B virus contained in the
5 vaccine.

6

7 Fluzone High-Dose is approved for use in persons 65 years of age and older.

8

9 **2 DOSAGE AND ADMINISTRATION**

- 10 • **For intramuscular use only**

11 2.1 Dose and Schedule

12 Fluzone High-Dose should be administered as a single 0.5 mL injection by the intramuscular
13 route in adults 65 years of age and older.

14

15 2.2 Administration

16 Inspect Fluzone High-Dose visually for particulate matter and/or discoloration prior to
17 administration. If either of these conditions exist, the vaccine should not be administered.

18

19 Before administering a dose of vaccine, shake the prefilled syringe.

20

21 The preferred site for intramuscular injection is the deltoid muscle. The vaccine should not be
22 injected into the gluteal area or areas where there may be a major nerve trunk.

23

1 Do not administer this product intravenously or subcutaneously.

2

3 Fluzone High-Dose should not be combined through reconstitution or mixed with any other
4 vaccine.

5

6 **3 DOSAGE FORMS AND STRENGTHS**

7 Fluzone High-Dose is a suspension for injection.

8

9 Fluzone High-Dose is supplied in prefilled syringes (gray syringe plunger rod), 0.5 mL, for adults
10 65 years of age and older.

11

12 **4 CONTRAINDICATIONS**

13 A severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine [see *Description*
14 (11)], including egg protein, or to a previous dose of any influenza vaccine is a contraindication to
15 administration of Fluzone High-Dose.

16

17 **5 WARNINGS AND PRECAUTIONS**

18 5.1 Guillain-Barré Syndrome

19 If Guillain-Barré syndrome (GBS) has occurred within 6 weeks following previous influenza
20 vaccination, the decision to give Fluzone High-Dose should be based on careful consideration of
21 the potential benefits and risks. The 1976 swine influenza vaccine was associated with an elevated
22 risk of GBS. Evidence for a causal relation of GBS with other influenza vaccines is inconclusive;

1 if an excess risk exists, it is probably slightly more than 1 additional case per 1 million persons
2 vaccinated. (See references 1 and 2.)

3

4 5.2 Preventing and Managing Allergic Reactions

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

7

8 5.3 Altered Immunocompetence

9 If Fluzone High-Dose is administered to immunocompromised persons, including those receiving
10 immunosuppressive therapy, the expected immune response may not be obtained.

11

12 5.4 Limitations of Vaccine Effectiveness

13 Vaccination with Fluzone High-Dose may not protect all recipients.

14

15 6 ADVERSE REACTIONS

16 6.1 Clinical Trials Experience

17 Because clinical trials are conducted under widely varying conditions, adverse event rates
18 observed in the clinical trial(s) of a vaccine cannot be directly compared to rates in the clinical
19 trial(s) of another vaccine and may not reflect the rates observed in practice. Two clinical studies
20 have evaluated the safety of Fluzone High-Dose.

21 Study 1 (NCT00391053, see <http://clinicaltrials.gov>) was a multi-center, double-blind pre-
22 licensure trial conducted in the US. In this study, adults 65 years of age and older were

1 randomized to receive either Fluzone High-Dose or Fluzone (2006-2007 formulation). The study
2 compared the safety and immunogenicity of Fluzone High-Dose to those of Fluzone. The safety
3 analysis set included 2573 Fluzone High-Dose recipients and 1260 Fluzone recipients.

4

5 [Table 1](#) summarizes solicited injection-site reactions and systemic adverse events reported within
6 7 days post-vaccination via diary cards. Onset was usually within the first 3 days after vaccination
7 and a majority of the reactions resolved within 3 days. Solicited injection-site reactions and
8 systemic adverse events were more frequent after vaccination with Fluzone High-Dose compared
9 to Fluzone.

