



Direct Healthcare Professional Communication

September 2022

COVID-19 Vaccination Errors in Children

Dear Healthcare Professional,

The Egyptian Pharmaceutical Vigilance Center of the Central Administration for Pharmaceutical Care at The Egyptian Drug Authority would like to inform you with the WHO statement on COVID-19 vaccination errors in children as follows:

Summary

- Vaccination errors have been reported in a number of countries.
- According to the WHO global database of individual case safety reports, about 24% of all case safety reports in children after COVID-19 vaccinations are related to vaccination errors.
- The types of vaccination errors include the use of adult dose in children, use in inappropriate age groups, underdose, overdose, use of unapproved COVID-19 vaccines, inappropriate scheduling between doses, preparation errors such as omitting a diluent before vaccination, administering a COVID-19 vaccine instead of another vaccine, failure to adhere to requisite storage conditions and use of expired doses.
- Vaccination errors have been reported with Pfizer-BioNTech, Moderna, AstraZeneca, Janssen, Sinovac, Novavax and other COVID-19 vaccines.

Background information on the security concerns

The vaccination errors have been reported through the passive vaccine safety surveillance systems and included in the media in a number of countries. On 19 May 2022, the US Advisory Committee on Immunization Practices (ACIP) presented data showing that half of all non-serious adverse events following Pfizer BNT162b2 vaccination in children aged 5-11 years submitted to the Vaccine Adverse Event Reporting System (VAERS) surveillance system through 24 April 2022 included an event associated with vaccination error (1).

According to the WHO global database of individual case safety reports (VigiBase data as of 10 July 2022), about 24% of all case safety reports in children after COVID-19 vaccinations are related to vaccination errors. The types of vaccination errors include the use of adult dose in children, use in





inappropriate age groups, underdose, overdose, use of unapproved COVID-19 vaccines, inappropriate scheduling between doses, preparation errors such as omitting a diluent before vaccination, administering a COVID-19 vaccine instead of another vaccine, failure to adhere to requisite storage conditions and use of expired doses. Vaccination errors have been reported with Pfizer-BioNTech, Moderna, AstraZeneca, Janssen, Sinovac, Novavax and other COVID-19 vaccines.

Although in very rare instances serious adverse events have been documented after vaccination against COVID-19 disease, none of these were verified to be related to vaccination errors of any kind. Children who received an incorrect dose of a COVID-19 vaccine or who received an inappropriately prepared vaccine have only reported expected adverse events like a sore arm, headache, and fever.

Healthcare providers are reminded to:

- Be alert when storing, preparing, and administering COVID-19 vaccines.
- Check the date of birth and current age of the child.
- Revise instructions for vaccine administration according to product label and dosing information in reference to age mentioned in the link attached ⁽¹⁾.
- Revise Immunization Schedule for Children 6 Months through 17 Years of Age attached ⁽²⁾.
- Ensure that vaccine vials are clearly labelled.
- Provide adequate training to other healthcare providers involved in COVID-19 vaccination of children.

If a vaccination error does occur, healthcare providers should immediately inform individuals and/or their guardians as well as report the incident to the relevant local vaccine safety surveillance system or immunization program. Children who have received an incorrect dose or an incorrectly prepared vaccine should be monitored for any adverse events.

References

- (1) American Academy of Pediatrics
https://downloads.aap.org/AAP/PDF/COVID%20Vaccine%20Dosing_Quick%20Reference.pdf?_ga=2.233317982.1540468903.1657898439-1537646742.1653333380
- (2) CDC Immunization Schedule for Children 6 Months through 17 Years of Age
<https://www.cdc.gov/vaccines/covid-19/downloads/COVID-19-immunization-schedule-ages-6months-older.pdf>
- (3) More information on guidance on what to do with subsequent doses if an error in administration occurs
<https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us-appendix.html>





<https://www.health.gov.au/resources/publications/atagi-clinical-guidance-on-covid-19-vaccine-administration-errors>

Call for reporting

Healthcare professionals are asked to report any suspected adverse reactions via the Egyptian reporting system:

Name: Egyptian Pharmaceutical Vigilance Center

Address: 21 Abd El Aziz Al Soud Street, El-Manial, Cairo, Egypt, And PO Box: 11451 Telephone: +202- 25354100, Extension: 1470 Fax: +202 - 23610497

