Respiratory Season 2024 – 2025 Vaccine Recommendations for Pediatrics and Adolescents

Maine Immunization Program
Virtual Training
November 21, 2024

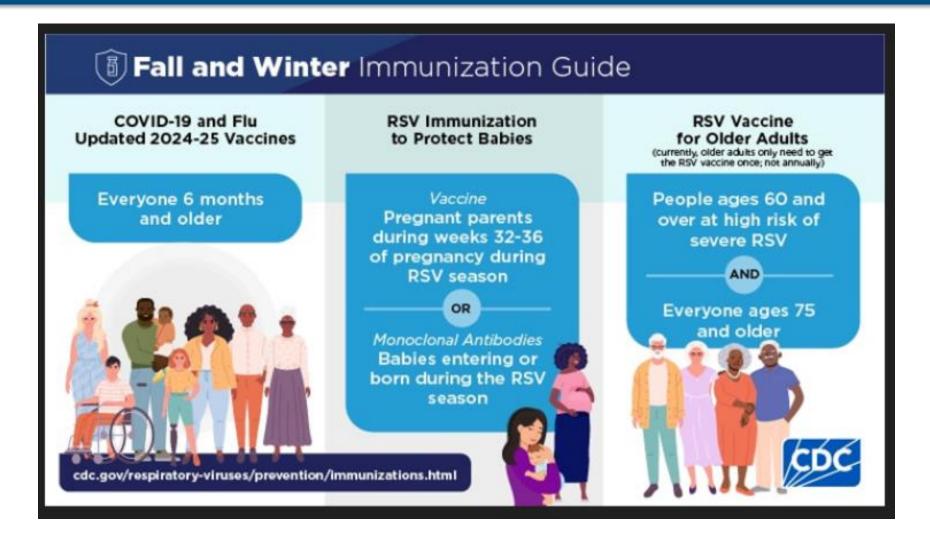


Objectives

2024 - 2025 Respiratory Season (COVID-19, FLU, RSV)

- COVID-19 Vaccine Presentations and Recommendations for 2024 2025
 - Moderna/SPIKEVAX
 - Pfizer/COMIRNATY
 - Novavax
- Influenza Vaccine Recommendations for Pediatric and Adolescent Age Groups
- Respiratory Syncytial Virus (RSV) Season 2024 2025 Timeline
 - Beyfortus (nirsevimab) recommendations for infants and young children
- Respiratory Vaccine Coadministration
- Storage and Beyond-Use Date Tracking Labels for Respiratory Vaccines
- Resources

Respiratory Season 2024 – 2025 COVID-19 – FLU - RSV



COVID -19 Vaccine Presentations 2024 – 2025

Pediatric and Adolescent Age Groups

Trade Name/ NDC#	MIP ordering recommendations for specific patient population	Presentations
Moderna/80777-0291- 80	6m - 11 years	Prefilled syringe
Moderna/80777-0110- 93*	12 years and older	
Novavax /80631-0107- 10*	12 years and older	Prefilled syringe
Pfizer/59267-4426-02	6m – 4 years	Multi-dose vial
Pfizer/59267-4438-02	5 – 11 years	Single dose vial
Pfizer/00069-2432-10*	12 years and older	Prefilled syringe

Moderna/SPIKEVAX COVID-19 Vaccine Summary 2024 - 2025

Presentations and Indications

- Moderna COVID-19 Vaccine 2024-2025 Formula is indicated for people 6 months through 11 years of age
- Moderna SPIKEVAX® is indicated for people 12 years and older

Storage Requirements

The following requirements apply to both Moderna COVID-19 Vaccine 2024-2025 Formula and SPIKEVAX®:



- Store frozen between -50°C to -15°C (-58°F to 5°F)
- After thawing, products may be stored refrigerated between 2°C to 8°C (36°F to 46°F) for up to <u>60 days</u> or up to the expiration date printed on the carton, whichever comes first
- After thawing, products may be stored between 8°C to 25°C (46°F to 77°F) for up to 12 hours
- Do not refreeze once thawed