10

1 **Table 1: Study 1^a: Frequency of Solicited Injection-Site Reactions and Systemic Adverse**
 2 **Events Within 7 Days After Vaccination with Fluzone High-Dose or Fluzone, Adults 65**
 3 **Years of Age and Older**

	Fluzone High-Dose (N ^b =2569-2572)			Fluzone (N ^b =1258-1260)		
	Percentage			Percentage		
	Any	Moderate ^c	Severe ^d	Any	Moderate ^c	Severe ^d
Injection-Site Pain	35.6	3.7	0.3	24.3	1.7	0.2
Injection-Site Erythema	14.9	1.9	1.8	10.8	0.8	0.6
Injection-Site Swelling	8.9	1.6	1.5	5.8	1.3	0.6
Myalgia	21.4	4.2	1.6	18.3	3.2	0.2
Malaise	18.0	4.7	1.6	14.0	3.7	0.6
Headache	16.8	3.1	1.1	14.4	2.5	0.3
Fever^e (≥99.5°F)	3.6	1.1	0.0	2.3	0.2	0.1

4 ^a NCT00391053

5 ^b N is the number of vaccinated participants with available data for the events listed

6 ^c Moderate - Injection-site pain: sufficiently discomforting to interfere with normal behavior or activities; Injection-site erythema and Injection-site swelling: ≥2.5 cm to <5 cm; Fever: >100.4°F to ≤102.2°F; Myalgia, Malaise, and Headache: interferes with daily activities

9 ^d Severe - Injection-site pain: incapacitating, unable to perform usual activities; Injection-site erythema and Injection-site swelling: ≥5 cm; Fever: >102.2°F; Myalgia, Malaise, and Headache: prevents daily activities

11 ^e Fever - The percentage of temperature measurements that were taken by oral route or not recorded were 97.9% and 2.1%, respectively, for Fluzone High-Dose; and 98.6% and 1.4%, respectively, for Fluzone

14 Within 6 months post-vaccination, 156 (6.1%) Fluzone High-Dose recipients and 93 (7.4%)
 15 Fluzone recipients experienced a serious adverse event (SAE). No deaths were reported within 28
 16 days post-vaccination. A total of 23 deaths were reported during Days 29 – 180 post-vaccination:
 17 16 (0.6%) among Fluzone High-Dose recipients and 7 (0.6%) among Fluzone recipients. The
 18 majority of these participants had a medical history of cardiac, hepatic, neoplastic, renal, and/or
 19 respiratory diseases. These data do not provide evidence for a causal relationship between deaths
 20 and vaccination with Fluzone High-Dose.

21

1 Study 2 (NCT01427309, see <http://clinicaltrials.gov>) was a multi-center, double-blind post-
2 licensure efficacy trial conducted in the US and Canada over two influenza seasons. In this study,
3 adults 65 years of age and older were randomized to receive either Fluzone High-Dose or Fluzone
4 (2011-2012 and 2012-2013 formulations). The study compared the efficacy and safety of Fluzone
5 High-Dose to those of Fluzone. The safety analysis set included 15,992 Fluzone High-Dose
6 recipients and 15,991 Fluzone recipients.

7

8 Within the study surveillance period (approximately 6 to 8 months post-vaccination), 1323 (8.3%)
9 Fluzone High-Dose recipients and 1442 (9.0%) Fluzone recipients experienced an SAE. Within
10 30 days post-vaccination, 204 (1.3%) Fluzone High-Dose recipients and 200 (1.3%) Fluzone
11 recipients experienced an SAE. The majority of these participants had one or more chronic
12 comorbid illnesses. A total of 167 deaths were reported within 6 to 8 months post-vaccination: 83
13 (0.5%) among Fluzone High-Dose recipients and 84 (0.5%) among Fluzone recipients. A total of
14 6 deaths were reported within 30 days post-vaccination: 6 (0.04%) among Fluzone High-Dose
15 recipients and 0 (0%) among Fluzone recipients. These data do not provide evidence for a causal
16 relationship between deaths and vaccination with Fluzone High-Dose.