Email: pv.followup@edaegypt.gov.eg

Online reporting: <https://primaryreporting.who-umc.org/EG>
QR Code:

Hotline: 15301



Pediatric COVID-19 Vaccine Dosing Quick Reference Guide

American Academy of Pediatrics

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Pfizer-BioNTech COVID-19 Vaccine Products

Monovalent Product

Maroon cap: 3 mcg/0.2 ml (dilute before use)

Orange cap: 10 mcg/0.2 ml (dilute before use)

Gray cap: 30 mcg/0.3 ml

Bivalent Product

Bivalent gray cap: 30 mcg/0.3 ml

Moderna COVID-19 Vaccine Products

Monovalent Product

Blue cap/magenta label: 25 mcg/0.25 ml

Blue cap/purple label: 50 mcg/0.5 ml

Red cap/blue label: 100 mcg/0.5 ml

Bivalent Product

Blue cap/gray label: 50 mcg/0.5 ml

Novavax COVID-19 Vaccine Product

Monovalent Product

Dark blue cap: 5 mcg/0.5 ml

Age at

First Dose

Pfizer-BioNTech COVID-19 Vaccine

Moderna COVID-19 Vaccine

Novavax COVID-19 Vaccine

Age at First Dose	Pfizer-BioNTech COVID-19 Vaccine			Moderna COVID-19 Vaccine			Novavax COVID-19 Vaccine		
6 months – 4 years	Dose 1 Maroon cap	Dose 2 3-8 weeks after dose 1 Maroon cap	Dose 3 at least 8 weeks after dose 2 Maroon cap	Dose 1 Blue cap/magenta label	Dose 2 4-8 weeks after dose 1 Blue cap/magenta label				
5 years	Dose 1 Orange cap	Dose 2 3-8 weeks after dose 1 Orange cap	Dose 3 at least 5 months after dose 2 Orange cap	Dose 1 Blue cap/magenta label	Dose 2 4-8 weeks after dose 1 Blue cap/magenta label				
6 – 11 years	Dose 1 Orange cap	Dose 2 3-8 weeks after dose 1 Orange cap	Dose 3 at least 5 months after dose 2 Orange cap	Dose 1 Blue cap/purple label	Dose 2 4-8 weeks after dose 1 Blue cap/purple label				
12 – 17 years	Dose 1 Gray cap	Dose 2 3-8 weeks after dose 1 Gray cap	Bivalent dose at least 2 months after last dose [†] Bivalent gray cap	Dose 1 Red cap/blue label	Dose 2 4-8 weeks after dose 1 Red cap/blue label	Bivalent dose at least 2 months after dose 2 Pfizer's Bivalent gray cap	Dose 1 Dark blue cap	Dose 2 3-8 weeks after dose 1 Dark blue cap	Bivalent dose at least 2 months after dose 2 Pfizer's Bivalent gray cap
18 years and older	Dose 1 Gray cap	Dose 2 3-8 weeks after dose 1 Gray cap	Bivalent dose at least 2 months after last dose [†] Bivalent gray cap OR Moderna's Blue cap/gray label	Dose 1 Red cap/blue label	Dose 2 4-8 weeks after dose 1 Red cap/blue label	Bivalent dose at least 2 months after last dose [†] Blue cap/gray label OR Pfizer's Bivalent gray cap	Dose 1 Dark blue cap	Dose 2 3-8 weeks after dose 1 Dark blue cap	Bivalent dose at least 2 months after dose 2 Pfizer's Bivalent gray cap OR Moderna's Blue cap/gray label

[†]At least 2 months after completion of monovalent primary series or last monovalent booster dose.

