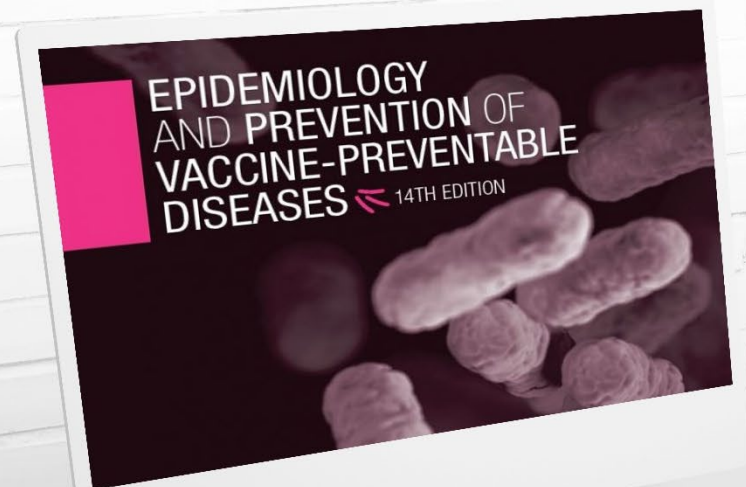


COVID-19 Vaccines

Pink Book Web-on-Demand Series

JoEllen Wolicki, BSN, RN
Nurse Educator
Immunization Services Division





Learning Objectives

- Describe the fundamental principles of the immune response.
- Describe immunization best practices.
- Describe an emerging immunization issue.
- For each vaccine-preventable disease, identify those for whom routine immunization is recommended.
- For each vaccine-preventable disease, describe characteristics of the vaccine used to prevent the disease.
- Locate current immunization resources to increase knowledge of team's role in program implementation for improved team performance.

Continuing Education Information

- To claim continuing education (CE) for this course, please follow the steps below by July 1, 2026.
- Search and register for course **WD4810-082724** in **CDC TRAIN**.
- Pass the post-assessment at 80%.
- Complete the evaluation.
- Visit “Your Learning” to access your certificates and transcript.
- If you have any questions, contact **CDC TRAIN** at train@cdc.gov or CE Coordinator, Melissa Barnett, at MBarnett2@cdc.gov



Disclosure Statements

- **In compliance with continuing education requirements, all planners and presenters must disclose all financial relationships, in any amount, with ineligible companies during the previous 24 months as well as any use of unlabeled product(s) or products under investigational use.**
- **CDC, our planners, and content experts, wish to disclose they have no financial relationship(s) with ineligible companies whose primary business is producing, marketing, selling, reselling, or distributing healthcare products used by or on patients.**
- **Content will not include any discussion of the unlabeled use of a product or a product under investigational use.**
- **CDC did not accept financial or in-kind support from any ineligible company for this continuing education activity.**

Disclosure Statements

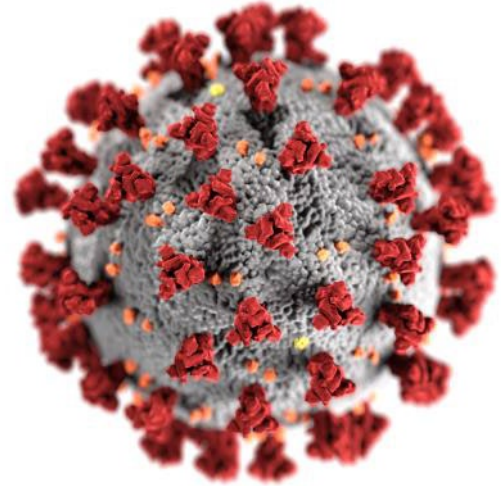
- **The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.**

1

COVID-19 Disease

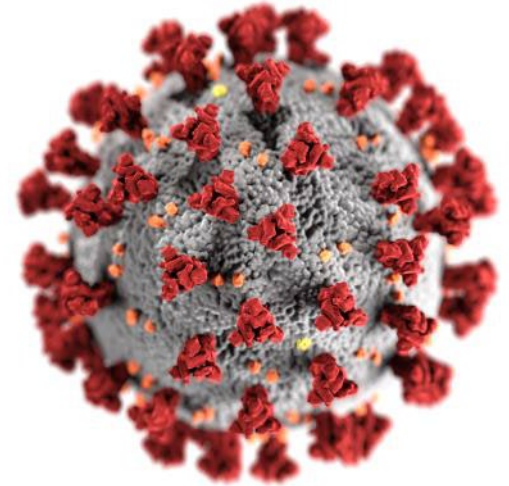
COVID-19

- COVID-19 (coronavirus disease 2019) is a disease caused by the SARS-CoV-2 virus.
- As of June 1, 2024, over 1.2 million people have died from COVID-19 in the U.S.



About SARS-CoV-2

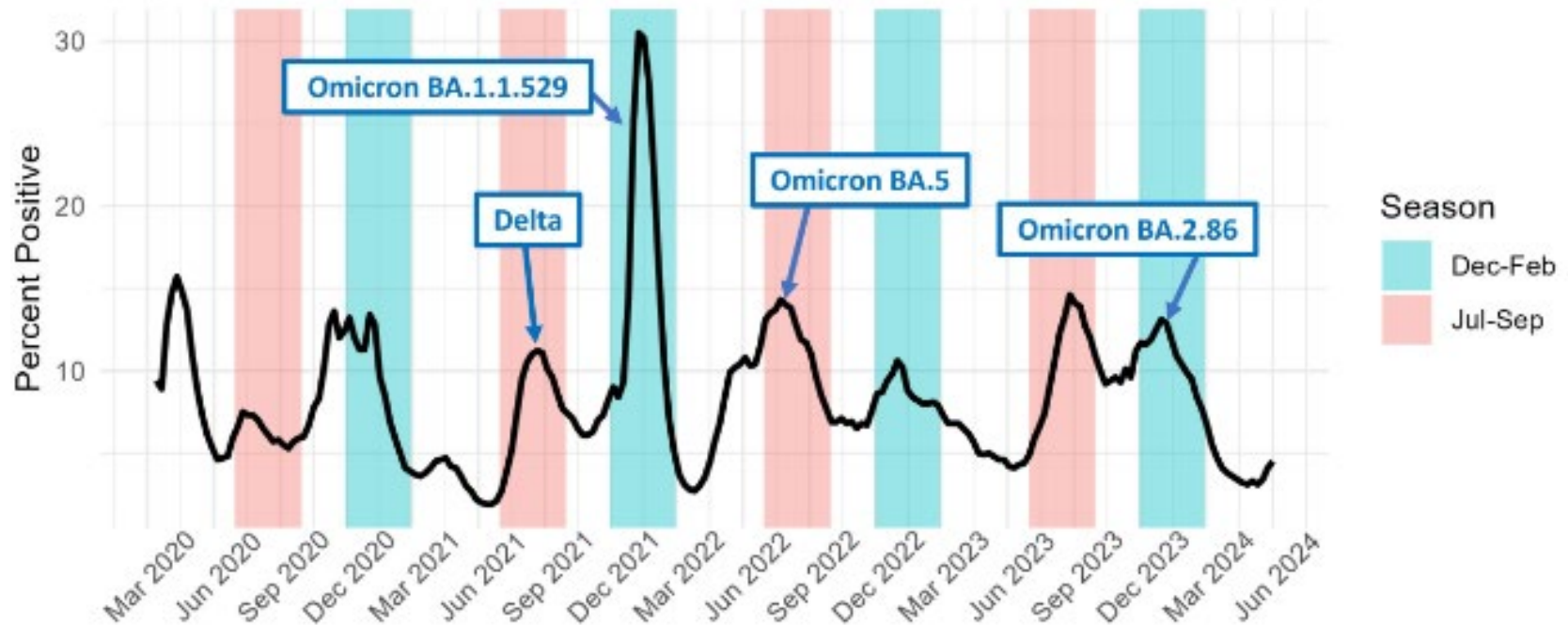
- **Viruses are constantly changing, including the virus that causes COVID-19.**
- **These changes occur over time and can lead to the emergence of variants that may have new characteristics.**
- **In the United States, CDC uses genomic surveillance to track emerging variants that cause COVID-19.**



SARS-CoV-2 Transmission

- **SARS-CoV-2 can be very contagious and can spread quickly.**
- **People infected with SARS-CoV-2 can transmit the virus if they are vaccinated or unvaccinated, asymptomatic, pre-symptomatic, or symptomatic.**
- **Peak transmissibility occurs from prior to symptom onset to a few days after, but most people can shed virus up to 10 days following infection.**

Seasonality: SARS-CoV-2 Circulates Year-Round*



*Percentage of positive SARS-CoV-2 tests reported to the National Respiratory and Enteric Virus Surveillance System (NREVSS)

COVID-19 Clinical Presentation (1)

- **COVID-19 can vary from asymptomatic infection to critical illness.**
- **Symptoms can be difficult to differentiate from other viral respiratory illnesses such as influenza and respiratory syncytial virus (RSV).**
- **Symptoms and severity can change during illness.**



COVID-19 Clinical Presentation (2)

- **Because symptoms may progress quickly, close follow-up is needed, especially for:**
 - Older adults
 - People with disabilities
 - People with immunocompromising conditions
 - People with certain underlying medical conditions

[Clinical Presentation | COVID-19 | CDC](#)

[Underlying Conditions and the Higher Risk for Severe COVID-19 | COVID-19 | CDC](#)

[Respiratory Viruses and People with Weakened Immune Systems | Respiratory Illnesses | CDC](#)



COVID-19 Clinical Presentation (3)

- **Infected people can transmit SARS-CoV-2 before symptom onset.**
- **Incubation periods may differ by SARS-CoV-2 variant.**



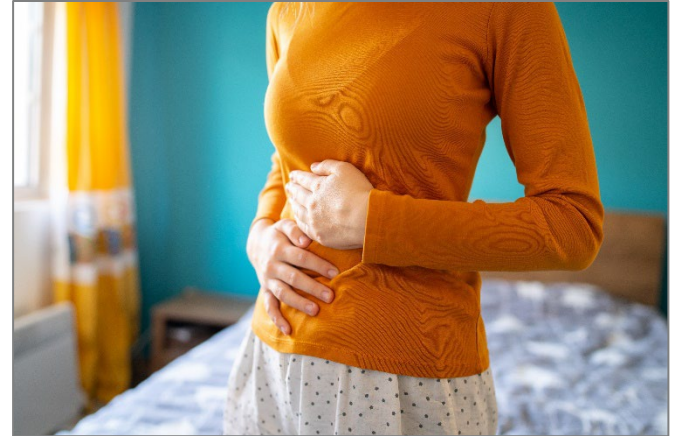
COVID-19 Signs and Symptoms (1)

- **Common COVID-19 symptoms:**
 - Fever or chills
 - Cough
 - Shortness of breath or difficulty breathing
 - Fatigue
 - Headache
 - Muscle or body aches



COVID-19 Signs and Symptoms (2)

- **Some people have gastrointestinal symptoms:**
 - Nausea
 - Vomiting
 - Diarrhea
- **Several studies report ocular symptoms:**
 - Redness
 - Tearing
 - Dry eye or foreign body sensation
 - Discharge or increased secretions
 - Itching or pain



Risk Factors for Severe COVID-19

- **Age is the strongest risk factor for severe COVID-19.**
- **Being unvaccinated or not being up-to-date on COVID-19 vaccinations.**
- **Presence of underlying medical conditions also increases the risk for severe COVID-19.**

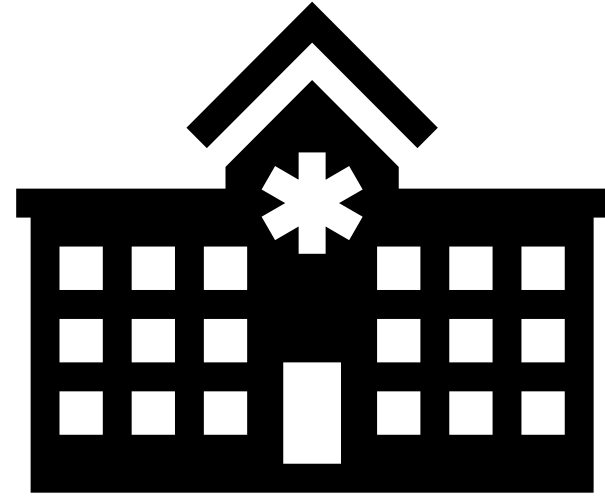


Conditions That Can Increase Risk for Severe COVID-19

- Asthma
- Cancer
- Cerebrovascular disease
- Chronic kidney disease
- Chronic lung disease
- Chronic liver disease
- Cystic fibrosis
- Dementia
- Diabetes
- Disabilities
- Heart condition
- HIV Infection
- Mental health conditions
- Neurologic conditions
- Obesity
- Physical inactivity
- Pregnancy
- Primary immunodeficiencies
- Solid organ transplant
- Smoking—current or former
- Tuberculosis
- Use of corticosteroids or other immunosuppressive medications

Complications of Severe COVID-19

- Hypoxemic respiratory failure/acute respiratory distress syndrome
- Sepsis and septic shock
- Elevation in inflammatory cytokines
- Complications from prolonged hospitalization, including:
 - Thromboembolism
 - Hospital-acquired pneumonia
 - Hospital-acquired bacterial and fungal infections



Long COVID

- **Chronic condition that occurs after SARS-CoV-2 infection and is present for at least 3 months.**
- **Includes a wide range of symptoms and conditions that may cause disability.**
- **Anyone infected with SARS-CoV-2 can experience Long COVID, including children.**
- **COVID-19 vaccination is best available tool to prevent Long COVID.**

2

COVID-19 Vaccines

2024–25 COVID-19 Vaccines

Type of Vaccine	Name
mRNA	Moderna COVID-19 Vaccine/Spikevax
	Pfizer-BioNTech COVID-19 Vaccine/Comirnaty
Protein subunit	Novavax COVID-19 Vaccine

