

# Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger

United States  
2025

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



## Vaccines and Other Immunizing Agents in the Child and Adolescent Immunization Schedule\*

Monoclonal antibody	Abbreviation(s)	Trade name(s)
Respiratory syncytial virus monoclonal antibody	RSV-mAb	Beyfortus Enflonsia
Vaccine	Abbreviation(s)	Trade name(s)
COVID-19 vaccine	1vCOV-mRNA	Comirnaty mNEXSPIKE Spikevax
	1vCOV-aPS	Nuvaxovid
Dengue vaccine	DEN4CYD	Dengvaxia
Diphtheria, tetanus, and acellular pertussis vaccine	DTaP	Daptacel Infanrix
<i>Haemophilus influenzae</i> type b vaccine	Hib (PRP-T)	ActHIB Hiberix
	Hib (PRP-OMP)	PedvaxHIB
Hepatitis A vaccine	HepA	Havrix Vaqta
Hepatitis B vaccine	HepB	Engerix-B Recombivax HB
Human papillomavirus vaccine	HPV	Gardasil 9
Influenza vaccine (inactivated: egg-based)	IIV3	Multiple
Influenza vaccine (inactivated: cell-culture)	cclIV3	Flucelvax
Influenza vaccine (recombinant)	RIV3	Flublok
Influenza vaccine (live, attenuated)	LAIV3	FluMist
Measles, mumps, and rubella vaccine	MMR	M-M-R II Priorix
Meningococcal serogroups A, C, W, Y vaccine	MenACWY-CRM	Menveo
	MenACWY-TT	MenQuadfi
Meningococcal serogroup B vaccine	MenB-4C	Bexsero
	MenB-FHbp	Trumenba
Meningococcal serogroup A, B, C, W, Y vaccine	MenACWY-TT/MenB-FHbp	Penbraya
	MenACWY-CRM/MenB-4C	Penmenvay
Mpox vaccine	Mpox	JYNNEOS
Pneumococcal conjugate vaccine	PCV15	Vaxneuvance
	PCV20	Prenvar 20
Pneumococcal polysaccharide vaccine	PPSV23	Pneumovax 23
Poliovirus vaccine (inactivated)	IPV	Ipol
Respiratory syncytial virus vaccine	RSV	Abrysvo
Rotavirus vaccine	RV1	Rotarix
	RV5	RotaTeq
Tetanus, diphtheria, and acellular pertussis vaccine	Tdap	Adacel Boostrix
Tetanus and diphtheria vaccine	Td	Tenivac Tdvax
Varicella vaccine	VAR	Varivax
Combination vaccines (use combination vaccines instead of separate injections when appropriate)		
DTaP, hepatitis B, and inactivated poliovirus vaccine	DTaP-HepB-IPV	Pediarix
DTaP, inactivated poliovirus, and <i>Haemophilus influenzae</i> type b vaccine	DTaP-IPV/Hib	Pentacel
DTaP and inactivated poliovirus vaccine	DTaP-IPV	Kinrix Quadracel
DTaP, inactivated poliovirus, <i>Haemophilus influenzae</i> type b, and hepatitis B vaccine	DTaP-IPV-Hib-HepB	Vaxelis
Measles, mumps, rubella, and varicella vaccine	MMRV	ProQuad

\*Administer recommended vaccines if immunization history is incomplete or unknown. Do not restart or add doses to vaccine series for extended intervals between doses. When a vaccine is not administered at the recommended age, administer at a subsequent visit when indicated. The use of trade names is for identification purposes only and does not imply endorsement by the AAP.

## How to use the child and adolescent immunization schedule

- 1 Determine recommended vaccine by age (**Table 1**)
- 2 Determine recommended interval for catch-up vaccination (**Table 2**)
- 3 Assess need for additional recommended vaccines by medical condition or other indication (**Table 3**)
- 4 Review vaccine types, frequencies, intervals, and considerations for special situations (**Notes**)
- 5 Review contraindications and precautions for vaccine types (**Appendix**)
- 6 Review new or updated American Academy of Pediatrics (AAP) guidance (**Addendum**)

## Report

- Suspected cases of reportable vaccine-preventable diseases or outbreaks to your state or local health department
- Clinically significant adverse events to the Vaccine Adverse Event Reporting System (VAERS) at [www.vaers.hhs.gov](http://www.vaers.hhs.gov) (Accessed August 11, 2025) or 800-822-7967
- For RSV-mAb products, clinically significant adverse events to MedWatch Adverse Event Report Program at [www.accessdata.fda.gov/scripts/medwatch/index.cfm](http://www.accessdata.fda.gov/scripts/medwatch/index.cfm) (Accessed August 11, 2025). If co-administered with other products, then report to VAERS.