Primary series

Booster dose

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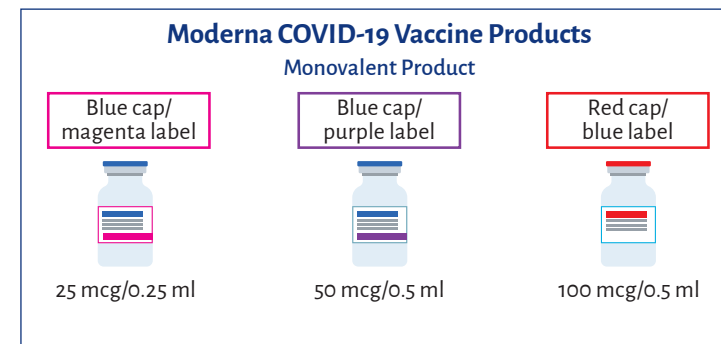
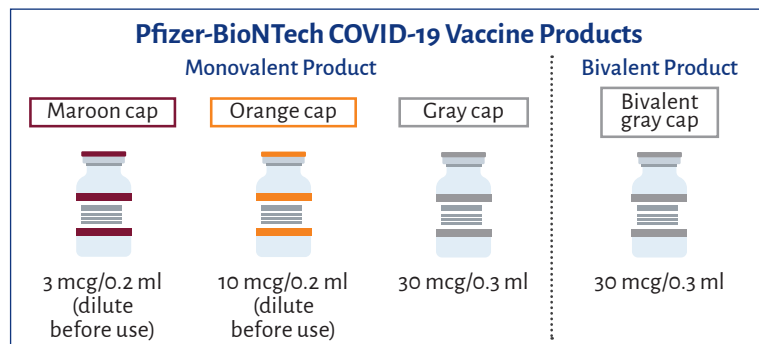
Pediatric COVID-19 Vaccine Dosing Quick Reference Guide

American Academy of Pediatrics

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Patients turning a different age between primary series doses: Children should receive the dose recommended for age at the time of vaccination.*



Pfizer-BioNTech COVID-19 Vaccine

4 years turning 5 years**	Dose 1 Maroon cap	Dose 2 3-8 weeks after dose 1 Maroon cap (if 4 years old) Orange cap (if 5 years old)	Dose 3 at least 8 weeks after dose 2 Orange cap
11 years turning 12 years	Dose 1 Orange cap	Dose 2 3-8 weeks after dose 1 Gray cap	Bivalent dose at least 2 months after dose 2 Bivalent gray cap

Moderna COVID-19 Vaccine

	<div>Dose 1</div> <div>Blue cap/ magenta label</div>	<div>Dose 2</div> <div>4-8 weeks after dose 1</div> <div>Blue cap/ purple label</div>	
	<div>Dose 1</div> <div>Blue cap/ purple label</div>	<div>Dose 2</div> <div>4-8 weeks after dose 1</div> <div>Red cap/ blue label</div>	<div>Bivalent dose</div> <div>at least 2 months after dose 2</div> <div>Pfizer's</div> <div>Bivalent gray cap</div>

*CDC and AAP recommendation; FDA allows for children crossing age categories to receive either the lower or higher dose after the birthday, so if this were to occur, these doses would count and repeat vaccination is not necessary.

**Children turning 4 to 5 years of age between Dose 1 and Dose 2 also have the option to receive a 2-dose primary series using orange cap.

Primary series

Booster dose

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Pediatric COVID-19 Vaccine Dosing Quick Reference Guide: Moderately to Severely Immunocompromised Children



Pfizer-BioNTech COVID-19 Vaccine Products

Monovalent Product

Maroon cap: 3 mcg/0.2 ml (dilute before use)

Orange cap: 10 mcg/0.2 ml (dilute before use)