Understanding the virus and vaccine

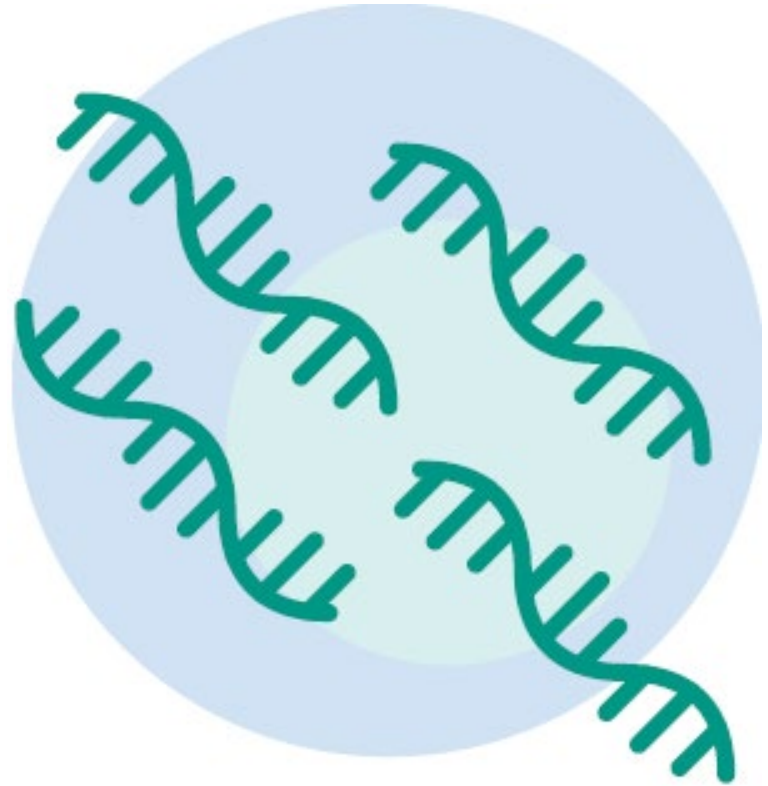




mRNA Vaccines:

**Moderna and Pfizer-BioNTech
COVID-19 Vaccines are mRNA
vaccines.**

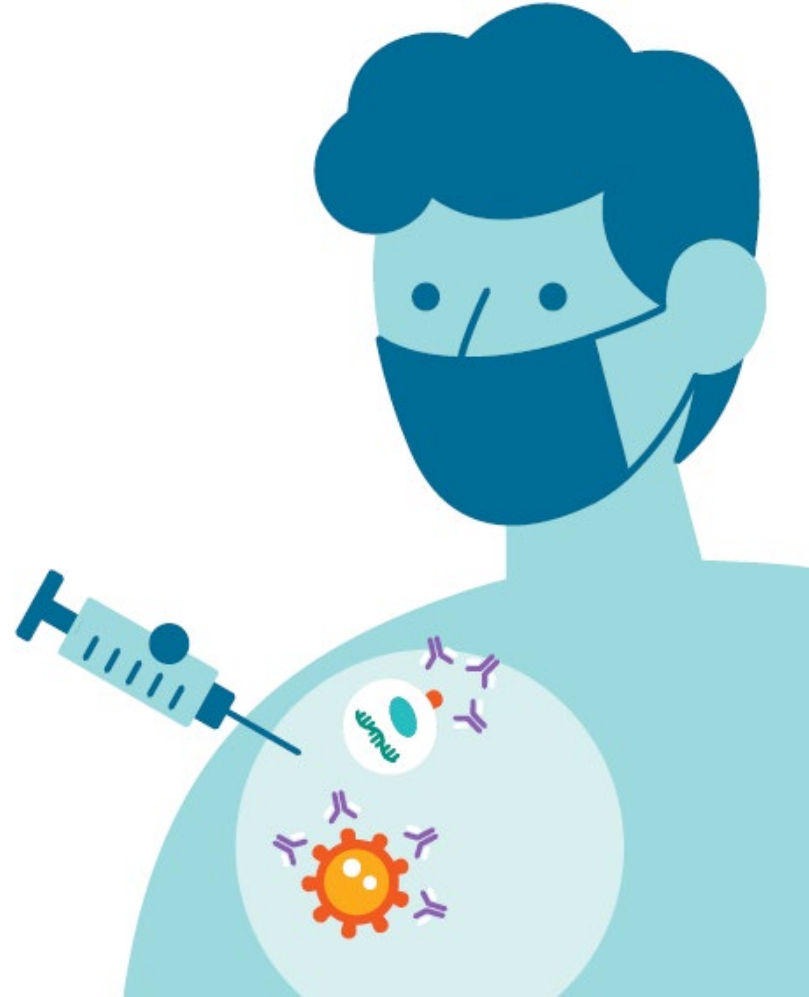
What is mRNA?



What is in the vaccine?



How does an mRNA vaccine work?

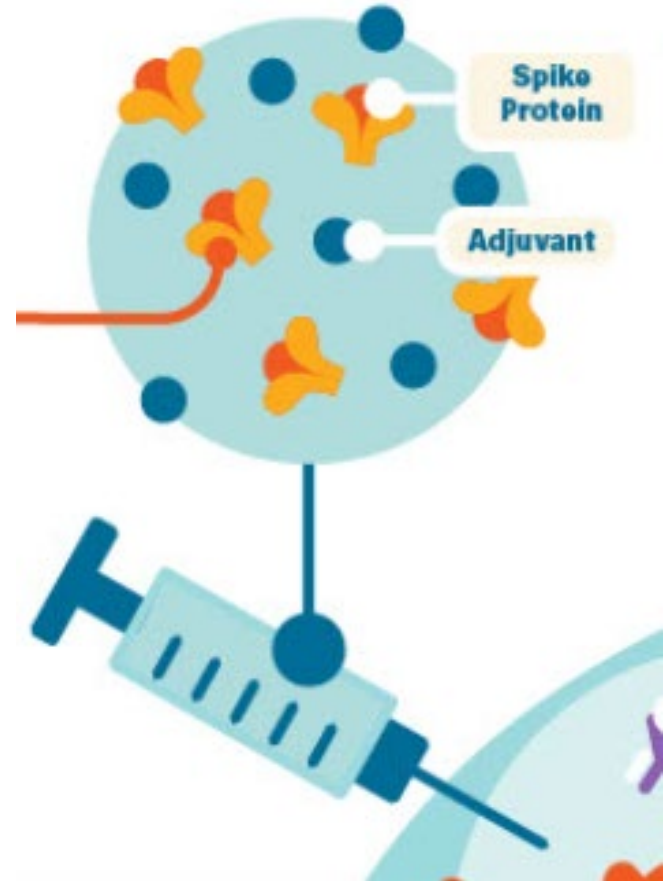




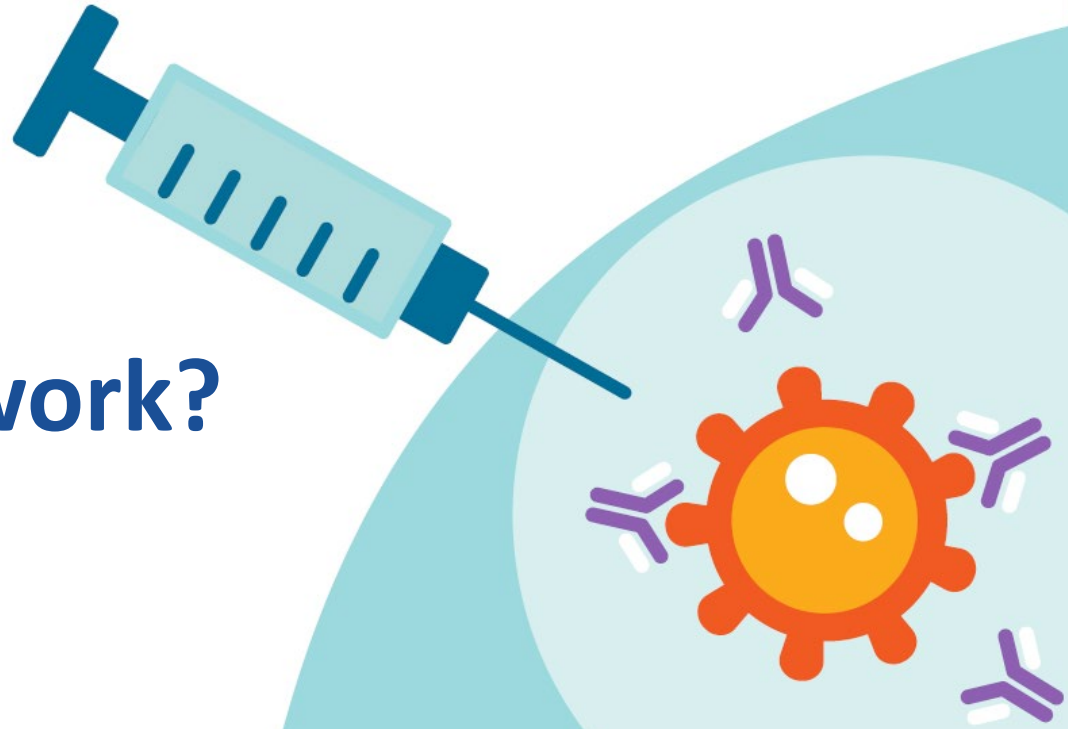
Protein Subunit Vaccine:

Novavax COVID-19 Vaccine is a protein subunit vaccine.

What is in the vaccine?



How does it work?



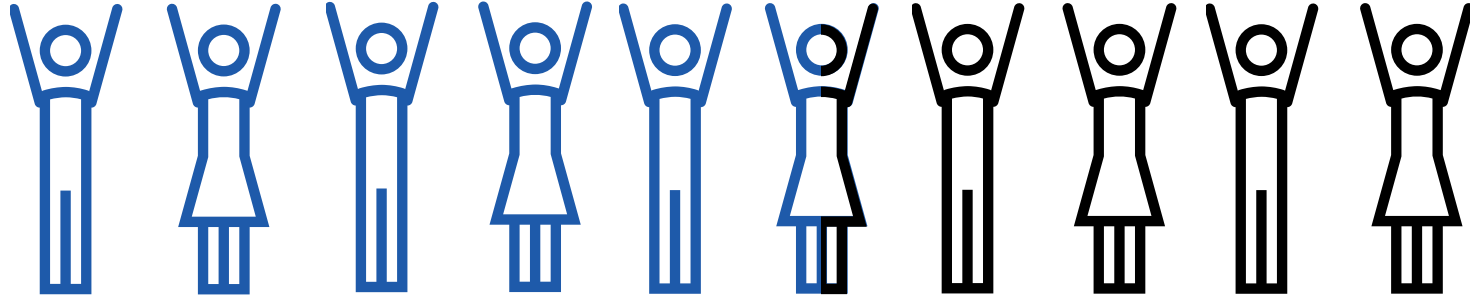
What COVID-19 Vaccination Can Do

- **Help bodies develop immunity to SARS-CoV-2 without having to get the illness**
- **Prevent serious illness, hospitalizations, long term health outcomes, and death**
- **Cause a more predictable immune response than an infection with SARS-CoV-2**

COVID-19 Vaccines Do Not

- COVID-19 vaccines recommended for use in the United States do not
 - Shed or release their components
 - Cause new variants
 - Change or interact with DNA in any way
- **Do not contain *any* live virus, so it cannot give anyone COVID-19**

COVID-19 Vaccine Effectiveness



Adults who received 2023–24 vaccine were 54% less likely to have symptomatic illness than those who didn't.*

*Among 9,222 eligible adults aged 18 years and older who receive an updated vaccine compared with those who had not – Increasing Community Access to Testing (ICATT) program, September 21, 2023 – January 14, 2024.

[Early Estimates of Updated 2023–2024 \(Monovalent XBB.1.5\) COVID-19 Vaccine Effectiveness Against Symptomatic SARS-CoV-2 Infection Attributable to Co-Circulating Omicron Variants Among Immunocompetent Adults — Increasing Community Access to Testing Program, United States, September 2023–January 2024 | MMWR \(cdc.gov\)](#)
[COVID-19 Vaccine Effectiveness | COVID-19 | CDC](#)

2023–24 COVID-19 vaccine provided increased protection against hospitalizations for adults 18 years of age and older with immunocompromising conditions compared with those who did not receive the updated vaccine.*



*Interim Effectiveness of Updated 2023–2024 (Monovalent XBB.1.5) COVID-19 Vaccines Against COVID-19–Associated Hospitalization Among Adults Aged ≥ 18 Years with Immunocompromising Conditions — VISION Network, September 2023–February 2024 | MMWR (cdc.gov)



COVID-19 Vaccine Products

2024–25 COVID-19 Vaccines: Novavax

12 Years and Older	
Dosage:	5 µg rS protein and 50 µg Matrix-M adjuvant
Injection volume:	0.5 mL
How supplied:	Manufacturer-filled syringe

2024–25 Moderna/Spikevax COVID-19 Vaccine

	6 Months Through 11 Years	12 Years and Older
Dosage:	25 µg	50 µg
Injection volume:	0.25 mL	0.5 mL
How supplied:	Manufacturer-filled syringe	Manufacturer-filled syringe

2024–25 Pfizer-BioNTech/Comirnaty COVID-19 Vaccine

	6 Months Through 4 Years	5 Through 11 Years	12 Years and Older
Dosage:	3 µg	10 µg	30 µg
Injection volume:	0.3 mL	0.3 mL	0.3 mL
How supplied:	3-dose multidose vial	Single-dose vial	Manufacturer-filled syringe
Dilution required:	Yes—1.1 mL	No	No

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

[Pfizer-BioNTech COVID-19 Vaccine | FDA](#)

[Package Insert and FDA Approved Patient Labeling - COMIRNATY](#)



Knowledge Check

My patient is 12 years of age and has never had a COVID-19 vaccination. What options are available?

- A. Novavax COVID-19 Vaccine
- B. Moderna COVID-19 Vaccine
- C. Pfizer-BioNTech COVID-19 Vaccine
- D. All of the above



Answer

My patient is 12 years of age and has never had a COVID-19 vaccination. What options are available?