Moderna and Spikevax COVID-19 Vaccine Shelf Life 2024 - 2025

Shelf Life

	Moderna COVID-19 Vaccine 2024-2025 Formula	SPIKEVAX®
Shelf Life	6 months through 11 years	12 and older
Frozen vaccine	10 months	10 months
Refrigerated vaccine	Up to 60 days or until the expiration date printed on the carton, whichever comes first	Up to 60 days or until the expiration date printed on the carton, whichever comes first
Room temperature vaccine (8°C to 25°C)	Up to 12 hours	Up to 12 hours

Pfizer COVID-19 Vaccine Summary 2024 - 2025

Presentations and Indications

- **COMIRNATY** (30 mcg/0.3mL glass pre-filled syringe presentation) is indicated for individuals 12 years of age and older.
- **Pfizer-BioNTech COVID-19 Vaccine** is indicated for individuals 5 through 11 years of age (via a 10mcg / 0.3mL single-dose vial presentation) and for individuals 6 months through 4 years of age (via a 3mcg / 0.3mL multi-dose vial (3 doses per vial) presentation).

Storage Requirements:

- Multi-dose and single-dose vials
 - The multi-dose and single-dose vials must be stored frozen at ultra-cold temperatures (between 90°C and -60°C). Once the vials are thawed, the multi-dose and single-dose vials must be stored refrigerated (between 2°C and 8°C).
- Glass single-dose pre-filled syringes
 - The glass single-dose pre-filled syringes for ages 12 and older must be stored refrigerated (between 2°C and 8°C); **DO NOT FREEZE**. The total time out of refrigeration (at temperatures between 8°C and 25°C) must not exceed 12 hours.

Diluent Type and Volume

- 1.1 mL of sterile 0.9% Sodium Chloride Injection, USP.
- Reconstitution is required only for the Pfizer-BioNTech COVID-19 Vaccine for individuals 6 months through 4 years of age in multi-dose vials.

Pfizer COVID-19 Vaccine Shelf Life 2024 - 2025

Shelf Life

Shelf Life	6 months through 4 years	5 years through 11 years	12 and older
Unopened, frozen vaccine	Once received, frozen vials may be sto freezer at -90°C to -60°C until the exp cartons. Do not store vials at -25°C to should not be refrozen.	piration date printed on the vials and	DO NOT FREEZE.
Unopened, refrigerated vaccine	Once received, frozen vials may be imprefrigerator [2°C to 8°C], thawed and sexceed the expiration date printed on cartons are received at 2°C to 8°C, the Check that the carton has been update expiry date, not to exceed the expirations.	stored for up to 10 weeks, not to the vial and cartons. If vials and ey should be stored at 2°C to 8°C. ed to reflect the 10-week refrigerated	The vaccine may be stored at 2°C to 8°C until the expiration date printed on the carton and syringe labels (not to exceed 8 months). DO NOT FREEZE.
Opened, refrigerated vaccine	If not previously thawed at 2°C to 8°C vials to thaw at room temperature [up Multi-dose or single dose vials may be 25°C] for a total of 12 hours prior to the multiple dose vials should be held bet should be discarded 12 hours after dil	e stored at room temperature [8°C to ne first puncture. After dilution, tween 2°C to 25°C. Multi-dose vials	After removing the tip cap and attaching an appropriate needle, the glass prefilled syringe should be used immediately. If it cannot be used immediately, it must be used within 4 hours. DO NOT FREEZE.
Opened, room temperature vaccine	If not previously thawed at 2°C to 8°C vials to thaw at room temperature [up Multi-dose or single dose vials may b 25°C] for a total of 12 hours prior to to multiple dose vials should be held be should be discarded 12 hours after discarded 12 hou	e stored at room temperature [8°C to he first puncture. After dilution, tween 2°C to 25°C. Multi-dose vials	After removing the tip cap and attaching an appropriate needle, the glass prefilled syringe should be used immediately. If it cannot be used immediately, it must be used within 4 hours. DO NOT FREEZE.