Gray cap: 30 mcg/0.3 ml

Bivalent Product

Bivalent gray cap: 30 mcg/0.3 ml

Moderna COVID-19 Vaccine Products

Monovalent Product

Blue cap/magenta label: 25 mcg/0.25 ml

Blue cap/purple label: 50 mcg/0.5 ml

Red cap/blue label: 100 mcg/0.5 ml

Bivalent Product

Blue cap/gray label: 50 mcg/0.5 ml

Novavax COVID-19 Vaccine Product

Monovalent Product

Dark blue cap: 5 mcg/0.5 ml

Age at First Dose	Pfizer-BioNTech COVID-19 Vaccine				Moderna COVID-19 Vaccine				Novavax COVID-19 Vaccine		
6 months–4 years	Dose 1 Maroon cap	Dose 2 3 weeks after dose 1 Maroon cap	Dose 3 at least 8 weeks after dose 2 Maroon cap		Dose 1 Blue cap/magenta label	Dose 2 4 weeks after dose 1 Blue cap/magenta label	Dose 3 at least 4 weeks after dose 2 Blue cap/magenta label				
5 years	Dose 1 Orange cap	Dose 2 3 weeks after dose 1 Orange cap	Dose 3 at least 4 weeks after dose 2 Orange cap	Dose 4 at least 3 months after dose 3 Orange cap	Dose 1 Blue cap/magenta label	Dose 2 4 weeks after dose 1 Blue cap/magenta label	Dose 3 at least 4 weeks after dose 2 Blue cap/magenta label				
6–11 years	Dose 1 Orange cap	Dose 2 3 weeks after dose 1 Orange cap	Dose 3 at least 4 weeks after dose 2 Orange cap	Dose 4 at least 3 months after dose 3 Orange cap	Dose 1 Blue cap/purple label	Dose 2 4 weeks after dose 1 Blue cap/purple label	Dose 3 at least 4 weeks after dose 2 Blue cap/purple label				
12–17 years	Dose 1 Gray cap	Dose 2 3 weeks after dose 1 Gray cap	Dose 3 at least 4 weeks after dose 2 Gray cap	Bivalent dose at least 2 months after last dose† Bivalent gray cap	Dose 1 Red cap/blue label	Dose 2 4 weeks after dose 1 Red cap/blue label	Dose 3 at least 4 weeks after dose 2 Red cap/blue label	Bivalent dose at least 2 months after dose 3 Pfizer's Bivalent gray cap	Dose 1 Dark blue cap	Dose 2 3 weeks after dose 1 Dark blue cap	Bivalent dose at least 2 months after dose 2 Pfizer's Bivalent gray cap
18 years and older	Dose 1 Gray cap	Dose 2 3 weeks after dose 1 Gray cap	Dose 3 at least 4 weeks after dose 2 Gray cap	Bivalent dose at least 2 months after last dose† Bivalent gray cap OR Moderna's Blue cap/gray label	Dose 1 Red cap/blue label	Dose 2 4 weeks after dose 1 Red cap/blue label	Dose 3 at least 4 weeks after dose 2 Red cap/blue label	Bivalent dose at least 2 months after last dose† Blue cap/gray label OR Pfizer's Bivalent gray cap	Dose 1 Dark blue cap	Dose 2 3 weeks after dose 1 Dark blue cap	Bivalent dose at least 2 months after dose 2 Moderna's Blue cap/gray label OR Pfizer's Bivalent gray cap

†At least 2 months after completion of monovalent primary series or last monovalent booster dose.

Primary series

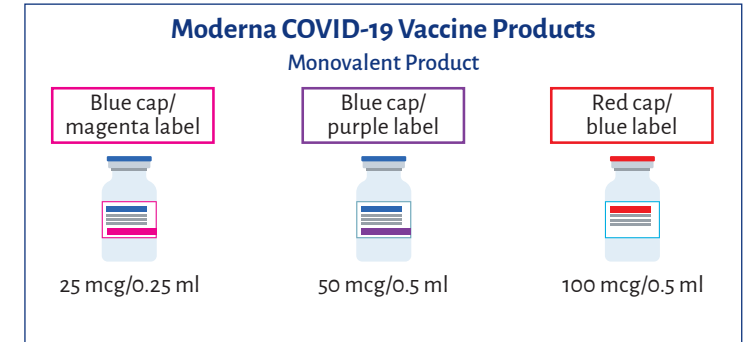
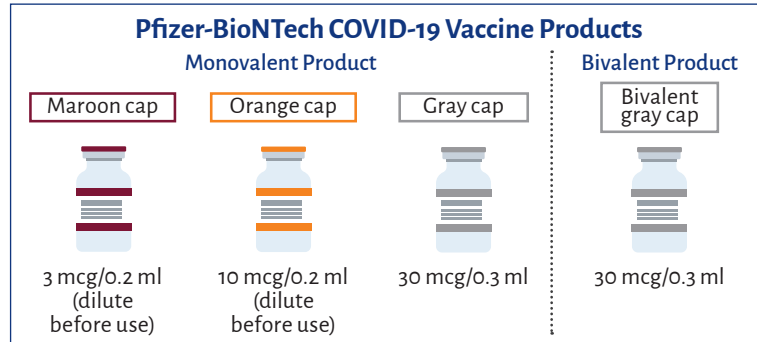
Booster dose

View online at aap.org/CovidVaccineGuide

Last updated September 2022

Pediatric COVID-19 Vaccine Dosing Quick Reference Guide: Moderately to Severely Immunocompromised Children

Patients turning a different age between primary series doses: Children should receive the dose recommended for age at the time of vaccination.*