- A. Novavax COVID-19 Vaccine
- B. Moderna COVID-19 Vaccine
- C. Pfizer-BioNTech COVID-19 Vaccine
- D. All of the above**



3

Vaccination Schedule

COVID-19 Vaccination Recommendations

Vaccination is recommended for everyone ages 6 months and older.



2024-2025 COVID-19 Immunization Schedule for People 6 Months of Age and Older

2024-2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

Table 2a. For people who **ARE** moderately or severely immunocompromised

2024-25 Moderna COVID-19 Vaccine
Vaccine type: mRNA

Current age is:	And the vaccine type is:	Unvaccinated	1 prev COVID-19 vaccine	2 prev COVID-19 vaccine	3 or more COVID-19 vaccine
6 months through 4 years*	2 prev COVID-19 vaccine	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) [†]	2 or more previous doses of any Moderna COVID-19 vaccine, NOT including at least 1 dose of 2024-25 vaccine [†]	2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 vaccine [†]	5 through 11 years [‡] Any number of previous doses of COVID-19 vaccine, NOT including at least 1 dose of 2024-25 vaccine
12 years and older	3 or more COVID-19 vaccine	Unvaccinated (0 doses)	Any number of previous doses of COVID-19 vaccine, NOT including at least 1 dose of 2024-25 vaccine [†]	Any number of previous doses of COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 vaccine [†]	12 years and older Any number of previous doses of COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 vaccine [†]

2024-2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

The following tables provide COVID-19 vaccination schedules based on age, health status, and product. For detailed guidance see [Interim Clinical Considerations for Use of COVID-19 Vaccines](#), CDC.

Table 1a. For people who are **NOT** moderately or severely immunocompromised[†]

2024-25 Moderna COVID-19 Vaccine
Vaccine type: mRNA | Do NOT use any previously available Moderna COVID-19 vaccine products.

Current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
Unvaccinated	Unvaccinated (0 doses)	Give 2 1-dose initial series. • Dose 1 now. • Dose 2 at least 4–8 weeks after Dose 1. [†]	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) intramuscular (IM) injection
6 months through 4 years*	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) [†]	Complete the series. Give: • Dose 2 at least 4–8 weeks after Dose 1. [†]	No further doses are indicated.
	2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 vaccine [†]	Give 1 dose at least 8 weeks after the last dose.	
5 through 11 years [‡]	Any number of previous doses of COVID-19 vaccine, NOT including at least 1 dose of 2024-25 vaccine	Give 1 dose now.	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) intramuscular (IM) injection
	Any number of previous doses of COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 vaccine	No further doses are indicated.	
12 years and older	Unvaccinated (0 doses)	Give 1 dose now.	0.5 mL/50 µg in a manufacturer-filled syringe (MFS) intramuscular (IM) injection
	Any number of previous doses of COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 vaccine [†]	Give 1 dose at least 8 weeks after the last dose.	

2024-2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

Table 2b. For people who **ARE** moderately or severely immunocompromised

2024-25 Pfizer-BioNTech COVID-19 Vaccine
Vaccine type: mRNA | Do NOT use any previously available Pfizer-BioNTech COVID-19 vaccine products.

Current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
Unvaccinated	Unvaccinated (0 doses)	Give a 3-dose initial series. • Dose 1 now. • Dose 2 at least 3–8 weeks after Dose 1. [†] • Dose 3 at least 8 weeks after Dose 2. [†] Complete the below series. Give: • Dose 2 at least 3–8 weeks after Dose 1. [†] • Dose 3 at least 8 weeks after Dose 2. [†]	0.3 mL/7 µg from a yellow-capped multidose vial intramuscular (IM) injection
6 months through 4 years*	1 previous dose of any Pfizer-BioNTech COVID-19 Vaccine (Doses 1 and 2) [†]	Complete the series. Give: • Dose 3 at least 8 weeks after Dose 2. [†]	No further doses are indicated.
	2 or more previous doses of any Pfizer-BioNTech COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 COVID-19 vaccine [†]	Give 1 dose at least 8 weeks after the last dose.	
5 through 11 years [‡]	Unvaccinated (0 doses)	Give 1 dose now.	0.3 mL/7 µg from a blue-capped single-dose vial intramuscular (IM) injection
	Any number of previous doses of COVID-19 vaccine, NOT including at least 1 dose of 2024-25 COVID-19 vaccine	Give 1 dose at least 8 weeks after the last dose.	
12 years and older	Unvaccinated (0 doses)	Give 1 dose now.	0.3 mL/30 µg in a manufacturer-filled syringe (MFS)
	Any number of previous doses of COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 COVID-19 vaccine [†]	Give 1 dose at least 8 weeks after the last dose.	

2024-2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

The following tables provide COVID-19 vaccination schedules based on age, health status, and product. For detailed guidance see [Interim Clinical Considerations for Use of COVID-19 Vaccines](#), CDC.

Table 1b. For people who are **NOT** moderately or severely immunocompromised[†]

2024-25 Pfizer-BioNTech COVID-19 Vaccine
Vaccine type: mRNA | Do NOT use any previously available Pfizer-BioNTech COVID-19 vaccine products.

Current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
Unvaccinated	Unvaccinated (0 doses)	Give a 3-dose initial series. • Dose 1 now. • Dose 2 at least 3–8 weeks after Dose 1. [†] • Dose 3 at least 8 weeks after Dose 2. [†] Complete the below series. Give: • Dose 2 at least 3–8 weeks after Dose 1. [†] • Dose 3 at least 8 weeks after Dose 2. [†]	0.3 mL/7 µg from a yellow-capped multidose vial intramuscular (IM) injection
6 months through 4 years*	1 previous dose of any Pfizer-BioNTech COVID-19 Vaccine (Doses 1 and 2) [†]	Complete the series. Give: • Dose 3 at least 8 weeks after Dose 2. [†]	No further doses are indicated.
	2 or more previous doses of any Pfizer-BioNTech COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 COVID-19 vaccine [†]	Give 1 dose at least 8 weeks after the last dose.	
5 through 11 years [‡]	Unvaccinated (0 doses)	Give 1 dose now.	0.3 mL/7 µg from a blue-capped single-dose vial intramuscular (IM) injection
	Any number of previous doses of COVID-19 vaccine, NOT including at least 1 dose of 2024-25 COVID-19 vaccine	Give 1 dose at least 8 weeks after the last dose.	
12 years and older	Unvaccinated (0 doses)	Give 1 dose now.	0.3 mL/30 µg in a manufacturer-filled syringe (MFS)
	Any number of previous doses of COVID-19 vaccine, INCLUDING at least 1 dose of 2024-25 COVID-19 vaccine [†]	Give 1 dose at least 8 weeks after the last dose.	

2024-2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

Table 2c. For people who **ARE** moderately or severely immunocompromised

2024-25 Novavax COVID-19 Vaccine
Vaccine type: Protein subunit | Do NOT use any previously available Novavax COVID-19 vaccine products.

Current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
Unvaccinated	Unvaccinated (0 doses)	Give a 2-dose initial series. • Dose 1 now. • Dose 2 at least 3–8 weeks after Dose 1. [†]	0.5 mL/5 µg protein and 50 µg Matrix-M1 adjuvant in a manufacturer-filled syringe (MFS) intramuscular (IM) injection
12 years and older	1 previous dose of 2024-25 Novavax COVID-19 Vaccine (Dose 1)	Give Dose 2 at least 3–8 weeks after the last dose. [†]	No further doses are indicated.
	Any number of previous doses of COVID-19 vaccine, WITH at least 1 dose of 2024-25 vaccine [†]	Give 1 dose at least 8 weeks after the last dose.	

2024-2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

The following tables provide COVID-19 vaccination schedules based on age, health status, and product. For detailed guidance see [Interim Clinical Considerations for Use of COVID-19 Vaccines](#), CDC.

Table 1c. For people who are **NOT** moderately or severely immunocompromised[†]

2024-25 Novavax COVID-19 Vaccine
Vaccine type: Protein subunit | Do NOT use any previously available Novavax COVID-19 vaccine products.

Current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
Unvaccinated	Unvaccinated (0 doses)	Give a 2-dose initial series. • Dose 1 now. • Dose 2 at least 3–8 weeks after Dose 1. [†]	0.5 mL/5 µg protein and 50 µg Matrix-M1 adjuvant in a manufacturer-filled syringe (MFS) intramuscular (IM) injection
12 years and older	1 previous dose of 2024-25 Novavax COVID-19 Vaccine (Dose 1)	Give Dose 2 at least 3–8 weeks after the last dose. [†]	No further doses are indicated.
	Any number of previous doses of COVID-19 vaccine, WITH at least 1 dose of 2024-25 vaccine [†]	Give 1 dose at least 8 weeks after the last dose.	

2024–2025 COVID-19 Vaccine Immunization Schedule for People 6 Months of Age and Older



The following tables provide COVID-19 vaccination schedules based on age, health status, and product. For detailed guidance see [Interim Clinical Considerations for Use of COVID-19 Vaccines](#) | CDC.

Table 1a. For people who are **NOT** moderately or severely immunocompromised*

2024-25 Moderna COVID-19 Vaccine			
Vaccine type: mRNA Do NOT use any previously available Moderna COVID-19 vaccine products.			
If current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
6 months through 4 years [†]	Unvaccinated (0 doses)	Give a 2-dose initial series. • Dose 1 now. • Dose 2 at least 4–8 weeks after Dose 1. [‡]	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) Intramuscular (IM) injection
	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) [§]	Complete the series. Give: • Dose 2 at least 4–8 weeks after Dose 1. [‡]	
	2 or more previous doses of any Moderna COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine [§]	Give 1 dose at least 8 weeks after the last dose.	
5 through 11 years [†]	2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine [§]	No further doses are indicated.	
	Unvaccinated (0 doses)	Give 1 dose now.	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) Intramuscular (IM) injection
	Any number of previous doses of COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine	Give 1 dose at least 8 weeks after the last dose.	
12 years and older	Any number of previous doses of COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine	No further doses are indicated.	
	Unvaccinated (0 doses)	Give 1 dose now.	0.5 mL/50 µg in a manufacturer-filled syringe (MFS) Intramuscular (IM) injection
	Any number of previous doses of COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine	Give 1 dose at least 8 weeks after the last dose.	
12 years and older	Any number of previous doses of COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine**	No further doses are indicated.	

* People with a recent SARS-CoV-2 infection may consider delaying vaccination by 3 months from symptom onset or positive test (if infection was asymptomatic).
[†] Children 6 months through 4 years of age should receive the same vaccine product for all doses. In the following situations, a different age-appropriate COVID-19 vaccine product may be administered: the same vaccine is not available at the time of the clinic visit, the previous dose is unknown, the person would otherwise not receive a recommended dose, or the person starts but is unable to complete a vaccination series with the same vaccine due to a contraindication.
[‡] An 8-week interval between the first and second doses of Moderna COVID-19 Vaccine might be optimal for some people, as it might reduce the rare risk of myocarditis and pericarditis associated with COVID-19 vaccines.
[§] If mRNA vaccine is administered from different manufacturers, a 3-dose initial series should be followed:
 • Children who received Dose 1 from one manufacturer but will receive subsequent dose(s) from a different manufacturer, administer:
 • Dose 2 at least 4–8 weeks after Dose 1.
 • Dose 3 at least 8 weeks after Dose 2.
 • Children who received 2 doses of vaccine from different manufacturers, administer Dose 3 at least 8 weeks after Dose 2.
[¶] CDC recommends that people receive the age-appropriate vaccine product and dosage based on their age on the day of vaccination. Children who turn 5 years of age during the initial series, administer 1 dose at least 4–8 weeks after Dose 1. There is no dosage change. No further doses are indicated.
 ** If the immunization history is only 1 dose of 2024–25 Novavax COVID-19 vaccine, see Table 1c for detailed guidance.

Table 1a. For people who are **NOT** moderately or severely immunocompromised*

2024–25 Moderna COVID-19 Vaccine

Vaccine type: mRNA | Do NOT use any previously available Moderna COVID-19 vaccine products.

If current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
6 months through 4 years[†]	Unvaccinated (0 doses)	Give a 2-dose initial series. <ul style="list-style-type: none"> • Dose 1 now. • Dose 2 at least 4–8 weeks after Dose 1.[‡] 	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) Intramuscular (IM) injection
	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) [§]	Complete the series. Give: <ul style="list-style-type: none"> • Dose 2 at least 4–8 weeks after Dose 1.[‡] 	
	2 or more previous doses of any Moderna COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine [§]	Give 1 dose at least 8 weeks after the last dose.	
	2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine [§]	No further doses are indicated.	

* CDC recommends that people receive the age-appropriate vaccine product and dosage based on their age on the day of vaccination. Children who turn 5 years of age during the initial series administer 1 dose at least 4–8 weeks after Dose 1. There is no dosage change. No further doses are indicated.

†† If the immunization history is only 1 dose of 2024–25 Novavax COVID-19 vaccine, see Table 1c for detailed guidance.

1. For people who are **NOT** moderately or severely immunocompromised*

2024-25 Moderna COVID-19 Vaccine

Vaccine type: mRNA | Do NOT use any previously available Moderna COVID-19 vaccine products.

If current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
6 months through 4 years[†]	Unvaccinated (0 doses)	Give a 2-dose initial series. <ul style="list-style-type: none">• Dose 1 now.• Dose 2 at least 4–8 weeks after Dose 1.[‡]	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) Intramuscular (IM) injection
	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) [§]	Complete the series. Give: <ul style="list-style-type: none">• Dose 2 at least 4–8 weeks after Dose 1.[‡]	
	2 or more previous doses of any Moderna COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine [§]	Give 1 dose at least 8 weeks after the last dose.	
	2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine [§]	No further doses are indicated.	

Table 1a. For people who are **NOT** moderately or severely immunocompromised[†]

2024-25 Moderna COVID-19 Vaccine

Vaccine type: mRNA | Do NOT use any previously available Moderna COVID-19 vaccine products.