Novavax COVID-19 Vaccine Summary 2024 - 2025

Presentations and Indications

- Novavax COVID-19 Vaccine, Adjuvanted is indicated for individuals 12 years of age and older.
- Novavax's product will be presented in prefilled syringes, and there is one dosage strength (0.5mL) for all authorized uses.

Storage Requirements

• Must be stored refrigerated (between 2°C and 8°C).

Diluent Type and Volume

Ready to use. No dilution, mixing, thawing, or reconstitution required.

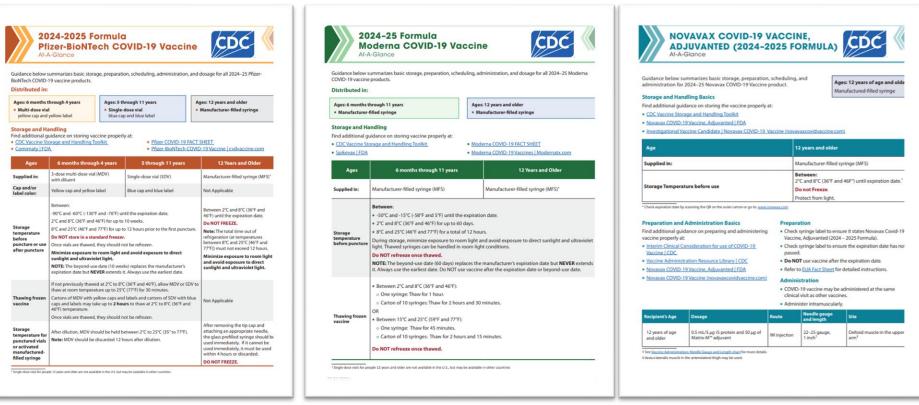
Novavax COVID-19 Vaccine Shelf Life 2024 - 2025

Shelf Life

Shelf Life	Novavax COVID-19 Vaccine, Adjuvanted (2024-2025 Formula)	
Unopened, frozen vaccine	N/A; Novavax's product is never frozen. DO NOT FREEZE.	
Unopened, refrigerated vaccine	3 months	
Opened, refrigerated vaccine	Prefilled syringe must be immediately used or discarded once opened. Discard each syringe after single use.	
Opened, room temperature vaccine	Prefilled syringe must be immediately used or discarded once opened. Discard each syringe after single use.	

2024 – 2025 COVID-19 Vaccine At-A-Glance

<u>Pfizer</u> <u>Moderna</u> <u>Novavax</u>



U.S. COVID-19 Vaccine Product Information | CDC

Updated Interim Clinical Considerations for Use of Covid-19 Vaccine

The Center for Disease Control and Prevention (CDC) has updated the <u>Interim Clinical</u> <u>Considerations for Use of COVID-19 Vaccines in the United States</u> with guidance for use of the 2024–2025 COVID-19 vaccines.

Summary of recent changes (last updated October 31, 2024):

- People ages 6 months and older **who are moderately or severely immunocompromised** are recommended to receive:
 - Unvaccinated: A multidose initial series with an age-appropriate COVID-19 vaccine and 1 dose 6 months (minimum interval 2 months) after completion of the initial series; may receive additional doses under shared clinical decision making
 - Previously completed the multidose initial series: 2 age-appropriate doses of 2024–2025 COVID-19 vaccine 6 months (minimum interval 2 months) apart; may receive additional doses under shared clinical decision making

Pediatric and Adolescent Influenza Recommendations 2024 - 2025

The CDC recommends that every person aged 6months and older get the flu vaccine by the end of October. It does take up to two weeks after vaccination to be protected from the flu.

All flu vaccine for the 2024-2025 season are Trivalent vs. the previous quadrivalent formulation. This change is due to one of last years strains no longer circulating.

When should vaccination start?

- ➤ If only 1 dose is needed for the season, vaccination should ideally be done during September or October. Though it is recommended vaccination continue throughout the season if influenza is circulating.
- ➤ Children 6 months through 8 years who require 2 doses should receive the first dose as soon as vaccine is available.