Pfizer-BioNTech COVID-19 Vaccine

4 years turning 5 years	Dose 1 Maroon cap	Dose 2 3 weeks after dose 1 Maroon cap (if 4 years old) Orange cap (if 5 years old)	Dose 3 at least 8 weeks after dose 2 Maroon cap (if 4 years old) at least 4 weeks after dose 2 Orange cap (if 5 years old)	Dose 4 at least 3 months after dose 3 Orange cap
11 years turning 12 years	Dose 1 Orange cap	Dose 2 3 weeks after dose 1 Orange cap (if 11 years old) Gray cap (if 12 years old)	Dose 3 at least 4 weeks after dose 2 Orange cap (if 11 years old) Gray cap (if 12 years old)	Bivalent dose at least 2 months after last dose† Bivalent gray cap

Moderna COVID-19 Vaccine

	Dose 1 Blue cap/ magenta label	Dose 2 4 weeks after dose 1 Blue cap/ magenta label (if 5 years old) Blue cap/ purple label (if 6 years old)	Dose 3 at least 4 weeks after dose 2 Blue cap/ purple label	
	Dose 1 Blue cap/ purple label	Dose 2 4 weeks after dose 1 Blue cap/ purple label (if 11 years old) Red cap/ blue label (if 12 years old)	Dose 3 at least 4 weeks after dose 2 Red cap/ blue label	Bivalent dose at least 2 months after last dose [†] Pfizer's Bivalent gray cap

*CDC and AAP recommendation; FDA allows for children crossing age categories to receive either the lower or higher dose after the birthday, so if this were to occur, these doses would count and repeat vaccination is not necessary.

†At least 2 months after completion of monovalent primary series or last monovalent booster dose.

COVID-19 Vaccine

Interim COVID-19 Immunization Schedule for Persons 6 Months of Age and Older



The following tables provide guidance for COVID-19 vaccination schedules based on age and medical condition.

- Administer the appropriate vaccine product based on the recipient's age and the product's age indications.
- Monovalent vaccine should be used for primary series doses. COVID-19 vaccine is a 2- or 3-dose primary series, depending on the recipient's age, immune state and the product used.
- For persons 12 years of age and older, administer a booster dose of bivalent vaccine after the primary series, regardless of the number of previous monovalent booster doses.
- COVID-19 vaccines may be administered on the same day as other vaccines, including influenza vaccine.

Table 1. Immunization Schedule for Children 6 Months through 17 Years of Age

Type	Recipient Age	Product*	For Most People		Those Who ARE Moderately or Severely Immunocompromised	
			Doses	Interval Between Doses [†]	Doses	Interval Between Doses
mRNA vaccine	6 months through 5 years	MONOVALENT Moderna: Blue vial cap with magenta-bordered label	Primary series: Monovalent			
			Dose 1 to 2	At least 4–8 weeks [‡]	Dose 1 to 2	At least 4 weeks
					Dose 2 to 3	At least 4 weeks
	6 through 11 years	MONOVALENT Moderna: Blue vial cap with purple-bordered label	Primary series: Monovalent			
			Dose 1 to 2	At least 4–8 weeks [‡]	Dose 1 to 2	At least 4 weeks
					Dose 2 to 3	At least 4 weeks
	12 through 17 years	MONOVALENT Moderna: Red vial cap with blue-bordered label	Dose 1 to 2	At least 4–8 weeks [‡]	Dose 1 to 2	At least 4 weeks
					Dose 2 to 3	At least 4 weeks
		Pfizer-BioNTech bivalent vaccine (gray cap) should be used for the booster dose.	Booster dose: Bivalent			
			Dose 2 to 3	At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)
	6 months through 4 years	MONOVALENT Pfizer-BioNTech: Maroon vial cap with maroon-bordered label	Primary series: Monovalent			
			Dose 1 to 2	At least 3–8 weeks [‡]	Dose 1 to 2	At least 3 weeks
			Doses 2 and 3	At least 8 weeks	Dose 2 to 3	At least 8 weeks
	5 through 11 years	MONOVALENT Pfizer-BioNTech: Orange vial cap with orange-bordered label	Primary series: Monovalent			
			Dose 1 to 2	At least 3–8 weeks [‡]	Dose 1 to 2	At least 3 weeks
					Dose 2 to 3	At least 8 weeks
			Booster dose: Monovalent			
	Dose 2 to 3	At least 5 months	Dose 3 to 4	At least 3 months		
	12 years through 17 years	MONOVALENT Pfizer-BioNTech: Gray vial cap with gray-bordered label	Primary series: Monovalent			
			Dose 1 to 2	At least 3-8 weeks [‡]	Dose 1 to 2	At least 3 weeks
		Dose 2 to 3			At least 4 weeks	
		BIVALENT - Pfizer-BioNTech: Gray vial cap with gray-bordered label	Booster dose: Bivalent			
	Dose 2 to 3		At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)	
Protein subunit vaccine	12 years and older	MONOVALENT Novavax	Primary series: Monovalent			
			Dose 1 to 2	At least 3–8 weeks [‡]	Dose 1 to 2	At least 3 weeks
		Pfizer-BioNTech bivalent vaccine (gray cap) should be used for the booster dose.	Booster dose: Bivalent			
			Dose 2 to 3	At least 8 weeks (2 months)	Dose 2 to 3	At least 8 weeks (2 months)