17

18 6.2 Post-Marketing Experience

19 The following events have been spontaneously reported during the post-approval use of Fluzone
20 or Fluzone High-Dose. Because these events are reported voluntarily from a population of
21 uncertain size, it is not always possible to reliably estimate their frequency or establish a causal
22 relationship to vaccine exposure. Adverse events were included based on one or more of the

1 following factors: severity, frequency of reporting, or strength of evidence for a causal
2 relationship to Fluzone or Fluzone High-Dose.

3

4 Events Reported During Post-Approval Use of Fluzone.

- 5 • *Blood and Lymphatic System Disorders:* Thrombocytopenia, lymphadenopathy
- 6 • *Immune System Disorders:* Anaphylaxis, other allergic/hypersensitivity reactions (including
7 urticaria, angioedema)
- 8 • *Eye Disorders:* Ocular hyperemia
- 9 • *Nervous System Disorders:* Guillain-Barré syndrome (GBS), convulsions, febrile
10 convulsions, myelitis (including encephalomyelitis and transverse myelitis), facial palsy
11 (Bell's palsy), optic neuritis/neuropathy, brachial neuritis, syncope (shortly after vaccination),
12 dizziness, paresthesia
- 13 • *Vascular Disorders:* Vasculitis, vasodilatation/flushing
- 14 • *Respiratory, Thoracic and Mediastinal Disorders:* Dyspnea, pharyngitis, rhinitis, cough,
15 wheezing, throat tightness
- 16 • *Skin and Subcutaneous Tissue Disorders:* Stevens-Johnson syndrome
- 17 • *General Disorders and Administration Site Conditions:* Pruritus, asthenia/fatigue, pain in
18 extremities, chest pain
- 19 • *Gastrointestinal Disorders:* Vomiting

20

21 Other Events Reported During Post-Approval Use of Fluzone High-Dose.

- 22 • *Gastrointestinal Disorders:* Nausea, diarrhea
- 23 • *General Disorders and Administration Site Conditions:* Chills

1 **7 DRUG INTERACTIONS**

2 Data evaluating the concomitant administration of Fluzone High-Dose with other vaccines are not
3 available.

4
5 **8 USE IN SPECIFIC POPULATIONS**

6 8.1 Pregnancy

7 Pregnancy Category C: Animal reproduction studies have not been conducted with Fluzone High-
8 Dose. It is also not known whether Fluzone High-Dose can cause fetal harm when administered to
9 a pregnant woman or can affect reproduction capacity. Fluzone High-Dose should be given to a
10 pregnant woman only if clearly needed.

11
12 8.4 Pediatric Use

13 Safety and effectiveness of Fluzone High-Dose in persons <65 years of age have not been
14 established.

15
16 8.5 Geriatric Use

17 Safety, immunogenicity, and efficacy of Fluzone High-Dose have been evaluated in adults 65
18 years of age and older. [See *Adverse Reactions* (6.1) and *Clinical Studies* (14)]

19
20 **11 DESCRIPTION**

21 Fluzone High-Dose (Influenza Vaccine) for intramuscular injection is an inactivated influenza
22 vaccine, prepared from influenza viruses propagated in embryonated chicken eggs. The virus-
23 containing allantoic fluid is harvested and inactivated with formaldehyde. Influenza virus is

1 concentrated and purified in a linear sucrose density gradient solution using a continuous flow
2 centrifuge. The virus is then chemically disrupted using a non-ionic surfactant, octylphenol
3 ethoxylate (Triton® X-100), producing a “split virus”. The split virus is further purified and then
4 suspended in sodium phosphate-buffered isotonic sodium chloride solution. The Fluzone High-
5 Dose process uses an additional concentration factor after the ultrafiltration step in order to obtain
6 a higher hemagglutinin (HA) antigen concentration.