2.	If current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
	6 months through 4 years [†]	Unvaccinated (0 doses)	Give a 2-dose initial series. <ul style="list-style-type: none"> • Dose 1 now. • Dose 2 at least 4–8 weeks after Dose 1.[‡] 	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) Intramuscular (IM) injection
		1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) [§]	Complete the series. Give: <ul style="list-style-type: none"> • Dose 2 at least 4–8 weeks after Dose 1.[‡] 	
		2 or more previous doses of any Moderna COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine [§]	Give 1 dose at least 8 weeks after the last dose.	
		2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine [§]	No further doses are indicated.	

Table 1a. For people who are NOT moderately or severely immunocompromised[†]

2024-25 Moderna COVID-19 Vaccine			
Vaccine type: mRNA Do NOT use any previously available Moderna COVID-19 vaccine products.			
If current age is:	3. And the COVID-19 vaccination history is:	Then:	Administer:
6 months through 4 years [†]	Unvaccinated (0 doses)	Give a 2-dose initial series. <ul style="list-style-type: none"> • Dose 1 now. • Dose 2 at least 4–8 weeks after Dose 1.[‡] 	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) Intramuscular (IM) injection
	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) [§]	Complete the series. Give: <ul style="list-style-type: none"> • Dose 2 at least 4–8 weeks after Dose 1.[‡] 	
	2 or more previous doses of any Moderna COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine [§]	Give 1 dose at least 8 weeks after the last dose.	
	2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine [§]	No further doses are indicated.	

Table 1a. For people who are **NOT** moderately or severely immunocompromised¹

2024-25 Moderna COVID-19 Vaccine			
Vaccine type: mRNA Do NOT use any previously available Moderna COVID-19 vaccine products.			
If current age is:	And the COVID-19 vaccination history is:	4. Then:	Administer:
6 months through 4 years ¹	Unvaccinated (0 doses)	Give a 2-dose initial series. <ul style="list-style-type: none"> • Dose 1 now. • Dose 2 at least 4–8 weeks after Dose 1.[‡] 	0.25 mL/25 µg in a manufacturer-filled syringe (MFS) Intramuscular (IM) injection
	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) [§]	Complete the series. Give: <ul style="list-style-type: none"> • Dose 2 at least 4–8 weeks after Dose 1.[‡] 	
	2 or more previous doses of any Moderna COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine [§]	Give 1 dose at least 8 weeks after the last dose.	
	2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine [§]	No further doses are indicated.	
		No further doses are indicated.	

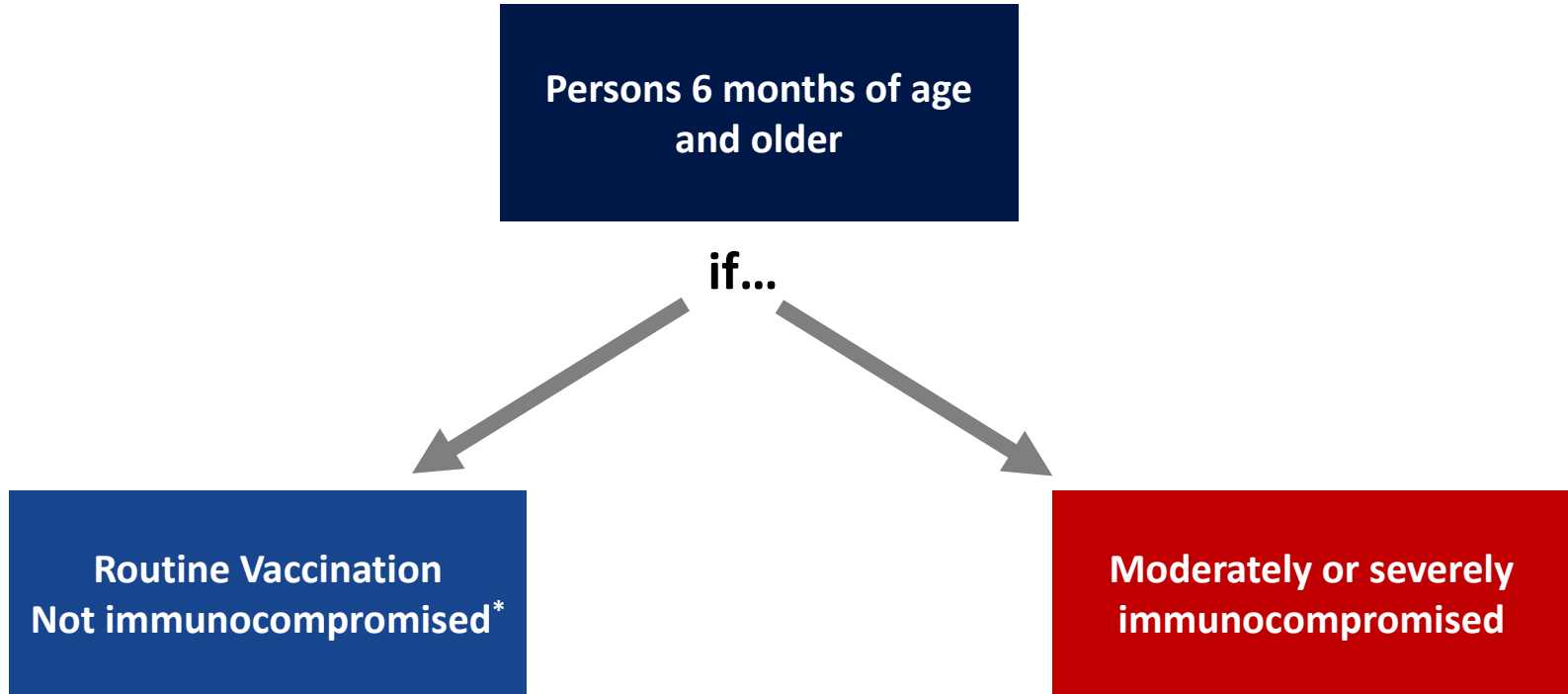
Table 1a. For people who are **NOT** moderately or severely immunocompromised¹

2024-25 Moderna COVID-19 Vaccine		
Vaccine type: mRNA Do NOT use any previously available Moderna COVID-19 vaccine products.		
If current age is:	And the COVID-19 vaccination history is:	Then:
6 months through 4 years ¹	Unvaccinated (0 doses)	Give a 2-dose initial series. <ul style="list-style-type: none"> • Dose 1 now. • Dose 2 at least 4–8 weeks after Dose 1.²
	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) ³	Complete the series. Give: <ul style="list-style-type: none"> • Dose 2 at least 4–8 weeks after Dose 1.²
	2 or more previous doses of any Moderna COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine ³	Give 1 dose at least 8 weeks after the last dose.
	2 or more previous doses of any Moderna COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine ³	No further doses are indicated.

5. Administer:

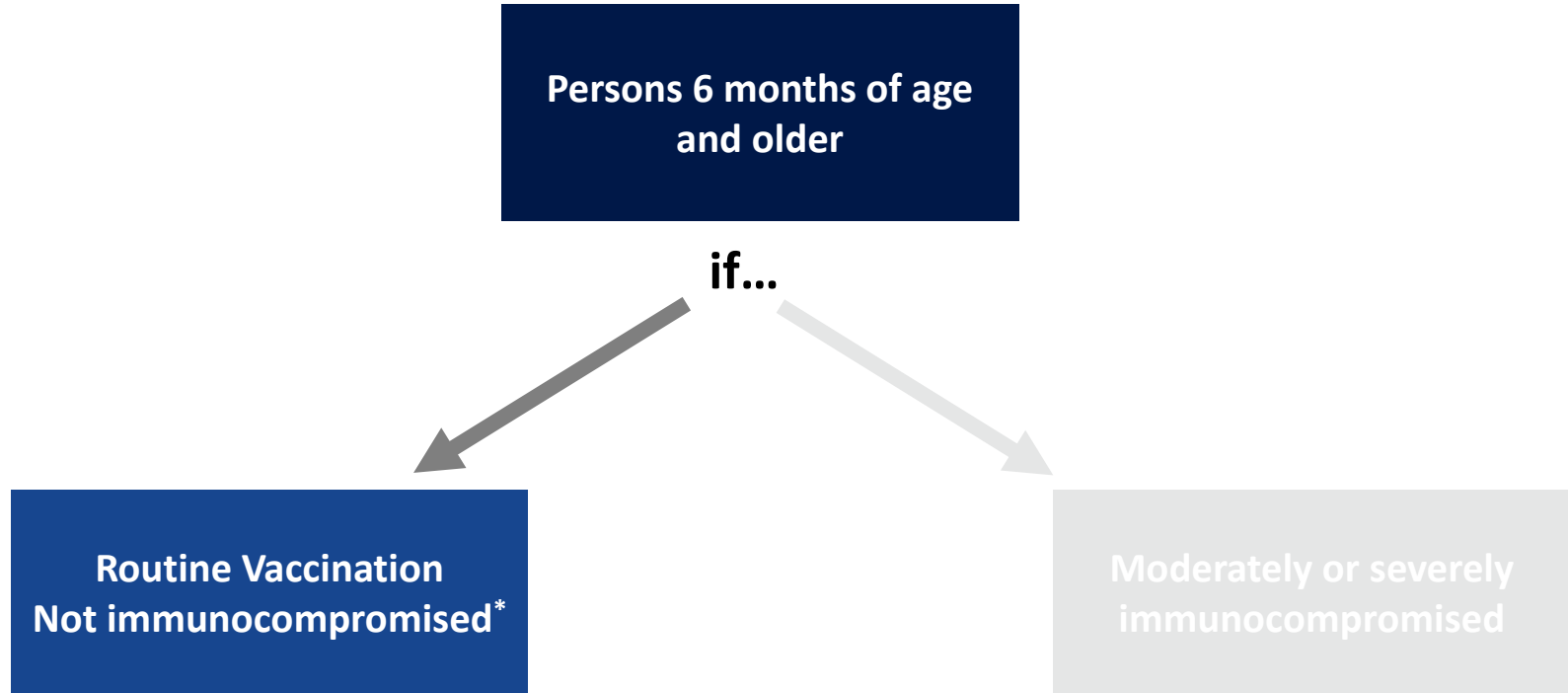
0.25 mL/25 µg
 in a manufacturer-filled syringe (MFS)
 Intramuscular (IM) injection

COVID-19 Vaccination Schedule



*Not immunocompromised is referred to as routine vaccination in the following slides.

COVID-19 Vaccination Schedule

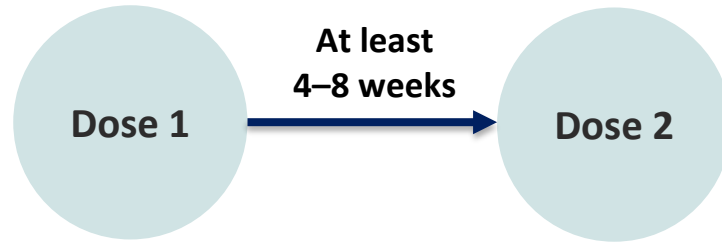


*Not immunocompromised is referred to as routine vaccination in the following slides.



Routine Vaccination* for Ages 6 Months Through 4 Years

**Moderna
2024–25 Vaccine**



**Previously
unvaccinated**

**Pfizer-BioNTech
2024–25 Vaccine**



*Children who are not moderately to severely immunocompromised

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

[COVID-19 Immunization Schedule for Persons 6 Months of Age and Older • CDC.gov](#)



Routine Vaccination* for Ages 6 Months Through 4 Years Previously Vaccinated with Moderna COVID-19 Vaccine

1 previous dose of
Moderna vaccine

At least 4–8 weeks
after Dose 1

1 dose

2 or more previous doses
not including at least 1
dose of 2024–25 Moderna
vaccine

At least 8 weeks after
the previous dose

1 dose

2 or more previous doses
including at least 1 dose of
2024–25 Moderna vaccine

No dose
indicated

*Children who are not moderately to severely immunocompromised

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

[COVID-19 Immunization Schedule for Persons 6 Months of Age and Older • CDC.gov](#)



Routine Vaccination* for Ages 6 Months Through 4 Years Previously Vaccinated with Pfizer-BioNTech COVID-19 Vaccine

**1 previous dose
of Pfizer-BioNTech
vaccine**

At least 3–8 weeks
after Dose 1

Dose 2

At least 8 weeks
after Dose 2

Dose 3

**2 previous doses of
Pfizer-BioNTech
vaccine**

At least 8 weeks
after Dose 2

Dose 3

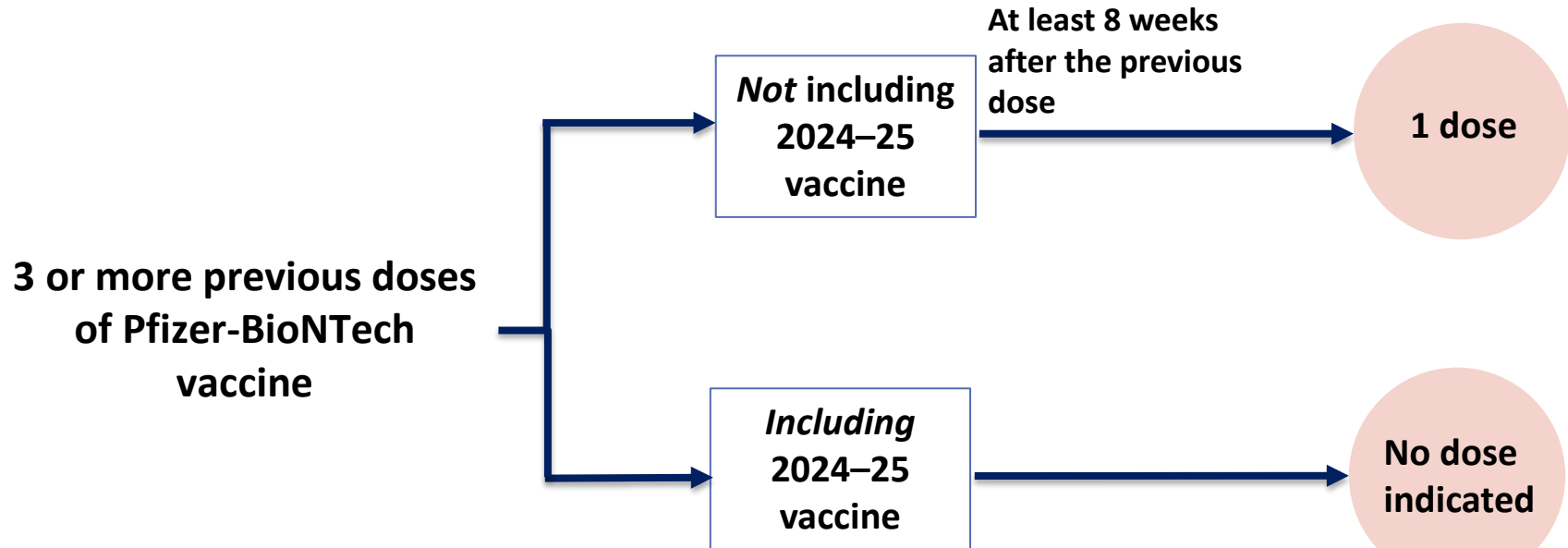
*Children who are not moderately to severely immunocompromised