* Complete the primary series with same product. If the vaccine product previously administered cannot be determined, is no longer available or contraindicated, any age-appropriate monovalent COVID-19 vaccine may be administered at least 28 days after the first dose to complete the primary series.

[†] Persons with a recent SARS-CoV-2 infection may consider delaying a primary series or booster dose by 3 months from symptom onset or positive test (if infection was asymptomatic).

[‡] Some studies in adolescents and adults have shown the small risk of myocarditis associated with mRNA or Novavax COVID-19 Vaccines might be reduced and peak antibody responses and vaccine effectiveness may be increased with an interval longer than 4 weeks. An 8-week interval may be optimal for people who are not moderately or severely immunocompromised and ages 6 months–64 years, especially for males ages 12–39 years.

COVID-19 Vaccine

Interim COVID-19 Immunization Schedule
for Persons 6 Months of Age and Older



Table 2. Immunization Schedule for Persons 18 Years of Age

Type	Recipient Age	Product*	For Most People		Those Who ARE Moderately or Severely Immunocompromised	
			Doses	Interval Between Doses [†]	Doses	Interval Between Doses
mRNA vaccine	18 years and older	MONOVALENT Moderna Red vial cap with a blue-bordered label	Primary series: Monovalent			
			Dose 1 to 2	At least 4–8 weeks [‡]	Dose 1 to 2	At least 4 weeks
					Dose 2 to 3	At least 4 weeks
		BIVALENT Moderna Blue cap with gray bordered label	Booster dose: Bivalent			
	Dose 2 to 3		At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)	
	18 years and older	MONOVALENT Pfizer-BioNTech Gray vial cap with gray-bordered label	Primary series: Monovalent			
			Dose 1 to 2	At least 3-8 weeks [‡]	Dose 1 to 2	At least 3 weeks
					Dose 2 to 3	At least 4 weeks
		BIVALENT Pfizer-BioNTech: Gray vial cap with gray-bordered label	Booster dose: Bivalent			
	Dose 2 to 3		At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)	
Protein subunit vaccine	12 years and older	MONOVALENT Novavax	Primary series: Monovalent			
			Dose 1 to 2	At least 3–8 weeks [‡]	Dose 1 to 2	At least 3 weeks
		Moderna or Pfizer-BioNTech bivalent COVID-19 vaccine should be used for the booster dose.	Booster dose: Bivalent			
			Dose 2 to 3	At least 8 weeks (2 months)	Dose 2 to 3	At least 8 weeks (2 months)
Adenovirus vector vaccine	18 years and older	MONOVALENT Janssen	Janssen COVID-19 vaccine is authorized for use in certain limited situations due to safety considerations. ⁵			
		Moderna or Pfizer-BioNTech bivalent COVID-19 vaccine should be used for the booster dose.	Booster dose: Bivalent			
			Administer a single booster dose at least 8 weeks (2 months) after the previous dose.			

* Complete the primary series with same product. If the vaccine product previously administered cannot be determined, is no longer available or contraindicated, any age-appropriate monovalent COVID-19 vaccine may be administered at least 28 days after the first dose to complete the primary series. Moderna or Pfizer-BioNTech bivalent COVID-19 vaccine can be administered for the booster dose, regardless of the primary series product.

† Persons with a recent SARS-CoV-2 infection may consider delaying a primary series or booster dose by 3 months from symptom onset or positive test (if infection was asymptomatic).