7

8 Fluzone High-Dose suspension for injection is clear and slightly opalescent in color.

9

10 Neither antibiotics nor preservative are used in the manufacture of Fluzone High-Dose.

11

12 The Fluzone High-Dose prefilled syringe presentation is not made with natural rubber latex.

13

14 Fluzone High-Dose is standardized according to United States Public Health Service requirements
15 and is formulated to contain HA of each of the following three influenza strains recommended for
16 the 2018-2019 influenza season: A/Michigan/45/2015 X-275 (H1N1), A/Singapore/INFIMH-16-
17 0019/2016 IVR-186 (H3N2), and B/Maryland/15/2016 BX-69A (a B/Colorado/6/2017-like virus,
18 B Victoria lineage). The amounts of HA and other ingredients per dose of vaccine are listed in
19 [Table 2](#).

1 **Table 2: Fluzone High-Dose Ingredients**

Ingredient	Quantity (per dose)
	Fluzone High-Dose 0.5 mL Dose
Active Substance: Split influenza virus, inactivated strains^a:	180 mcg HA total
A (H1N1)	60 mcg HA
A (H3N2)	60 mcg HA
B	60 mcg HA
Other:	
Sodium phosphate-buffered isotonic sodium chloride solution	QS ^b to appropriate volume
Formaldehyde	≤100 mcg
Octylphenol ethoxylate	≤250 mcg
Gelatin	None
Preservative	None

2 ^a per United States Public Health Service (USPHS) requirement

3 ^b Quantity Sufficient

4

5 **12 CLINICAL PHARMACOLOGY**

6 12.1 Mechanism of Action

7 Influenza illness and its complications follow infection with influenza viruses. Global surveillance
8 of influenza identifies yearly antigenic variants. For example, since 1977, antigenic variants of
9 influenza A (H1N1 and H3N2) viruses and influenza B viruses have been in global circulation.
10 Specific levels of hemagglutination inhibition (HI) antibody titer post-vaccination with
11 inactivated influenza virus vaccines have not been correlated with protection from influenza virus
12 infection. In some human studies, antibody titers $\geq 1:40$ have been associated with protection from
13 influenza illness in up to 50% of participants. (See references 3 and 4.)

1 Antibodies against one influenza virus type or subtype confer limited or no protection against
2 another. Furthermore, antibodies to one antigenic variant of influenza virus might not protect
3 against a new antigenic variant of the same type or subtype. Frequent development of antigenic
4 variants through antigenic drift is the virologic basis for seasonal epidemics and the reason for the
5 usual change of one or more new strains in each year's influenza vaccine. Therefore, influenza
6 vaccines are standardized to contain the hemagglutinins of influenza virus strains representing the
7 influenza viruses likely to be circulating in the US during the influenza season.

8

9 Annual vaccination with the current vaccine is recommended because immunity during the year
10 after vaccination declines and because circulating strains of influenza virus change from year to
11 year.

12

13 **13 NON-CLINICAL TOXICOLOGY**

14 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

15 Fluzone High-Dose has not been evaluated for carcinogenic or mutagenic potential or for
16 impairment of fertility.

17

18 **14 CLINICAL STUDIES**

19 14.1 Immunogenicity of Fluzone High-Dose in Adults 65 Years of Age and Older

20 Study 1 (NCT00391053) was a multi-center, double-blind pre-licensure trial conducted in the US
21 in which adults 65 years of age and older were randomized to receive either Fluzone High-Dose
22 or Fluzone (2006-2007 formulation). The study compared the safety and immunogenicity of
23 Fluzone High-Dose to those of Fluzone. For immunogenicity analyses, 2576 participants were

1 randomized to Fluzone High-Dose and 1275 participants were randomized to Fluzone. Females
2 accounted for 51.3% of participants in the Fluzone High-Dose group and 54.7% of participants in
3 the Fluzone group. In both groups, the mean age was 72.9 years (ranged from 65 through 97 years
4 in the Fluzone High-Dose group and 65 through 94 years in the Fluzone group); 35% of
5 participants in the Fluzone High-Dose group and 36% of participants in the Fluzone group were
6 75 years of age or older. Most participants in the Fluzone High-Dose and Fluzone groups,
7 respectively, were White (91.7% and 92.9%), followed by Hispanic (4.8% and 3.7%), and Black
8 (2.7% and 2.7%).