## Questions or comments

Submit a question or comment to [www.aap.org/en/forms/immunization-schedule-questions](http://www.aap.org/en/forms/immunization-schedule-questions).

## Helpful information

- **Best practices for immunization (including contraindications and precautions):** [www.aap.org/immunization](http://www.aap.org/immunization) and [www.immunize.org](http://www.immunize.org)
- **Red Book: 2024–2027 Report of the Committee on Infectious Diseases (33<sup>rd</sup> Edition):** [www.aapRedBook.org](http://www.aapRedBook.org)
- **Vaccine information statements:** [www.immunize.org/vaccines/vis/about-vis](http://www.immunize.org/vaccines/vis/about-vis)

For the most up-to-date version,  
visit [AAP.org/ImmunizationSchedule](http://AAP.org/ImmunizationSchedule)



Table 1

# Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2025

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These recommendations must be read with the **Notes** that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the outlined purple bars. To determine minimum intervals between doses, see the catch-up schedule (Table 2).

Vaccine and other immunizing agents	Birth	1 mos	2 mos	4 mos	6 mos	8 mos	9 mos	12 mos	15 mos	18 mos	19–23 mos	2–3 yrs	4–6 yrs	7–10 yrs	11–12 yrs	13–15 yrs	16 yrs	17–18 yrs
Respiratory syncytial virus (RSV-mAb [nirsevimab, clesrovimab])	1 dose during RSV season depending on maternal RSV vaccination status (See Notes)					1 dose nirsevimab during RSV season (See Notes)												
Hepatitis B (HepB)	1 <sup>st</sup> dose	2 <sup>nd</sup> dose			3 <sup>rd</sup> dose													
Rotavirus (RV): RV1 (2-dose series), RV5 (3-dose series)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	See Notes													
Diphtheria, tetanus, and acellular pertussis (DTaP <7 yrs)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	3 <sup>rd</sup> dose				4 <sup>th</sup> dose			5 <sup>th</sup> dose						
Haemophilus influenzae type b (Hib)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	See Notes				3 <sup>rd</sup> or 4 <sup>th</sup> dose (See Notes)									
Pneumococcal conjugate (PCV15, PCV20)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	3 <sup>rd</sup> dose				4 <sup>th</sup> dose									
Inactivated poliovirus (IPV)			1 <sup>st</sup> dose	2 <sup>nd</sup> dose	3 <sup>rd</sup> dose								4 <sup>th</sup> dose	See Notes				
COVID-19 (1vCOV-mRNA, 1vCOV-aPS)					1 or more doses of 2025–2026 vaccine (See Notes)							1 dose of 2025–2026 vaccine (See Notes)						
Influenza					1 or 2 doses annually (See Notes)										1 dose annually (See Notes)			
Measles, mumps, and rubella (MMR)					See Notes			1 <sup>st</sup> dose				2 <sup>nd</sup> dose						
Varicella (VAR)								1 <sup>st</sup> dose				2 <sup>nd</sup> dose						
Hepatitis A (HepA)					See Notes			2-dose series (See Notes)										
Tetanus, diphtheria, and acellular pertussis (Tdap ≥7 yrs)															1 <sup>st</sup> dose			
Human papillomavirus (HPV)															2-dose series	See Notes		
Meningococcal (MenACWY-CRM ≥2 mos, MenACWY-TT ≥2years)			See Notes											1 <sup>st</sup> dose		2 <sup>nd</sup> dose		
Meningococcal B (MenB-4C, MenB-FHbp)															See Notes			
Respiratory syncytial virus vaccine (RSV [Abrysvo])															Seasonal administration during pregnancy if not previously vaccinated			
Dengue (DEN4CYD: 9–16 yrs)															Seropositive in areas with endemic dengue (See Notes)			
Mpox																		



Range of recommended ages for all children



Range of recommended ages for catch-up vaccination



Range of recommended ages for certain high-risk groups or populations



Recommended vaccination for those who desire protection



Recommended vaccination based on shared clinical decision-making

Table 2

## Recommended Catch-up Immunization Schedule for Children and Adolescents Who Start Late or Who Are More than 1 Month Behind, United States, 2025