‡ Some studies in adolescents and adults have shown the small risk of myocarditis associated with mRNA or Novavax COVID-19 Vaccines might be reduced and peak antibody responses and vaccine effectiveness may be increased with an interval longer than 4 weeks. An 8-week interval may be optimal for people who are not moderately or severely immunocompromised and ages 6 months–64 years, especially for males ages 12–39 years.

§ For guidance on retrospective record review, scheduling and administration see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us-appendix.html#appendix-a

COVID-19 Vaccine

Interim COVID-19 Immunization Schedule for Persons 6 Months of Age and Older

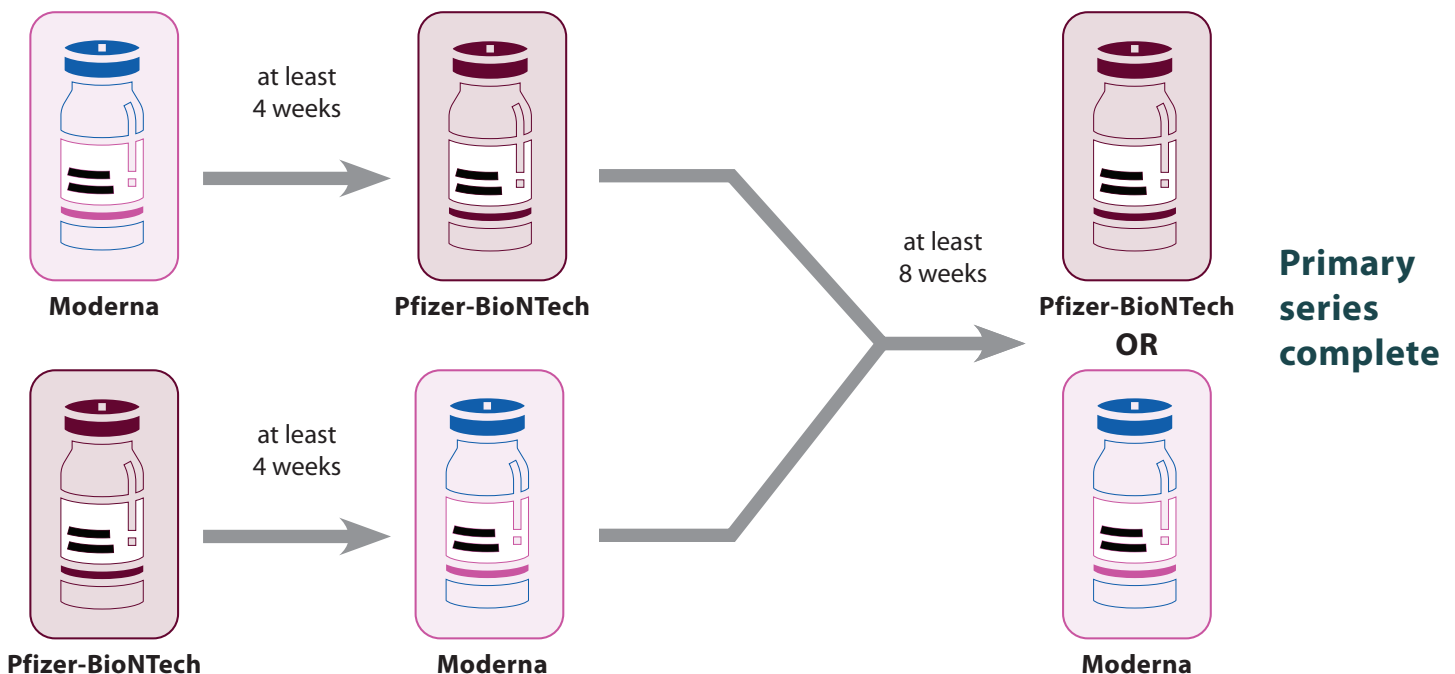


Special Situations When Vaccinating Children

- COVID-19 vaccine from the same manufacturer should be used for the primary series. If a different manufacturer is administered, follow the guidance below:
 - If a dose of the age-appropriate product from BOTH Moderna and Pfizer-BioNTech COVID-19 is given, count both doses if the recommended interval between doses has been met.
 - Complete the series following the Pfizer-BioNTech 3-dose schedule using an age-appropriate vaccine from either manufacturer. See examples.
 - Repeating doses is not recommended.
 - This guidance applies to:
 - All eligible children, including those who are moderately or severely immunocompromised.
 - Vaccines from both manufacturers, regardless which vaccine was given first.