9
10 The primary endpoints of the study were HI GMTs and seroconversion rates 28 days after
11 vaccination. Pre-specified statistical superiority criteria required that the lower limit (LL) of the 2-
12 sided 95% CI of the GMT ratio (Fluzone High-Dose/Fluzone) be greater than 1.50 for at least two
13 of the strains, and if one strain failed, non-inferiority of that strain must be demonstrated
14 ($LL > 0.67$), and that the lower limit of the 2-sided 95% CI of the seroconversion rate difference
15 (Fluzone High-Dose minus Fluzone) be greater than 10% for at least two of the strains, and if one
16 strain failed, non-inferiority of that strain must be demonstrated ($LL > -10\%$). As shown in [Table 3](#),
17 statistically superior HI GMTs and seroconversion rates after vaccination with Fluzone High-
18 Dose compared to Fluzone were demonstrated for influenza A subtypes, A (H1N1) and A
19 (H3N2), but not for influenza type B. For strain B, non-inferiority of Fluzone High-Dose
20 compared to Fluzone was demonstrated for both the HI GMTs and seroconversion rates.

1 **Table 3: Study 1^a: Post-Vaccination HI Antibody GMTs and Seroconversion Rates and**
 2 **Analyses of Superiority of Fluzone High-Dose Relative to Fluzone, Adults 65 Years of Age**
 3 **and Older**

Influenza Strain	GMT		GMT Ratio	Seroconversion % ^b		Difference	Met Both Pre-defined Superiority Criteria ^d
	Fluzone High-Dose N ^c =2542-2544	Fluzone N ^c =1252	Fluzone High-Dose over Fluzone (95% CI)	Fluzone High-Dose N ^c =2529-2531	Fluzone N ^c =1248-1249	Fluzone High-Dose minus Fluzone (95% CI)	
A (H1N1)	115.8	67.3	1.7 (1.6; 1.8)	48.6	23.1	25.4 (22.4; 28.5)	Yes
A (H3N2)	608.9	332.5	1.8 (1.7; 2.0)	69.1	50.7	18.4 (15.1; 21.7)	Yes
B	69.1	52.3	1.3 (1.2; 1.4)	41.8	29.9	11.8 (8.6; 15.0)	No

4 ^aNCT00391053

5 ^b Seroconversion: Paired samples with pre-vaccination HI titer <1:10 and post-vaccination (day 28) titer ≥1:40 or a
 6 minimum 4-fold increase for participants with pre-vaccination titer ≥1:10

7 ^c N is the number of vaccinated participants with available data for the immunologic endpoint listed

8 ^d Predefined superiority criterion for seroconversion: the lower limit of the two-sided 95% CI of the difference of the
 9 seroconversion rates (Fluzone High-Dose minus Fluzone) is >10%. Predefined superiority criterion for the GMT
 10 ratio: the lower limit of the 95% CI of the GMT ratio (Fluzone High-Dose divided by Fluzone) is >1.5
 11

12 14.2 Efficacy of Fluzone High-Dose in Adults 65 Years of Age and Older

13 Study 2 (NCT01427309) was a multi-center, double-blind post-licensure efficacy trial conducted
 14 in the US and Canada in which adults 65 years of age and older were randomized (1:1) to receive
 15 either Fluzone High-Dose or Fluzone. The study was conducted over two influenza seasons
 16 (2011-2012 and 2012-2013); 53% of participants enrolled in the first year of the study were re-
 17 enrolled and re-randomized in the second year. The per-protocol analysis set for efficacy
 18 assessments included 15,892 Fluzone High-Dose recipients and 15,911 Fluzone recipients. The

1 majority (67%) of participants in the per-protocol analysis set for efficacy had one or more high-
2 risk chronic comorbid conditions.