Available Influenza Vaccines 2024 - 2025

Trade Name/NDC#	MIP Ordering Recommendations for Specific Patient Population	Presentations
FluMist/66019-0311-10	Children 2- 18 years	0.2mL single dose sprayer, 10 pack
FluLaval/19515-0810-52	Children 6 months – 18 years	0.50mL prefilled syringe, 10 pack
Fluzone/49281-0641-15	Children 6 months – 18 years	0.50mL prefilled syringe, 10 pack
Flucelvax/70461-0654-03 *Recommended for those with egg allergy	Children 6 months – 18 years	0.50mL prefilled syringe, 10 pack
Fluarix/58160-0884-52	Children 6 months – 18 years	0.50mL prefilled syringe, 10 pack

All presentations of these flu vaccines must be refrigerated between 36°F and 46°F

FluLaval, Flucelvax and Flu-Mist need to be protected from light



FluMist – Protection Without The Injection

Flu protection without the injection!

- FluMist helps prevent flu in people aged 2-49. It's a nasal spray flu vaccine that starts working in the nose.
- FluMist continues to trigger your immune system to help build antibodies against influenza in 3 ways:



FluMist Dosing:

- 1 spray in each nostril = a single dose
- People 9 years of age and older need 1 dose of FluMist each year
- Children 2 through 8 years old may need 2 doses of FluMist depending on their history of previous influenza vaccination.

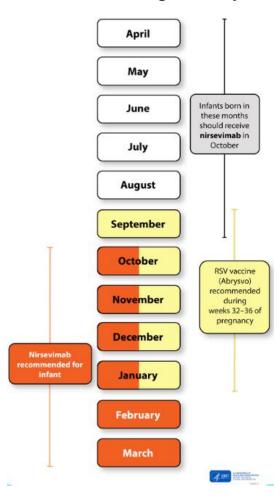
Respiratory Syncytial Virus (RSV) Season 2024 - 2025

Timing of Respiratory Syncytial Virus (RSV) immunization is very important in protecting infants and young children from getting very sick with RSV during the respiratory season.

Nirsevimab is a seasonal immunization that should be administered during the RSV season, October through the end of March.

- Infants born during the seasonal administration window (October 1 through March 31) should get nirsevimab within one week after birth, ideally during birth hospitalization.
 - Throughout March, any eligible infant or young child who has not yet received a recommended dose should receive nirsevimab at the earliest opportunity.
- For infants born *outside* of the seasonal administration window (April through September) and for young children who are at increased risk for severe RSV disease and entering their second RSV season, the optimal timing for nirsevimab administration is shortly before the RSV season begins (October or November).

Timing of RSV Immunizations for Infants and Pregnant People



Nirsevimab for Infants and Young Children 2024 - 2025

RSV Antibody Beyfortus (Nirsevimab):

Beyfortus (nirsevimab) is an injectable monoclonal antibody that provides immediate protection against RSV disease in infants and young children and last up to 5 months.

Nirsevimab is recommended for all babies younger than 8 months of age born to mothers who did not receive a maternal RSV vaccine (Pfizer's Abrysvo) during pregnancy.

Nirsevimab is also recommended for a small group of young children 8 through 19 months of age who are at increased risk for severe RSV. This nirsevimab dose should be given shortly before the child's second RSV season.

This group includes:

- Children who were born prematurely and have chronic lung disease
- Children with severe immunocompromise
- Children with severe cystic fibrosis
- American Indian and Alaska Native children
- ➤ Children ages 8 months and older who are not at increased risk of severe RSV disease should not receive nirsevimab.
- The CDC does not currently recommend nirsevimab for anyone aged 20 months or older.

 Maine Center for Disease Control and Prevention



RSV is the LEADING CAUSE

of infant hospitalization in the U.S.



RSV in Infants and Young Children

Nirsevimab Product Summary 2024 - 2025

Dosage and Administration

The recommended dosage of nirsevimab in neonates and infants born during or entering their first RSV season is based on body weight and is administered as one single intramuscular (IM) injection.