Examples:

Vaccination history: 1 dose of Pfizer-BioNTech and 1 dose of Moderna COVID-19 vaccines.



2. Children who have a birthday before completing the primary series

- Vaccine product and dosage (amount of vaccine given) is determined by the recipient's age.
- CDC recommends administering the age-appropriate product based on the child's age the day the vaccine will be administered – even if the series was started with a vaccine with younger age indications.
- If a dose(s) of the vaccine product indicated for the younger age group is administered, count the dose(s). Revaccination is not indicated. It is NOT considered a vaccine administration error.
- For detailed guidance see:
 - Pfizer-BioNTech COVID-19 Vaccine: For Children who Transition from a Younger to Older Age Group (www.cdc.gov/vaccines/covid-19/downloads/Pfizer-Child-Age-Transition-508.pdf)
 - Moderna COVID-19 Vaccine: For Children who Transition from a Younger to Older Age Group (www.cdc.gov/vaccines/covid-19/downloads/Moderna-Child-Age-Transition-508.pdf)

COVID-19 Vaccine

Interim COVID-19 Immunization Schedule
for Persons 6 Months of Age and Older



Table 3. COVID-19 Vaccine Products Summary

Type	Product*	Age Indications†	Diluent	Dose/Injection Amount	
mRNA vaccine	MONOVALENT Moderna: Blue vial cap with magenta-bordered label	6 months through 5 years	NONE	Any dose in the primary series. Booster doses are not recommended for this age group.	25 µg/ 0.25 mL
	MONOVALENT Moderna: Blue vial cap with purple-bordered label	6 through 11 years	NONE	Any dose in the primary series. Booster doses are not authorized for children, ages 6 through 11 years, who received a Moderna primary series.	50 µg/0.5 mL
	MONOVALENT Moderna: Red vial cap with blue- bordered label	12 years and older	NONE	Any dose in the primary series.	100 µg/ 0.5 mL
	BIVALENT Moderna: Blue vial cap with gray-bordered label	18 years and older	NONE	Booster dose	50 µg/0.5 mL
	MONOVALENT Pfizer-BioNTech: Maroon vial cap with maroon-bordered label	6 months through 4 years	2.2 mL 0.9% sodium chloride (normal saline, preservative-free)	Any dose in the primary series. Booster doses are not recommended for this age group.	3 µg/0.2 mL
	MONOVALENT Pfizer-BioNTech: Orange vial cap with orange-bordered label	5 through 11 years	1.3 mL 0.9% sodium chloride (normal saline, preservative-free)	Any dose in the primary series and booster doses	10 µg/0.2 mL
	MONOVALENT Pfizer-BioNTech: Gray vial cap with a gray- bordered label	12 years and older	NONE	Any dose in the primary series	30 µg/0.3 mL
	BIVALENT Pfizer-BioNTech: Gray vial cap with gray-bordered label	12 years and older	NONE	Booster dose	30 µg/0.3 mL
Protein sub unit vaccine	MONOVALENT Novavax: Royal blue cap	12 years and older	NONE	Any dose in the primary series.	5 µg rS and 50 µg of Matrix-M™ adjuvant/0.5 mL
Viral vector vaccine	MONOVALENT Janssen Blue Cap	18 years and older	NONE	Janssen COVID-19 vaccine is authorized for use in certain limited situations due to safety considerations.‡	5×10 ¹⁰ viral particles/0.5 mL

* Complete the primary series with same product. If the vaccine product previously administered cannot be determined, is no longer available or contraindicated, any age-appropriate monovalent COVID-19 vaccine may be administered at least 28 days after the first dose to complete the primary series. Age-appropriate Moderna or Pfizer-BioNTech bivalent COVID-19 vaccine can be administered for the booster dose, regardless of the primary series product.

† Administer the appropriate vaccine product based on the recipient's age and the vaccine product's age indications.

‡ For guidance on retrospective record review, scheduling and administration see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us-appendix.html#appendix-a

CDC Resources

CDC COVID-19 vaccine clinical training and materials at: www.cdc.gov/vaccines/covid-19/info-by-product/index.html

CDC Interim Clinical Considerations for the Use of COVID-19 Vaccines Currently Approved or Authorized in the United States at: www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#primary-series

CDC Vaccine administration clinical materials at: www.cdc.gov/vaccines/hcp/admin/resource-library.html

CDC Vaccine Storage and Handling Toolkit at: www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html