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

[COVID-19 Immunization Schedule for Persons 6 Months of Age and Older • CDC.gov](#)



Routine Vaccination* Ages 6 months Through 4 Years Previously Vaccinated with Pfizer-BioNTech COVID-19 Vaccine



*Children who are not moderately to severely immunocompromised

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

[COVID-19 Immunization Schedule for Persons 6 Months of Age and Older • CDC.gov](#)



Routine Vaccination* for Ages 5 Through 11 Years

Unvaccinated

1 dose of
Moderna

or

1 dose of
Pfizer-
BioNTech

1 or more doses of any mRNA COVID-19 vaccine *not* including 2024–25 vaccine

1 dose of
Moderna

or

1 dose of
Pfizer-
BioNTech

1 or more doses of any mRNA COVID-19 vaccine *including* 2024–25 vaccine

No dose indicated

*Children who are not moderately to severely immunocompromised

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

[COVID-19 Immunization Schedule for Persons 6 Months of Age and Older • CDC.gov](#)



Routine Vaccination* for 12 Through 64 Years of Age

Unvaccinated

1 dose of
Moderna

or

1 dose of
Pfizer-
BioNTech

1 or more doses of any mRNA COVID-19 vaccine *not* including 2024–25 vaccine

1 dose of
Moderna

or

1 dose of
Pfizer-
BioNTech

1 or more doses of any mRNA COVID-19 vaccine *including* 2024–25 vaccine

No dose indicated

*People who are not moderately to severely immunocompromised

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

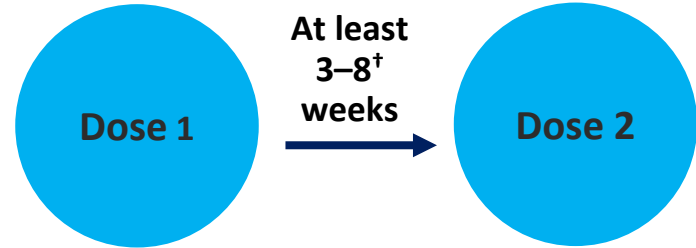
[COVID-19 Immunization Schedule for Persons 6 Months of Age and Older • CDC.gov](#)



Routine Vaccination* for Ages 12 Through 64 Years of Age

2024–25 Novavax COVID-19 Vaccine

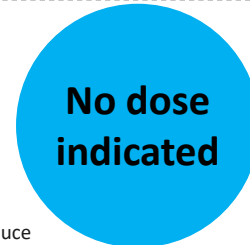
Unvaccinated



1 dose of any Novavax vaccine, *or*
1 or more doses of any mRNA vaccine
not including 2024–25 vaccine



2 doses of any Novavax vaccine including at least one
2024–25 Novavax vaccine dose, *or* 1 more doses of any
other COVID-19 vaccine *including* 2024–25 vaccine



*People who are not moderately to severely immunocompromised

†An 8-week interval between the first and second Novavax COVID-19 Vaccine doses might be optimal for some people, as it might reduce the rare risk of myocarditis and pericarditis associated with these vaccines:

Routine Vaccination* for Adults Ages 65 Years and Older

Doses recommended:

- 2 doses of 2024–25 COVID-19 vaccine 6 months apart[†]
- If previously unvaccinated and receiving Novavax, 2 doses are recommended as initial vaccination series, followed by a third dose of any age-appropriate 2024–25 COVID-19 vaccine 6 months[†] after second dose.

*People who are not moderately to severely immunocompromised

†Minimum interval 8 weeks

[Clinical Considerations for the use of 2024-2025 COVID-19 Vaccines in the United States \(October 23, 2024\)](#)

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

[COVID-19 Immunization Schedule for Persons 6 Months of Age and Older • CDC.gov](#)

COVID-19 Vaccination Schedule

Persons 6 months of age
and older

```
graph TD; A[Persons 6 months of age and older] --> B[if...]; B --> C[Routine Vaccination Not immunocompromised]; B --> D[Moderately or Severely Immunocompromised];
```

if...

Routine Vaccination
Not immunocompromised

Moderately or Severely
Immunocompromised

2024–2025 COVID-19 Immunization Schedule for People Who Are Moderately or Severely Immunocompromised

2024–2025 COVID-19 Vaccine Immunization Schedule

2024–2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

2024–2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

Table 2a. For people who ARE moderately or severely immunocompromised
2024–25 Moderna COVID-19 Vaccine
Vaccine type: mRNA | Do NOT use any previously available Moderna COVID-19 vaccine products.

If current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
12 years and older ¹	Unvaccinated (0 doses)	Give a 3-dose initial series. ¹ • Dose 1 now. • Dose 2 at least 4 weeks after Dose 1. • Dose 3 at least 4 weeks after Dose 2.	
5 through 11 years of age ²	1 previous dose of any Moderna COVID-19 Vaccine (Dose 1) ³	Complete the series. ¹ Give: • Dose 2 at least 4 weeks after Dose 1. • Dose 3 at least 4 weeks after Dose 2.	
6 months through 4 years ⁴	2 previous doses of any Moderna COVID-19 Vaccine (Doses 1 and 2) ³	Complete the series. ¹ Give: • Dose 3 at least 4 weeks after Dose 2.	0.25 mL/25 µg in a manufacturer-filled syringe (MFS)
	3 or more previous doses of Moderna COVID-19 Vaccine, NOT including at least 1 dose of 2024–25 COVID-19 vaccine ³	Give 1 dose at least 8 weeks after the last dose.	Intramuscular (IM) injection
	3 or more previous doses of Moderna COVID-19 Vaccine, INCLUDING at least 1 dose of 2024–25 COVID-19 vaccine	• These children may receive 1 additional dose at least 8 weeks following the last recommended dose. • Further additional doses may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. • Any further additional doses should be administered at least 8 weeks after the last COVID-19 vaccine dose.	

Footnotes:
¹ People 6 months of age receive 1 dose series in 1 of the following dose combinations:
 • 2 doses 21 to 28 days apart
 • 3 doses 14 to 28 days apart
² People 5 years of age receive 1 dose series in 1 of the following dose combinations:
 • 2 doses 21 to 28 days apart
 • 3 doses 14 to 28 days apart
³ If 2024–25 Moderna COVID-19 vaccine is administered from different manufacturers, complete the recommended 3-dose series.
⁴ For people who received their 1 to 3 prior vaccine doses but did not receive subsequent doses from a different manufacturer, administer:
 • Dose 2 at least 4 weeks after Dose 1.
 • Dose 3 at least 4 weeks after Dose 2.
 • Dose 4 at least 4 weeks after Dose 3.

2024–2025 COVID-19 Vaccine Immunization Schedule

2024–2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

2024–2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

Table 2b. For people who ARE moderately or severely immunocompromised
2024–25 Pfizer-BioTech COVID-19 Vaccine
Vaccine type: mRNA | Do NOT use any previously available Pfizer-BioTech COVID-19 vaccine products.

If current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
12 years and older ¹	Unvaccinated (0 doses)	Give a 3-dose initial series. ¹ • Dose 1 now. • Dose 2 at least 3 weeks after Dose 1. • Dose 3 at least 8 weeks after Dose 2.	
5 through 11 years of age ²	1 previous dose of any Pfizer-BioTech COVID-19 Vaccine (Dose 1) ³	Complete the series. ¹ Give: • Dose 2 at least 3 weeks after Dose 1. • Dose 3 at least 8 weeks after Dose 2.	
6 months through 4 years ⁴	2 previous doses of any Pfizer-BioTech COVID-19 Vaccine (Doses 1 and 2) ³	Complete series. ¹ Give: • Dose 3 at least 8 weeks after Dose 2.	0.3 mL/3 µg from a yellow capped multidose vial
	3 or more previous doses of Pfizer-BioTech COVID-19 Vaccine, NOT including at least 1 dose of 2024–25 COVID-19 vaccine ³	Give 1 dose at least 8 weeks after the last dose.	Intramuscular (IM) injection
	3 or more previous doses of Pfizer-BioTech COVID-19 Vaccine, INCLUDING at least 1 dose of 2024–25 COVID-19 vaccine	• These children may receive 1 additional dose at least 8 weeks following the last recommended dose. ⁵ • Further additional doses may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. ⁶ • Any further additional doses should be administered at least 8 weeks after the last COVID-19 vaccine dose. ¹	

Footnotes:
¹ Children 6 months through 4 years of age should receive the same vaccine products for all doses.
² In the following situations, a different age appropriate COVID-19 vaccine product may be administered the same vaccine is not available at the time of the clinic visit, the previous dose is unknown, the person would otherwise not receive a recommended dose, or the person starts but is unable to complete a vaccination series with the same vaccine due to a contraindication:
 • 2 doses 21 to 28 days apart
 • 3 doses 14 to 28 days apart
³ If 2024–25 Pfizer-BioTech COVID-19 vaccine is administered from different manufacturers, complete the recommended 3-dose series.
⁴ For people who received their 1 to 3 prior vaccine doses but did not receive subsequent doses from a different manufacturer, administer:
 • Dose 2 at least 3 weeks after Dose 1.
 • Dose 3 at least 8 weeks after Dose 2.
⁵ Dose 4 at least 8 weeks after Dose 3.
⁶ In the following situations, a different age appropriate COVID-19 vaccine product may be administered the same vaccine is not available at the time of the clinic visit, the previous dose is unknown, the person would otherwise not receive a recommended dose, or the person starts but is unable to complete a vaccination series with the same vaccine due to a contraindication:
 • 2 doses 21 to 28 days apart
 • 3 doses 14 to 28 days apart

2024–2025 COVID-19 Vaccine Immunization Schedule

2024–2025 COVID-19 Vaccine Immunization Schedule
for People 6 Months of Age and Older

Table 2c. For people who ARE moderately or severely immunocompromised
2024–25 Novavax COVID-19 Vaccine
Vaccine type: Protein subunit | Do NOT use any previously available Novavax COVID-19 vaccine products.

If current age is:	And the COVID-19 vaccination history is:	Then:	Administer:
12 years and older ¹	Unvaccinated (0 doses)	Give a 2-dose initial series. • Dose 1 now. • Dose 2 at least 3 weeks after Dose 1.	
	1 previous dose of 2024–25 Novavax COVID-19 Vaccine (Dose 1) ³	Give Dose 2 at least 3 weeks after the last dose.	0.5 mL/5 µg protein and 50 µg Matrix-M adjuvant in a manufacturer-filled syringe (MFS)
	1 or more previous doses of any COVID-19 vaccine, NOT including at least 1 dose of 2024–25 vaccine	Give 1 dose at least 8 weeks after the last dose.	Intramuscular (IM) injection
	2 or more previous doses of any COVID-19 vaccine, INCLUDING at least 1 dose of 2024–25 vaccine	Further additional doses may be administered, informed by the clinical judgement of a health care provider and personal preference and circumstances. Administer additional doses at least 8 weeks after the last dose.	

Footnotes:
¹ Previously unvaccinated people should receive a 2-dose because COVID-19 series. Additional doses may be given for age-appropriate product.
² In the following situations, a different age appropriate COVID-19 vaccine product may be administered the same vaccine is not available at the time of the clinic visit, the previous dose is unknown, the person would otherwise not receive a recommended dose, or the person starts but is unable to complete a vaccination series with the same vaccine due to a contraindication:
 • 2 doses 21 to 28 days apart
 • 3 doses 14 to 28 days apart

For People Who Are Moderately or Severely Immunocompromised Children 6 Months Through 4 Years: Unvaccinated

- **Children 6 months through 4 years of age should receive:**
 - An initial 3-dose series and dose 4 should be from the same manufacturer

Vaccine	Interval between Dose 1 and 2	Interval between Dose 2 and 3	Interval between Dose 3 and 4
Moderna	At least 4 weeks	At least 4 weeks	6 months*
Pfizer-BioNTech	At least 3 weeks	At least 8 weeks	6 months*

May receive additional doses of 2024–25 COVID-19 vaccine from the same manufacturer under shared clinical-decision making at least 8 weeks after the last dose

*Minimum interval 8 weeks

[Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC](#) and [2024–2025 COVID-19 Vaccine Immunization Schedule for People 6 Months of Age and Older \(cdc.gov\)](#)

For People Who Are Moderately or Severely Immunocompromised 5 Through 11 Years of Age: Unvaccinated

- **Children 5 through 11 years of age and older should receive:**
 - An initial 3-dose vaccine series from the same manufacturer
 - Dose 4 can be Moderna or Pfizer-BioNTech

Vaccine	Interval between dose 1 and 2	Interval between dose 2 and 3	Interval between dose 3 and 4
Moderna	At least 4 weeks	At least 4 weeks	6 months*
Pfizer-BioNTech	At least 3 weeks	At least 4 weeks	6 months*

May receive additional doses of 2024–25 Moderna or Pfizer-BioNTech COVID-19 vaccine under shared clinical-decision making at least 8 weeks after the last dose

*Minimum interval 8 weeks

[Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC](#) and [2024–2025 COVID-19 Vaccine Immunization Schedule for People 6 Months of Age and Older \(cdc.gov\)](#)

For People Who Are Moderately or Severely Immunocompromised 12 Years of Age and Older: Unvaccinated

- **People 12 years of age and older should receive:**
 - An initial 2 or 3-dose vaccine series from the same manufacturer
 - Doses after the initial series can be any 2024–25 COVID-19 vaccine

Vaccine	Interval between dose 1 and 2	Interval between dose 2 and 3	Interval between dose 3 and 4
Moderna	At least 4 weeks	At least 4 weeks	6 months*
Pfizer-BioNTech	At least 3 weeks	At least 4 weeks	6 months*
Novavax	At least 3 weeks	6 months*	

May receive additional doses of any 2024–25 COVID-19 vaccine under shared clinical-decision making at least 8 weeks after the last dose

*Minimum interval 8 weeks

[Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC](#) and [2024–2025 COVID-19 Vaccine Immunization Schedule for People 6 Months of Age and Older \(cdc.gov\)](#)

People Who Are Moderately or Severely Immunocompromised: Incomplete Initial Series Before September 2024

- **Complete the initial series with age-appropriate 2024–25 COVID-19 vaccine.***
 - Follow appropriate intervals based on age and product
- **Administer 1 dose of 2024–25 COVID-19 vaccine 6 months[†] after completing initial series.**
- **May receive additional doses of 2024–25 COVID-19 vaccine under shared clinical decision-making at least 8 weeks after the last dose**

*Children 6 months through 4 years should receive all doses from the same manufacturer.