3

4 In the per-protocol analysis set, females accounted for 57.2% of participants in the Fluzone High-
5 Dose group and 56.1% of participants in the Fluzone group. In both groups, the median age was
6 72.2 years (range 65 through 100 years). Overall, most participants in the study were White
7 (95%); approximately 4% of study participants were Black, and approximately 6% reported
8 Hispanic ethnicity.

9

10 The primary endpoint of the study was the occurrence of laboratory-confirmed influenza (as
11 determined by culture or polymerase chain reaction) caused by any influenza viral type/subtype in
12 association with influenza-like illness (ILI), defined as the occurrence of at least one of the
13 following respiratory symptoms: sore throat, cough, sputum production, wheezing, or difficulty
14 breathing; concurrent with at least one of the following systemic signs or symptoms: temperature
15 >99.0°F, chills, tiredness, headaches or myalgia. Participants were monitored for the occurrence
16 of a respiratory illness by both active and passive surveillance, starting 2 weeks post-vaccination
17 for approximately 7 months. After an episode of respiratory illness, nasopharyngeal swab
18 samples were collected for analysis; attack rates and vaccine efficacy were calculated (see [Table](#)
19 [4](#)).

1 **Table 4: Study 2^a: Relative Efficacy Against Laboratory-Confirmed Influenza^b Regardless**
 2 **of Similarity to the Vaccine Components, Associated with Influenza-Like Illness^c, Adults 65**
 3 **Years of Age and Older**

	Fluzone High-Dose N^d=15,892 n^e (%)	Fluzone N^d=15,911 n^e (%)	Relative Efficacy % (95% CI)
Any type/subtype^f	227 (1.43)	300 (1.89)	24.2 (9.7; 36.5) ^g
Influenza A	190 (1.20)	249 (1.56)	23.6 (7.4; 37.1)
A (H1N1)	8 (0.05)	9 (0.06)	11.0 (-159.9; 70.1)
A (H3N2)	171 (1.08)	222 (1.40)	22.9 (5.4; 37.2)
Influenza B^h	37 (0.23)	51 (0.32)	27.4 (-13.1; 53.8)

4 ^aNCT01427309

5 ^bLaboratory-confirmed: culture- or polymerase-chain-reaction-confirmed

6 ^cOccurrence of at least one of the following respiratory symptoms: sore throat, cough, sputum production, wheezing,
 7 or difficulty breathing; concurrent with at least one of the following systemic signs or symptoms: temperature
 8 >99.0°F, chills, tiredness, headaches or myalgia

9 ^dN is the number of vaccinated participants in the per-protocol analysis set for efficacy assessments

10 ^en is the number of participants with protocol-defined influenza-like illness with laboratory confirmation

11 ^fPrimary endpoint

12 ^gThe pre-specified statistical superiority criterion for the primary endpoint (lower limit of the 2-sided 95% CI of the
 13 vaccine efficacy of Fluzone High-Dose relative to Fluzone > 9.1%) was met.

14 ^hIn the first year of the study the influenza B component of the vaccine and the majority of influenza B cases were of
 15 the Victoria lineage; in the second year the influenza B component of the vaccine and the majority of influenza B
 16 cases were of the Yamagata lineage

17
 18 A secondary endpoint of the study was the occurrence of culture-confirmed influenza caused by
 19 viral types/subtypes antigenically similar to those contained in the respective annual vaccine
 20 formulations in association with a modified CDC-defined ILI, defined as the occurrence of a
 21 temperature >99.0°F (>37.2°C) with cough or sore throat. The efficacy of Fluzone High-Dose
 22 relative to Fluzone for this endpoint was 51.1% (95% CI: 16.8; 72.0).

23

1 **15 REFERENCES**

2

3 1 Lasky T, Terracciano GJ, Magder L, et al. The Guillain-Barré syndrome and the 1992-1993
4 and 1993-1994 influenza vaccines. *N Engl J Med* 1998;339:1797-802.

5 2 Baxter, R, et al. Lack of Association of Guillain-Barré Syndrome with Vaccinations. *Clin
6 Infect Dis* 2013;57(2):197-204.