Age less than 8 months:

- 50 mg for infants weighing <5 kg [<11 lb]
- 100 mg for infants weighing ≥5 kg [≥11 lb]

Age 8 through 19 months:

• 200 mg, administered as two 100 mg injections

Recommended Dosage of Beyfortus in Neonates and Infants Born During or Entering Their First RSV Season ⁵		
Body Weight at Time of Dosing	Recommended Dosage	
Less than 5 kg	50 mg by IM injection	
5 kg and greater	100 mg by IM injection	



Nirsevimab Shelf Life

Shelf Life

Shelf Life	Beyfortus
Refrigerated product	Current shelf life is 24 months from the time the syringes are filled during manufacturing.
Room temperature product	Shelf life is 8 hours at room temperature.

Storage Requirements

Must be stored refrigerated (between 2°C and 8°C)

**Any remaining nirsevimab products from the 2024-2025 season should continue to be stored at appropriate temperature and used first at the start of the 2025-2026 RSV season



Infant RSV Prevention At-a-Glance

Respiratory Syncytial Virus vaccines (RSV) Options for Infant RSV Prevention At-a-Glance

Two immunization products are available for the prevention of severe Respiratory Syncytial Virus (RSV) disease in infants: maternal RSV vaccine and infant RSV monoclonal antibody. All infants should be protected against severe RSV disease through use of one of these products.

Either maternal RSV vaccination or use of RSV monoclonal antibody in the infant is recommended.

Administration of both products is not needed for most infants.

Maternal RSV vaccination: Use ONLY Pfizer RSVPreF vaccine (trade name Abrysvo™)

Maternal RSV Vaccine

RSVPref vaccine (trade name Abrysov^m) is recommended for people during weeks 32 through 36 of pregnancy, using seasonal administration, to prevent severe RSV disease in infants. In clinical trials, here was a small increase in the number of preterm birth events in vaccinated pregnant people after vaccination. It is not clear if this is a true safety problem related to RSV vaccine or if this occurred for reasons unrelated to vaccinathed to vaccination.

Infant RSV Monoclonal Antibody'

RSV monoclonal antibody (generic name nirsevimab, trade name Beyfortus™) is recommended for the following:

- \bullet Infants less than 8 months of age born during or entering their first RSV season if:
 - Mother did not receive maternal RSV vaccine or it is unknown if mother received RSV vaccine
 - Infant was born less than 14 days after maternal RSV vaccination

In rare circumstances, nirsevimab may be considered for infants born to mothers vaccinated 14 or more days before birth when the health care provider believes the potential incremental benefit is warranted. These situations include, but are not limited to:

- Infants born to mothers who might not have mounted an adequate immune response to vaccination (e.g., people with immunocompromising conditions)
- * Infants born to mothers who have conditions associated with reduced transplacental antibody transfer (e.g., people living
- with HIV infection)

 Infants who might have experienced loss of maternal antibodies, such as those who have undergone cardiopulmonary
- bypass of extracorporeal membrane oxygenation (ECMO)
- Infants with substantial increased risk for severe RSV disease (e.g., hemodynamically significant congenital heart disease, intensive care admission with the requirement for oxygen at hospital discharge)
- Some infants and children aged 8 through 19 months who are at increased risk of severe RSV disease entering their second RSV season.
 - * American Indian/Alaska Native children
 - Children with chronic lung disease of prematurity who require medical support during the six months before the start of
 - Children with severe immunocompromise
 - * Children with severe cystic fibrosis

Note: A different monoclonal antibody, pain/rumab, is used in children under 24 months of age with certain conditions that place them at high risk for severe RSV disease. Please are <u>ABP audicines for pain/rumab</u>, AAP has published considerations on the use of intervinab and pain/rumab. https://publications.asc.org/indipode/inspread/82339; Ordering with 24349. Ordering are same RSV season.