[†]Minimum interval = 8 weeks

[Clinical Guidance for COVID-19 Vaccination](#) | [CDC](#) and [2024–2025 COVID-19 Vaccine Immunization Schedule for People 6 Months of Age and Older \(cdc.gov\)](#)

People Who Are Moderately or Severely Immunocompromised: Completed the Initial Series Before September 2024

- **Administer 2 doses of an age-appropriate 2024–25 COVID-19 vaccine***
 - Administer the first dose at least 8 weeks after the last dose
 - Administer the next dose 6 months after 2024–25 Dose 1[†]
- **May receive additional age-appropriate 2024–25 COVID-19 vaccine doses under shared clinical decision-making at least 8 weeks after the last dose***

*Children 6 months through 4 years should receive all doses from the same manufacturer

[†]Minimum interval = 8 weeks

[Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC](#) and [2024–2025 COVID-19 Vaccine Immunization Schedule for People 6 Months of Age and Older \(cdc.gov\)](#)



Knowledge Check

How long should people wait after their most recent dose of 2023–2024 COVID-19 vaccine before getting a 2024–2025 COVID-19 vaccine?

- A. 4 weeks
- B. 8 weeks
- C. 12 weeks



Answer

How long should people wait after their most recent dose of 2023–2024 COVID-19 vaccine before getting a 2024–2025 COVID-19 vaccine?

- A. 4 weeks
- B. 8 weeks**
- C. 12 weeks



Considerations for the Interval Between Doses 1 and 2 of an Initial Series

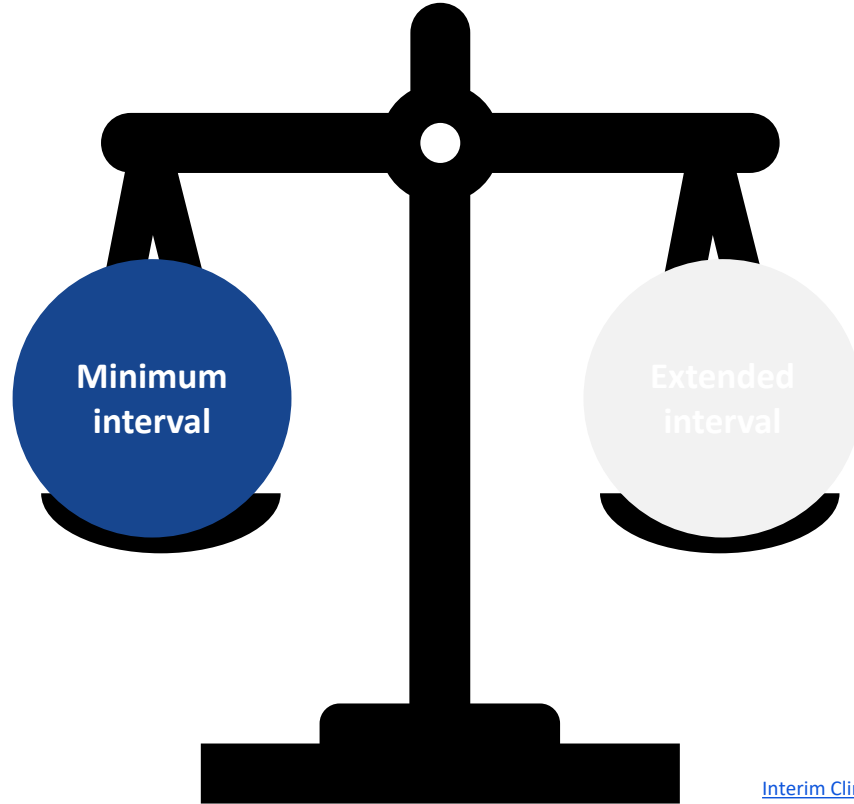


Considerations for a Shorter Interval Between Doses 1 and 2 of an Initial Series

Immunocompromised people

People 65 years of age and older receiving Novavax vaccine

Situations when the fullest possible protection needs to be sooner



Healthy people

Reduced the small risk of myocarditis/pericarditis

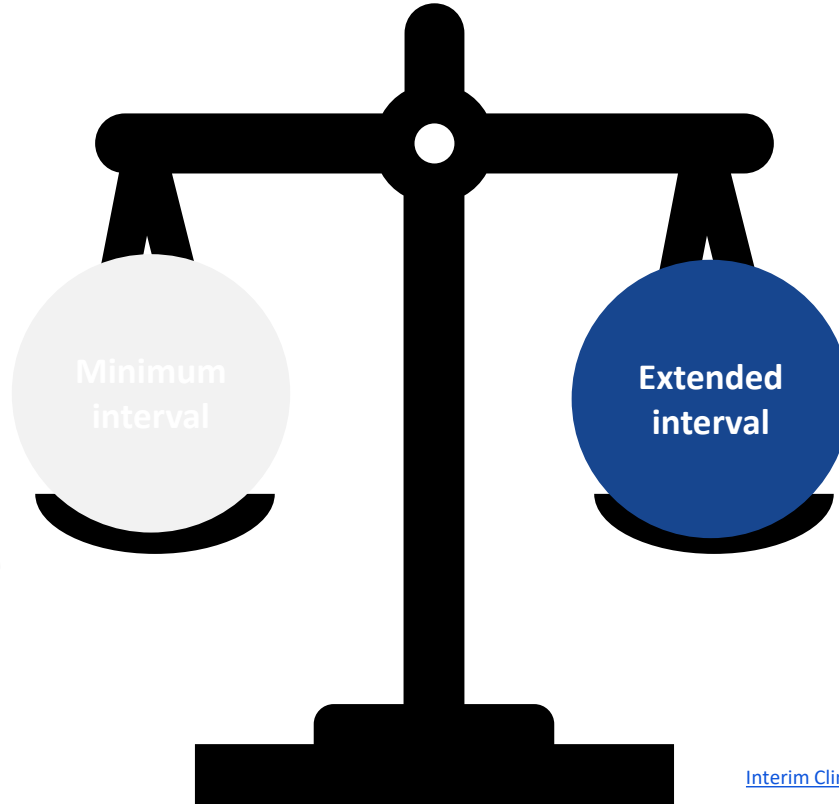
Adolescent and young adult males

Considerations for an Extended Interval Between Doses 1 and 2 of an Initial Series

Immunocompromised

People 65 years of age and older receiving Novavax vaccine

Situations when the fullest possible protection needs to be sooner



Healthy people younger than 64 years of age

Reduce the small risk of myocarditis/pericarditis

Adolescent and young adult males

4

Special Considerations

Product Interchangeability

Coadministration

Birthdays and Age Transitions

Prior SARS-CoV-2 Infection

COVID-19 Vaccination and Product Guidance: Persons Who Are Not Moderately or Severely Immunocompromised

- Children ages 6 months–4 years should receive all vaccine doses from the same manufacturer.
- Unvaccinated people receiving Novavax COVID-19 Vaccine:
 - Administer a 2-dose initial series.
 - Both doses should be Novavax COVID-19 vaccine.
 - However, if more than 8 weeks have elapsed since the 1st dose, any 2024–25 COVID-19 vaccine may be administered.

COVID-19 Vaccination and Product Guidance: Persons Who Are Moderately or Severely Immunocompromised

- Children ages 6 months–4 years should receive all vaccine doses from the same manufacturer.
- People 5 years of age and older should receive an initial series using vaccine from the same manufacturer.
 - Doses administered after a completed initial series may be any age-appropriate product.

Product Interchangeability

- **COVID-19 vaccine doses from the same manufacturer should be administered whenever recommended.**
- **In the following circumstances, an age-appropriate COVID-19 vaccine from a different manufacturer may be administered:**
 - Same vaccine not available at the time of the clinic visit
 - Previous dose not known
 - Person otherwise would not complete the initial series
 - Person starts but is unable to complete an initial series with the same COVID-19 vaccine because of a contraindication

Coadministration With Other Vaccines

- **Routine administration of all age-appropriate vaccine doses simultaneously is recommended as best practice for people for whom no specific contraindications exist at the time of the health care visit.**
- **COVID-19 vaccine may be administered at the same clinic visit as other routinely recommended vaccines.**

Mpox and COVID-19 Vaccines

- **There is no required minimum interval between receiving any COVID-19 vaccine and JYNNEOS or ACAM2000 vaccine, regardless of which is administered first.**
- **People, especially adolescent or young adult males, who are recommended to receive both vaccines might consider waiting 4 weeks between vaccines.**
 - Due to an observed risk for myocarditis and pericarditis after receipt of ACAM2000 orthopoxvirus vaccine and COVID-19 vaccines, and the hypothetical risk for myocarditis and pericarditis after JYNNEOS vaccine.
 - If patient is at increased risk for mpox or severe disease due to COVID-19, administration of JYNNEOS and COVID-19 vaccines should not be delayed.

COVID-19 Vaccine and Birthdays

- In general, CDC recommends that people should receive the age-appropriate vaccine product and dosage and follow the schedule based on their age on the day of vaccination, regardless of their size or weight.



Healthy Children Who Turn 5 Years of Age During the Initial Series of Pfizer-BioNTech COVID-19 Vaccine

Pfizer-BioNTech



0.3 mL/10 μ g

If this is the 2nd dose, administer 1 dose (0.3 mL/10 μ g) of vaccine 3–8 weeks after the 1st dose.

If this is the 3rd dose, administer 1 dose (0.3 mL/10 μ g) of vaccine at least 8 weeks after the 2nd dose.

Healthy Children Who Turn 5 Years of Age During the Initial Series of Moderna COVID-19 Vaccine

Moderna



0.25 mL/25 µg



Administer 1 dose (0.25 mL/25 µg) of vaccine
4–8 weeks after 1st dose.

Children With Moderate or Severe Immunocompromise Who Turn 5 Years of Age During the Initial Series

- Complete the 3-dose series with vaccine from the same manufacturer at the dosage for children ages 5 years and older.



Moderna

Complete the 3-dose series using **0.25 mL/25 µg**.



Pfizer-BioNTech

Complete the 3-dose series using **0.3 mL/10 µg**.

Children With Moderate or Severe Immunocompromise Who Turn 12 Years of Age During the Initial Series

- Complete the 3-dose series with vaccine from the same manufacturer at the dosage for children ages 12 years and older.



Spikevax (Moderna)

Complete the 3-dose series using **0.5 mL/50 µg**.



Comirnaty (Pfizer-BioNTech)

Complete the 3-dose series using **0.3 mL/30 µg**.

People With Prior SARS-CoV-2 Infection

- **People who recently had SARS-CoV-2 infection may consider delaying COVID-19 vaccination by 3 months from symptom onset or positive test (if infection was asymptomatic).**
- **Increased time between infection and vaccination might result in an improved immune response to vaccination.**
- **Factors such as risk of severe disease and COVID-19 community levels should be considered when determining whether to delay a COVID-19 vaccination after infection.**



Knowledge Check

My patient has had 1 dose of Pfizer-BioNTech COVID-19 vaccine at 4 years of age and turned 5 before Dose 2 could be given.

What should be done?

- A. Administer 1 dose of the 5 through 11-year formulation of Pfizer-BioNTech COVID-19 Vaccine.
- B. Administer 2 doses of the 5 through 11-year formulation of Pfizer-BioNTech COVID-19 Vaccine.
- C. Do not administer any vaccine.



Answer

My patient has had 1 dose of Pfizer-BioNTech COVID-19 vaccine at 4 years of age and turned 5 before Dose 2 could be given. What should be done?

- A. Administer 1 dose of the 5 through 11-year formulation of Pfizer-BioNTech COVID-19 Vaccine.
- B. Administer 2 doses of the 5 through 11-year formulation of Pfizer-BioNTech COVID-19 Vaccine.
- C. Do not administer any vaccine.



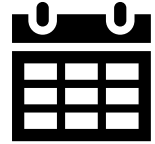
5

Vaccine Administration

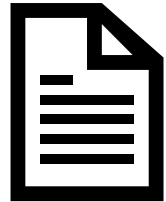
Vaccine Preparation

Check the expiration date and beyond-use date/time (BUD).

- The BUD replaces but does **not** extend the expiration date.
- Do not use vaccine after the expiration date or BUD, whichever date comes first.



Prepare according to the package insert or Emergency Use Authorization (EUA) Fact Sheet.