7 3 Hannoun C, Megas F, Piercy J. Immunogenicity and protective efficacy of influenza
8 vaccination. *Virus Res* 2004;103:133-138.

9 4 Hobson D, Curry RL, Beare AS, Ward-Gardner A. The role of serum haemagglutination-
10 inhibiting antibody in protection against challenge infection with influenza A2 and B
11 viruses. *J Hyg Camb* 1972;70:767-777.

12

16 HOW SUPPLIED/STORAGE AND HANDLING

16.1 How Supplied

Single-dose, prefilled syringe, without needle, 0.5 mL (NDC 49281-403-88) (not made with natural rubber latex). Supplied as package of 10 (NDC 49281-403-65).

16.2 Storage and Handling

Store Fluzone High-Dose refrigerated at 2° to 8°C (35° to 46°F). DO NOT FREEZE. Discard if vaccine has been frozen.

Do not use after the expiration date shown on the label.

17 PATIENT COUNSELING INFORMATION

See FDA-approved patient labeling (Patient Information).

- Inform the patient or caregiver that Fluzone High-Dose contains killed viruses and cannot cause influenza.
- Among persons aged 65 years and older, Fluzone High-Dose stimulates the immune system to produce antibodies that help protect against influenza.
- Among persons aged 65 years and older, Fluzone High-Dose offers better protection against influenza as compared to Fluzone.
- Annual influenza vaccination is recommended.
- Instruct vaccine recipients and caregivers to report adverse reactions to their healthcare provider and/or to Vaccine Adverse Event Reporting System (VAERS).

Fluzone is a registered trademark of Sanofi Pasteur Inc.

Manufactured by:

Sanofi Pasteur Inc.

Swiftwater PA 18370 USA

7228

SANOFI PASTEUR 

Patient Information Sheet
Fluzone® High-Dose
Influenza Vaccine

Please read this information sheet before getting Fluzone High-Dose vaccine. This summary is not intended to take the place of talking with your healthcare provider. If you have questions or would like more information, please talk with your healthcare provider.

What is Fluzone High-Dose vaccine?

Fluzone High-Dose is a vaccine that helps protect against influenza illness (flu).

Fluzone High-Dose vaccine is for people 65 years of age and older.

Vaccination with Fluzone High-Dose vaccine may not protect all people who receive the vaccine.

Who should not get Fluzone High-Dose vaccine?

You should not get Fluzone High-Dose vaccine if you:

- ever had a severe allergic reaction to eggs or egg products.
- ever had a severe allergic reaction after getting any flu vaccine.
- are younger than 65 years of age.

Tell your healthcare provider if you have or have had:

- Guillain-Barré syndrome (severe muscle weakness) after getting a flu vaccine.
- problems with your immune system as the immune response may be diminished.

How is Fluzone High-Dose vaccine given?

Fluzone High-Dose vaccine is a shot given into the muscle of the arm.

What are the possible side effects of Fluzone High-Dose vaccine?

The most common side effects of Fluzone High-Dose vaccine are:

- pain, redness, and swelling where you got the shot
- muscle ache
- tiredness
- headache

These are not all of the possible side effects of Fluzone High-Dose vaccine. You can ask your healthcare provider for a list of other side effects that is available to healthcare professionals.

Call your healthcare provider for advice about any side effects that concern you. You may report side effects to the Vaccine Adverse Event Reporting System (VAERS) at 1-800-822-7967 or <http://vaers.hhs.gov>.

Why should I get Fluzone High-Dose vaccine instead of Fluzone vaccine?

An efficacy study in adults 65 years of age and older has demonstrated that Fluzone High-Dose vaccine offers better protection against influenza than Fluzone vaccine.

What are the ingredients in Fluzone High-Dose vaccine?

Fluzone High-Dose vaccine contains 3 killed flu virus strains.

Inactive ingredients include formaldehyde and octylphenol ethoxylate.

Manufactured by: Sanofi Pasteur Inc.

Swiftwater, PA 18370 USA