From time of maternal vaccination, at least 14 days are needed for the development and transplacental transfer of maternal antibodies to protect the infar

Clinical Considerations for Use of Maternal RSV Vaccine or Infant RSV Monoclonal Antibody

(Administration of both products is not needed for most infants)

Product	Maternal RSV Vaccine	RSV Monoclonal Antibody
Description	RSVPreF vaccine Trade name: Abrysvo**	Generic name nirsevimab Trade name: Beyfortus™
Immunity	Mother – Active immunity Infant – Passive immunity	Passive immunity
Duration of Protection	Approximately 3 to 6 months for infant	Approximately 5 months or more
How Supplied	A kit that includes a val of lyophilized antigen component, a prefilled syringe containing sterile water diluent, and a vial adapter. The lyophilized antigen component is reconstituted with the sterile water diluent to form a single dose.	Single dose pre-filled syringe with a purple (for 50 mg dosage) or light blue (for 100 mg dosage) plunger rod. No reconstitution needed.
Recommended Dosage	0.5 mL Currently recommended for administration as a single dose. It is not yet known whether additional doses might be needed in later pregnancies.	Age less than 8 months • Less than 5 kg: 50 mg (0.5mL) • 5 kg and greater: 100 mg (ImL) Age 8 through 19 months • 200 mg (administered as two IM injections)
Number of Doses	One	One ⁵
How Administered	IM injection	IM injection
Coadministration	Can be administered without regard to timing of other routine immunizations, including simultaneous administration	Can be administered without regard to timing of other routine immunizations, including simultaneous administration
Gestation or Age for Immunization	32 through 36 weeks	Less than age 8 months depending on mother's RSV vaccination status Ages 8 through 19 months if at increased risk for severe RSV disease.*
When to Administer (Seasonality)	Beginning of September through end of January in most of the continental United States.	Beginning of October through end of March in most of the continental United States.
	In jurisdictions with RSV seasonality that differs from most of the continental United States, including Alaska, southern Florida, Guam, Hawali, Puerto Rico, U.S. affiliation, Pecific Islands, and U.S. Wigni Islands, health-are providers should follow state, local, or territorial guidance on timing of maternal RSV vaccination.	In jurisdictions with BSV seasonality that differs from most of the continental United States, including Alaska, southern Florida, Guarn, Hawali, Puerto Rico, US, diffusited Pacific Lainda, and US. Virgin Islands, health-care providers should follow state, local, or territorial guidance on timing of nirsevimab administration.
Contraindications (Product Should Not Be Administered)	History of severe allergic reaction (e.g., anaphylaxis) to any component of the maternal RSV vaccine	History of severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of nirsevimab

Clinical Considerations for Use of Maternal RSV Vaccine or Infant RSV Monoclonal Antibody

(Administration of both products is not needed for most infants)

Product	Maternal RSV Vaccine	RSV Monoclonal Antibody
Precautions (Administration Should Typically Be Deferred)	The presence of a moderate or severe acute illness, with or without a fever.	The presence of a moderate or severe acute illness, with or without a fever.
Safety	Local and systemic reactions in clinical trist, the most common reactions after maternal RSV vaccine in pregnant people were pain at the injection site, headache, muscle pain, and nausea. Severe allergic reactions As with any medicine or vaccine, there is a remote chance of RSV vaccine causing a severe allergic reaction. Preterm birth In clinical trists, among people who were vaccinated during weeks 24 through 36 weeks of pregnancy, more preterm births were reported among maternal RSV vaccine recipients. This difference was not statistically different. Available data are insufficient to establish or exclude a causal relationship between preterm birth and maternal RSV vaccine. PSA sproved the vaccine RSV vaccine, PSA approved the vaccine for use during weeks 32 through 36 of pregnancy. The vaccine studies did not include people who already had higher risk of preterm birth. Hypertensive disorders of pregnancy (including percelampsis) occurred in 18 MS of pregnancy although not common, in the clinical trisk, hypertensive disorders of pregnancy (including percelampsis) occurred in 18 MS of pregnant people who received the RSV vaccine compared to 14Ms of pregnant people who received a pliacebo.	Local and systemic reactions in clinical trisk, the most common adverse events after nissevimab were rash and injection-site reactions, each occurring in 1% of infants and young children. Sewere allergic reactions. As with any medicine or vaccine, then is a remote chance of nirewimab causing a severe allergic reaction. Serious adverse event The incidence of senious adverse events was not increased in the nirsewimab continuous adverse events was not increased in the nirsewimab arm compared with that in the placebo arm. No senious allergis reactions or immune complexe diseases were reported in the clinical trisk.