Thawing Frozen Vaccine Before Administration: Moderna Vaccine

Moderna	In the refrigerator between 2°C and 8°C (36°F and 46°F)	At room temperature between 15°C and 25°C (59°F and 77°F)
1 MFS	1 hour	45 minutes
1 carton of 10 MFS	2 hours and 30 minutes	2 hours and 15 minutes



- Do not refreeze thawed vaccine.
- Do not shake.

MFS = manufacturer-filled syringe

[FACT SHEET FOR HEALTHCARE PROVIDERS ADMINISTERING VACCINE: EMERGENCY USE AUTHORIZATION OF MODERNA COVID-19 VACCINE \(2024-2025 FORMULA\), FOR INDIVIDUALS 6 MONTHS THROUGH 11 YEARS OF AGE \(fda.gov\)](#)

[Package Insert - SPIKEVAX](#)

Thawing Frozen Vaccine Before Administration: Pfizer-BioNTech Vaccine

Pfizer-BioNTech	In the refrigerator between 2°C and 8°C (36°F and 46°F)
Cartons of single-dose vials	2 hours
Cartons of multidose vials	2 hours
Manufacturer-filled syringes	Can <u>not</u> be frozen, no thawing time needed



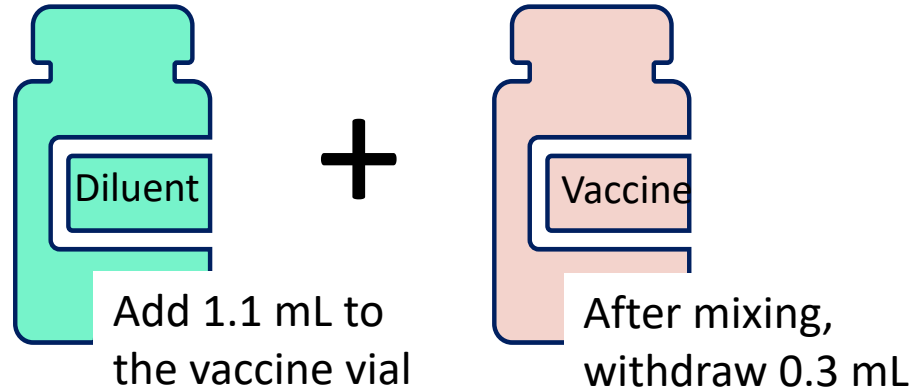
- Do **not** refreeze thawed vaccine.
- Do **not** shake.

[FACT SHEET FOR HEALTHCARE PROVIDERS ADMINISTERING VACCINE: EMERGENCY USE AUTHORIZATION OF PFIZER-BIONTECH COVID-19 VACCINE \(2024–2025 FORMULA\), FOR 6 MONTHS THROUGH 11 YEARS OF AGE](#)

[Package Insert and FDA Approved Patient Labeling - COMIRNATY](#)

Pfizer-BioNTech COVID-19 Vaccine for Infants and Young Children 6 Months Through 4 Years of Age

- **Supplied in a multidose vial and requires mixing with diluent**
 - Use only the diluent provided by the manufacturer.
 - Mix by gently inverting the vial 10 times. Do not shake.
 - After dilution, the vial = 3 doses.



Store between 2°C and 25°C (35°F and 77°F) and discard after 12 hours.

Prepare the Vaccine

Examine the vaccine. Do not use if liquid contains particulate matter or is discolored.



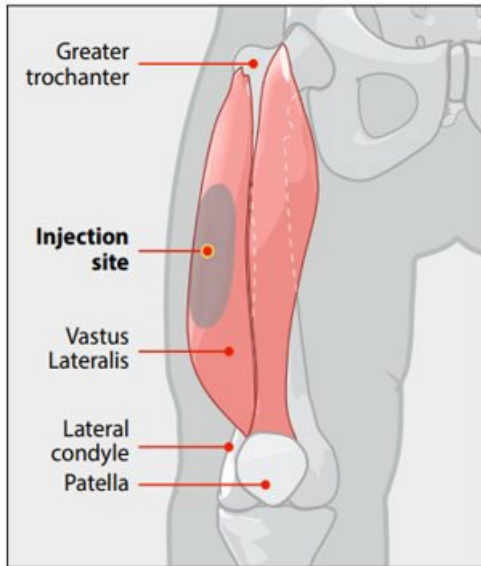
Prepare the vaccine for an intramuscular (IM) injection.

- Use the correct needle size for the recipient.
- Use a new, sterile needle and syringe for each recipient.

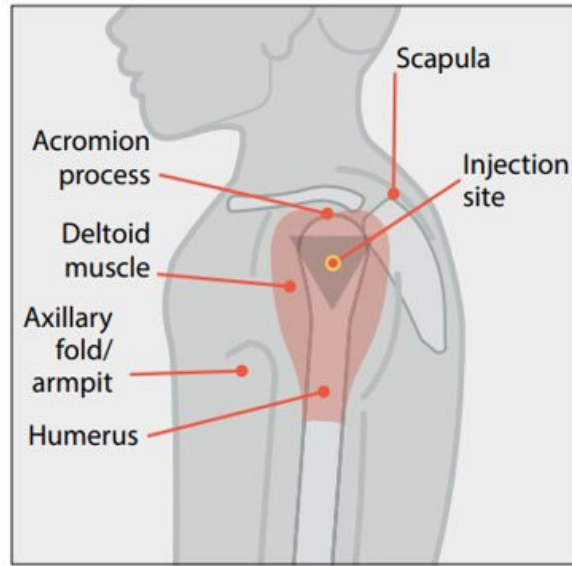


Vaccine Administration

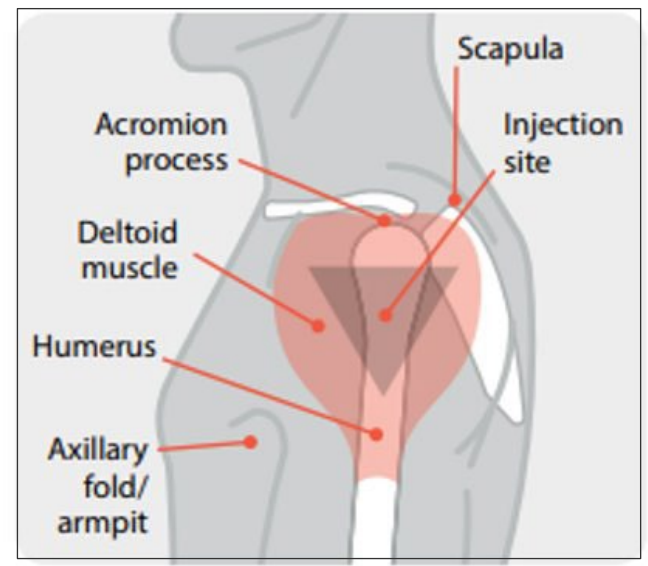
- All COVID-19 vaccines are administered by intramuscular injection.



Infant



Child/Adolescent



Adult





Knowledge Check

A 0.3 mL dose of Pfizer-BioNTech Vaccine from a vial for children 5-through-11-year was inadvertently administered to a 29-year-old patient. Does the dose need to be repeated?

- A. Yes
- B. No



Answer

A 0.3 mL dose of Pfizer-BioNTech Vaccine from a vial for children 5-through-11-year was inadvertently administered to a 29-year-old patient. Does the dose need to be repeated?

A. Yes



B. No

Correct Pfizer-BioNTech Vaccine Dosage



6 months through 4 years

Injection volume: 0.3 mL

Dosage: 3 μ g



5 through 11 years

Injection volume: 0.3 mL

Dosage: 10 μ g



12 years and older

Injection volume: 0.3 mL

Dosage: 30 μ g

COVID-19 Vaccine Administration Errors

Type	Administrative/Implementation	Technical/Manufacturing
Administration	<ul style="list-style-type: none"> Received vial (e.g., vial label) from the manufacturer or vendor incorrectly Received vials (e.g., administration) 	<ul style="list-style-type: none"> Did not inspect vials Did not inspect vials Did not inspect vials Did not inspect vials
Age	<ul style="list-style-type: none"> 2022-01-01-2022-01-01 vaccine administration for a child that is not age appropriate (e.g., age 12-17) 2022-01-01-2022-01-01 vaccine administration for a child that is not age appropriate (e.g., age 12-17) 	<ul style="list-style-type: none"> If the first dose is administered to a child that is not age appropriate, the child should not receive the second dose until the child is at least 12 years old If part of a consecutive series of doses is administered to a child that is not age appropriate, the child should not receive the second dose until the child is at least 12 years old If a child is administered a dose of any 2022-01-01-2022-01-01 vaccine to a child that is not age appropriate, the child should not receive the second dose until the child is at least 12 years old If a child is administered a dose of any 2022-01-01-2022-01-01 vaccine to a child that is not age appropriate, the child should not receive the second dose until the child is at least 12 years old
Product and dosage	<ul style="list-style-type: none"> Higher than authorized dose administered (e.g., 0.5 mL instead of 0.3 mL) Lower than authorized dose administered (e.g., 0.1 mL instead of 0.3 mL) 	<ul style="list-style-type: none"> Did not inspect vials
Storage and handling	<ul style="list-style-type: none"> Improper storage (e.g., temperature, light, humidity) Did not inspect vials 	<ul style="list-style-type: none"> Did not inspect vials
Intervals	<ul style="list-style-type: none"> Any COVID-19 vaccine administered as an "adjuvant" or "booster" 	<ul style="list-style-type: none"> Did not inspect vials
Interchangeability	<ul style="list-style-type: none"> COVID-19 vaccine from a different manufacturer administered as part of a consecutive series 	<ul style="list-style-type: none"> Did not inspect vials
Errors (2022-01-01-2022-01-01)	<ul style="list-style-type: none"> COVID-19 vaccine from a different manufacturer administered as part of a consecutive series Higher than authorized dose administered (e.g., 0.5 mL instead of 0.3 mL) Lower than authorized dose administered (e.g., 0.1 mL instead of 0.3 mL) Vaccine administered to a child that is not age appropriate Vaccine administered to a child that is not age appropriate Vaccine administered to a child that is not age appropriate Vaccine administered to a child that is not age appropriate 	<ul style="list-style-type: none"> Did not inspect vials Did not inspect vials Did not inspect vials Did not inspect vials Did not inspect vials Did not inspect vials Did not inspect vials
Errors (2022-01-01-2022-01-01)	<ul style="list-style-type: none"> Vaccine administered to a child that is not age appropriate 	<ul style="list-style-type: none"> Did not inspect vials



- Site and route
- Age
- Product and dosage
- Storage and handling
- Intervals
- Interchangeability
- Diluent

Vaccine Administration Errors: Age

Error	Guidance
Unauthorized age group (younger than 6 months)	If the first dose is administered 5 or more days before age 6 months, repeat the dose on or after the date the recipient reaches 6 months; space the repeat dose at least 4 weeks after the invalid dose.*

*In addition to the minimum age, for children who are not moderately or severely immunocompromised, an [8-week interval](#) between the invalid dose and the repeat dose might be optimal for some people as it might reduce the rare risk of myocarditis and pericarditis associated with mRNA (Moderna or Pfizer-BioNTech) COVID-19 vaccines and the potential for increased reactogenicity.

[Interim Clinical Considerations for Use of COVID-19 Vaccines: Appendices, References, and Previous Updates \(cdc.gov\)](#)
[Vaccine Adverse Event Reporting System \(VAERS\)](#)

Vaccine Administration Errors: Age

Error	Guidance
2024–25 Novavax vaccine administered to an unauthorized age group (ages 6 months–11 years)	<p>If part of a multidose initial series, count the dose and complete the initial series with an age appropriate 2024–25 mRNA vaccine. Space the next dose by at least the minimum interval.*</p> <ul style="list-style-type: none">For children ages 6 months–11 years who are moderately or severely immunocompromised, after completion of the initial series, administer 1 dose of any 2024–2025 mRNA vaccine 6 months (minimum interval 2 months) later; additional doses may be administered. <p>For routine vaccination children ages 5–11 years:</p> <ul style="list-style-type: none">If previously received 1 or more doses of any mRNA vaccine, no further doses are needed.If did not previously receive any doses of any mRNA vaccine, administer 1 dose of a 2024–25 mRNA vaccine at least 4 weeks after the dose given in error.*

*For some people ages 6 months–64 years who are not moderately or severely immunocompromised, an 8-week interval between the dose given in error and the repeat dose might be optimal as it might reduce the rare risk of myocarditis and pericarditis associated with Moderna, Novavax, and Pfizer-BioNTech COVID-19 vaccines, particularly in males ages 12–39 years, and the potential for increased reactogenicity.

[Interim Clinical Considerations for Use of COVID-19 Vaccines: Appendices, References, and Previous Updates \(cdc.gov\)](#)
[Vaccine Adverse Event Reporting System \(VAERS\)](#)

Vaccine Administration Errors: Incorrect Dosage

- **Higher-than-authorized dose:**

- Do not repeat the dose^{*}

- **Lower-than-authorized dose:**

- Repeat immediately (no minimum interval)[†]
- However, if a half-volume dose of vaccine is administered to a recipient recommended for the full volume, another half-volume dose can be administered on the same clinic day, and the 2 doses can count as 1 full dose.

^{*}If the administration error resulted in a higher-than-authorized vaccine dose, in general a subsequent dose may still be administered at the recommended interval. However, if local or systemic side effects following vaccination are clinically concerning (outside of the expected side effect profile) or are ongoing at the time of the subsequent dose, this dose might be delayed, but this decision should be assessed on a case-by-case basis.

[†]For some people ages 6 months–64 years who are not moderately or severely immunocompromised, an 8-week interval between the dose given in error and the repeat dose might be optimal as it might reduce the rare risk of myocarditis and pericarditis associated with Moderna, Novavax, and Pfizer-BioNTech COVID-19 vaccines, particularly in males ages 12–39 years, and the potential for increased reactogenicity.

[Interim Clinical Considerations for Use of COVID-19 Vaccines: Appendices, References, and Previous Updates \(cdc.gov\)](#)
[Vaccine Adverse Event Reporting System \(VAERS\)](#)

Vaccine Administration Errors: Storage and Handling

Error	Guidance
Dose administered after improper storage and handling (i.e., temperature excursion)	Contact the manufacturer for information on the stability of the vaccine. If the manufacturer does not have data to support the stability of the vaccine, repeat the dose immediately (no minimum interval).*
Dose administered past the expiration/beyond-use date	Repeat the dose immediately (no minimum interval).*

*For some people ages 6 months–64 years who are not moderately or severely immunocompromised, an 8-week interval between the dose given in error and the repeat dose might be optimal as it might reduce the rare risk of myocarditis and pericarditis associated with Moderna, Novavax, and Pfizer-BioNTech COVID-19 vaccines, particularly in males ages 12–39 years, and the potential for increased reactogenicity.

[Interim Clinical Considerations for Use of COVID-19 Vaccines: Appendices, References, and Previous Updates \(cdc.gov\)](#)
[Vaccine Adverse Event Reporting System \(VAERS\)](#)

Vaccine Administration Errors: Preparation and Diluent

- **Mix 2024–25 Pfizer-BioNTech COVID-19 Vaccine for ages 6 months through 4 years formulation (yellow cap; yellow label) with diluent.**

Error	Guidance
<i>Only</i> diluent administered (i.e., sterile 0.9% sodium chloride)	Administer the authorized dose immediately (no minimum interval).
No diluent, resulting in higher than authorized dose	Do not repeat dose. Inform the recipient of the potential for local and systemic adverse events.
Vaccine is mixed with too little diluent	
Incorrect diluent administered (e.g., sterile water, bacteriostatic 0.9% sodium chloride)	Repeat the dose immediately (no minimum interval).*

*For some people ages 6 months–64 years who are not moderately or severely immunocompromised, an 8-week interval between the dose given in error and the repeat dose might be optimal as it might reduce the rare risk of myocarditis and pericarditis associated with Moderna, Novavax, and Pfizer-BioNTech COVID-19 vaccines, particularly in males ages 12–39 years, and the potential for increased reactivity.

[Interim Clinical Considerations for Use of COVID-19 Vaccines: Appendices, References, and Previous Updates \(cdc.gov\)](#)
[Vaccine Adverse Event Reporting System \(VAERS\)](#)

What if a Vaccination Error Occurs?

- **Inform the patient/parent of the error.**
- **Determine the patient's status.**
- **Explain any needed next steps.**
- **Know how to correct the error:**
 - Contact your local health department, vaccine manufacturer, or CDC for guidance.
- **Record the vaccine—as it was given—on the medical administration record.**



Reporting Vaccination Errors to VAERS

- Providers are encouraged to report all vaccination errors, with or without adverse health events, if they believe the error may pose a safety risk.

VAERS Vaccine Adverse Event Reporting System
www.vaers.hhs.gov

About VAERS | Report an Adverse Event | VAERS Data | Resources | Submit Follow-Up Information

Have you had a reaction following a vaccination?

1. Contact your healthcare provider.
2. Report an Adverse Event using the VAERS online form or the downloadable PDF. *New!*

Important: If you are experiencing a medical emergency, seek immediate assistance from a healthcare provider or call 9-1-1. CDC and FDA do not provide individual medical treatment, advice, or diagnosis. If you need individual medical or health care advice, consult a qualified healthcare provider.

- VAERS Information Portal for Healthcare Providers to upload bulk reports. *New!*

[Click here for information on reporting to VAERS after COVID-19 vaccination](#)

REPORT AN ADVERSE EVENT
Review reporting requirements and submit reports.

SEARCH VAERS DATA
Download VAERS Data and search the CDC WONDER database.

REVIEW RESOURCES
Find materials, publications, learning tools, and other resources.

SUBMIT FOLLOW-UP INFORMATION
Upload additional information related to VAERS reports.

6

Safety

Contraindication to COVID-19 Vaccine

- **History of a severe allergic reaction** (e.g., anaphylaxis) after a previous dose or to a component of the COVID-19 vaccine

Precautions to COVID-19 Vaccine

- **History of:**
 - Diagnosed non-severe allergy to a component of COVID-19 vaccine
 - Non-severe, immediate allergic reaction (onset less than 4 hours) to a previous dose of one COVID-19 vaccine type*
- **Moderate or severe acute illness, with or without fever**
- **History of MIS-C or MIS-A**
- **History of myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine**

*The mRNA COVID-19 vaccines (Moderna and Pfizer-BioNTech) are one type of COVID-19 vaccine, and the protein subunit vaccine (Novavax) is another type of COVID-19 vaccine.

MIS-C = multisystem inflammatory syndrome in children; MIS-A = multisystem inflammatory syndrome in adults.

[Clinical Guidance for COVID-19 Vaccination | CDC](#)

COVID-19 Vaccine Safety Considerations: Myocarditis and Pericarditis (1)

- **A rare risk for myocarditis and pericarditis** has been observed following receipt of mRNA COVID-19 vaccines (i.e., Moderna or Pfizer-BioNTech) and Novavax COVID-19 Vaccine.

COVID-19 Vaccine Safety Considerations: Myocarditis and Pericarditis (2)

- **Myocarditis or pericarditis after a dose of an mRNA or Novavax vaccine:**
 - If occurs within 3 weeks, is a precaution to a subsequent dose of any COVID-19 vaccine
 - Experts advise that these people should generally not receive a subsequent dose of any COVID-19 vaccine.
 - If after risk assessment, a decision to administer a subsequent COVID-19 vaccine dose is made, wait until myocarditis or pericarditis has resolved.
 - Considerations for subsequent vaccination include:
 - Whether myocarditis or pericarditis was considered unrelated to mRNA or Novavax vaccination
 - Personal risk of severe acute COVID-19
 - Timing of immunomodulatory therapies

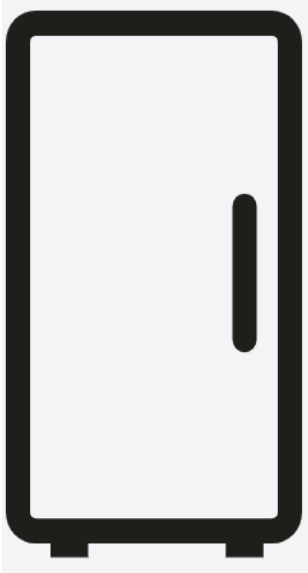
Observation Periods

- **Providers should consider observing all patients for 15 minutes after vaccination for syncope.**
- **Additionally, providers should consider observing people with the following medical histories for 30 minutes if a subsequent dose of the same vaccine type is administered:**
 - History of a non-severe, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of one COVID-19 vaccine type
 - History of a diagnosed non-severe allergy to a component of the COVID-19 vaccine

7

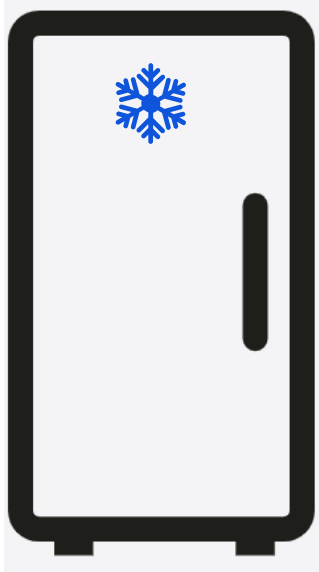
Storage and Handling

Novavax COVID-19 Vaccine

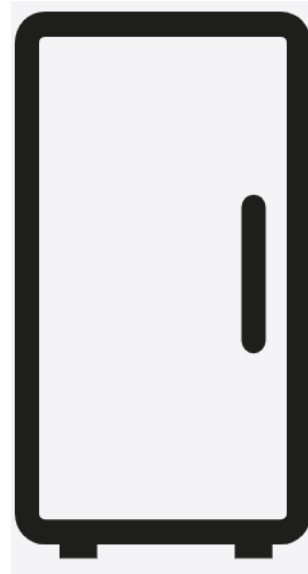


Store in the refrigerator
Between
2°C and 8°C
(36°F and 46°F)
until the expiration date

Moderna COVID-19 Vaccine

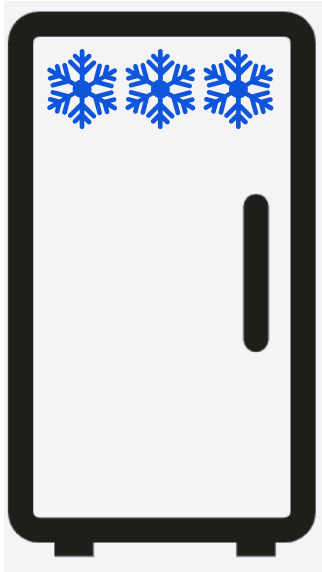


**Store in a standard
freezer**
Between
-50°C and -15°C
(-58°F and +5°F)
until the expiration date



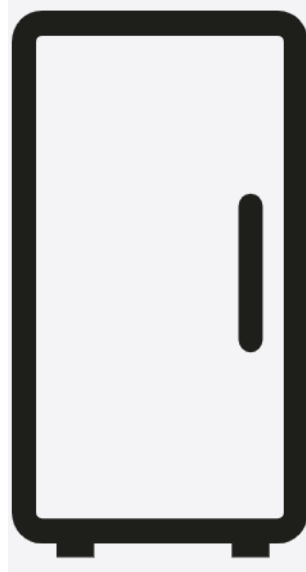
**Store in a
refrigerator**
Between
2°C and 8°C
(36°F and 46°F)
for up to 60 days

Pfizer-BioNTech COVID-19 Vaccine



**Store MDVs and SDVs
in an ultra-cold freezer**

Between
-90°C and -60°C
(-130°F and -76°F)
until the expiration
date



Store in a refrigerator
Between 2°C and 8°C
(36°F and 46°F)

MFSs: until the expiration date
MDVs and SDVs for up to 10 weeks

MDV=multidose vial; SDV=Single-dose vial; MFS=Manufacturer-filled syringe

[Vaccine Storage and Handling Toolkit - January 2023](#)

COVID-19 Vaccine Storage: Vials or Manufacturer-Filled Syringes

Vaccine Product – Prior to Use	Cool/Room Temperature 8° to 25°C (46° to 77°F)
Moderna 2024-25 MFS	For a total of 12 hours
Pfizer-BioNTech 2024-25 MDV or SDV	Up to 12 hours
Pfizer-BioNTech 2024-25 MFS	Up to 12 hours
Novavax 2024-25 MFS	DO NOT store at room temperatures.

MDV = multidose vial, SDV = single-dose vial, MFS = manufacturer-filled syringe

[Novavax COVID-19 Vaccine, Adjuvanted | FDA](#) | [Moderna COVID-19 Vaccine | FDA](#) | [SPIKEVAX | FDA](#) | [Pfizer-BioNTech COVID-19 Vaccine | FDA](#) | [COMIRNATY | FDA](#)

8

COVID-19 Vaccine Resources

COVID-19 Vaccine Clinical Resources

The screenshot displays the CDC Vaccines & Immunizations website. The main heading is "U.S. COVID-19 Vaccine Product Information". A sidebar on the left lists navigation options: "COVID-19 Vaccination", "Product Info by U.S. Vaccine" (with sub-item "EUI"), "Interim Clinical Considerations", "Provider Requirements and Support", "Vaccine Recipient Education", "Health Departments", "6 Things to Know", and "Vaccinate with Confidence".

The main content area includes a "Print" link, a "COVID-19 Immunization Schedule" section with the text "Find guidance for COVID-19 vaccination based on age, medical condition, and vaccination history.", and an "Information by Brand" section. This section is organized into a table with three columns: Pfizer-BioNTech, Moderna, and Novavax. Each column contains "At-a-Glance" and "Standing Orders" information. Below the table is a note: "Storage Labels and BUD Guidance (all brands) – includes labels and beyond-use date guidance for flu, COVID-19, and RSV immunization products." At the bottom is an "Education for Patients and Parents" section with introductory text and a list of links to fact sheets and information statements.

Pfizer-BioNTech	Moderna	Novavax
At-a-Glance	At-a-Glance	At-a-Glance
Standing Orders:	Standing Orders:	Standing Orders
<ul style="list-style-type: none">6 months–4 years of age5 years of age and older	<ul style="list-style-type: none">6 months–4 years of age5 years of age and older	

Education for Patients and Parents

Immunization providers should provide a Vaccine Information Statement (VIS) or Emergency Use Authorization (EUA) Factsheet for Recipients to a patient, parent, or legal representative before each dose of COVID-19 vaccine.

- [COVID-19 Pfizer-BioNTech Vaccine EUA Fact Sheet for individuals 6 months through 11 years of age](#)
- [COVID-19 Moderna Vaccine EUA Fact Sheet for individuals 6 months through 11 years of age](#)
- [COVID-19 Novavax EUA Recipient-Caregiver Fact Sheet 12 years of age and older](#)
- [COVID-19 Vaccine Information Statement for people 12 years of age and older](#)

Get the latest information for patients and parents on [current COVID-19 vaccine recommendations](#).

2024–25 Immunization Schedule

Product-specific information: At-A-Glances, Standing Orders

Patient/Parent Educational Materials

CDC Clinical Resources

- www.cdc.gov/vaccines
- Advisory Committee on Immunization Practices (ACIP) Vaccine Recommendations and Guidelines
- Recommended Immunization Schedules
- Vaccine Storage and Handling Toolkit
- Vaccine Information Statements

Pink Book Training
Materials



Continuing Education Information

- To claim continuing education (CE) for this course, please follow the steps below by July 1, 2026.
- Search and register for course **WD4810-082724** in **CDC TRAIN**.
- Pass the post-assessment at 80%.
- Complete the evaluation.
- Visit “Your Learning” to access your certificates and transcript.
- If you have any questions, contact **CDC TRAIN** at train@cdc.gov or CE Coordinator, Melissa Barnett, at MBarnett2@cdc.gov

CDC TRAIN

[HOME](#)

[COURSE CATALOG](#)

[CALENDAR](#)

[RESOURCES](#)

[HELP](#)



Email Us Your Immunization Questions



nipinfo@cdc.gov

Thank You From Atlanta!

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