IChiden B-10 months who are at increased risk of severe RSV disease (American Indian and Alaska Native children, children who are severely immunocompromised, children with capits (force)s with severe disease, and children with severe disease, and children with children with severe disease, and children with children with severe with sev

BOne dose for each RSV season except for children undergoing cardiac surgery with cardiopulmonary by where an additional dose is recommended as soon as the child is stable after surgery. See <u>label (fide.gov)</u>.



Infant RSV Prevention At-A-Glance | CDC

Respiratory Vaccine Coadministration

Getting COVID-19, flu, and RSV vaccines at the same time.

Flu, COVID-19, and RSV vaccines may be given at the same visit. For eligible patients, this means that if you're only able to make one trip to get your fall and winter vaccines, you can get all of those vaccines at the same visit. Talk with your health care provider about this option. If you prefer to receive each vaccine at a separate visit, there is no minimum waiting period between vaccines. It is important to make sure you are up to date and protected for this season. Talk with a healthcare provider or pharmacist if you have questions about these vaccines.

Nirsevimab and routine childhood vaccines **can be administered** during the same visit. No interval between nirsevimab and live vaccines (such as measles, mumps, and rubella [MMR] and varicella) is necessary.

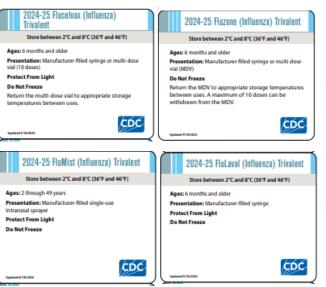
Getting more than one vaccine at the same visit.

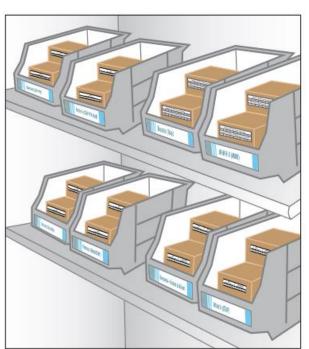
Vaccines given with a needle at the same visit should be given at separate places on the body (at least one inch apart). Adults and older children can get them in the same arm at least an inch apart, or they can get them in different arms. Young children can get them in the same thigh at least an inch apart, or they can get them in different thighs.



Vaccine Labels

Storage and Beyond-Use Date Tracking Labels







Vaccine Labels: Storage and Beyond-Use Date Tracking







CDC

CDC

CDC

Resources

COVID-19 Vaccine:

- CDC Recommends Updated COVID-19 Vaccine for Fall/Winter Virus Season | CDC Online Newsroom | CDC
- 2024–2025 COVID-19 Vaccine Immunization Schedule for People 6 Months of Age and Older
- Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC
- Pfizer COVID-19 Vaccine Summary | Vaccines & Immunizations | CDC
- Moderna COVID-19 Vaccine Summary | Vaccines & Immunizations | CDC
- Immunization and Vaccine Product Summaries | Vaccines & Immunizations | CDC

Influenza Vaccine:

- Who Needs a Flu Vaccine | CDC
- Preventing Seasonal Flu | Influenza (Flu) | CDC
- Seasonal Flu Vaccine Basics | Influenza (Flu) | CDC
- Influenza: Questions and Answers

RSV - Nirsevimab:

- RSV Immunization Guidance for Infants and Young Children | RSV | CDC
- Nirsevimab Frequently Asked Questions
- Immunizations to Protect Infants | RSV | CDC

Immunization Resources:

- Immunization | Maine CDC | DHHS
- Vaccine Labels: Storage and Beyond-Use Date Tracking

Questions?

Amanda Luciano Health Program Manager

Amanda.Luciano@maine.gov

207-287-9930



<u>ImmunizeME.org</u>