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The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. **Always use this table in conjunction with Table 1 and the Notes that follow.**

Children age 4 months through 6 years					
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Hepatitis B	Birth	4 weeks	8 weeks <i>and</i> at least 16 weeks after first dose: minimum age for the final dose is 24 weeks		
Rotavirus	6 weeks: Maximum age for first dose is 14 weeks, 6 days.	4 weeks	4 weeks: maximum age for final dose is 8 months, 0 days		
Diphtheria, tetanus, and acellular pertussis	6 weeks	4 weeks	4 weeks	6 months	6 months: A fifth dose is not necessary if the fourth dose was administered at age 4 years or older <i>and</i> at least 6 months after dose 3
<i>Haemophilus influenzae</i> type b	6 weeks	No further doses needed if first dose was administered at age 15 months or older 4 weeks if first dose was administered before the 1 <sup>st</sup> birthday 8 weeks (as final dose) if first dose was administered at age 12 through 14 months	No further doses needed if previous dose was administered at age 15 months or older 4 weeks if current age is younger than 12 months and first dose was administered at younger than age 7 months <i>and</i> at least 1 previous dose was PRP-T (ActHib, Pentacel, Hiberix), Vaxelis, or unknown 8 weeks and age 12 through 59 months (as final dose) if current age is younger than 12 months <i>and</i> first dose was administered at age 7 through 11 months; <b>OR</b> if current age is 12 through 59 months <i>and</i> first dose was administered before the 1 <sup>st</sup> birthday <i>and</i> second dose was administered at younger than 15 months; <b>OR</b> if both doses were PedvaxHIB and were administered before the 1 <sup>st</sup> birthday	8 weeks (as final dose): This dose only necessary for children age 12 through 59 months who received 3 doses before the 1 <sup>st</sup> birthday	
Pneumococcal conjugate	6 weeks	No further doses needed for healthy children if first dose was administered at age 24 months or older 4 weeks if first dose was administered before the 1 <sup>st</sup> birthday 8 weeks (as final dose for healthy children) if first dose was administered at the 1 <sup>st</sup> birthday or after	No further doses needed for healthy children if previous dose was administered at age 24 months or older 4 weeks: if current age is younger than 12 months <i>and</i> previous dose was administered at <7 months old 8 weeks (as final dose for healthy children) if previous dose was administered between 7–11 months (wait until at least 12 months old); <b>OR</b> if current age is 12 months or older <i>and</i> at least 1 dose was administered before age 12 months	8 weeks (as final dose): This dose is only necessary for children age 12 through 59 months regardless of risk, or age 60 through 71 months with any risk, who received 3 doses before age 12 months	
Inactivated poliovirus	6 weeks	4 weeks	4 weeks if current age is <4 years 6 months (as final dose) if current age is 4 years or older	6 months (minimum age 4 years for final dose)	
Measles, mumps, and rubella	12 months	4 weeks			
Varicella	12 months	3 months			
Hepatitis A	12 months	6 months			
Meningococcal ACWY	2 months MenACWY-CRM 2 years MenACWY-TT	8 weeks	See Notes	See Notes	
Children and adolescents age 7 through 18 years					
Meningococcal ACWY	Not applicable (N/A)	8 weeks			
Tetanus, diphtheria; tetanus, diphtheria, and acellular pertussis	7 years	4 weeks	4 weeks: if first dose of DTaP/DT was administered before the 1 <sup>st</sup> birthday 6 months (as final dose): if first dose of DTaP/DT or Tdap/Td was administered at or after the 1 <sup>st</sup> birthday	6 months: if first dose of DTaP/DT was administered before the 1 <sup>st</sup> birthday	
Human papillomavirus	9 years	Routine dosing intervals are recommended			
Hepatitis A	N/A	6 months			
Hepatitis B	N/A	4 weeks	8 weeks <i>and</i> at least 16 weeks after first dose		
Inactivated poliovirus	N/A	4 weeks	6 months: A fourth dose is not necessary if the third dose was administered at age 4 years or older <i>and</i> at least 6 months after the previous dose	A fourth dose of IPV is indicated if all previous doses were administered at <4 years <b>OR</b> if the third dose was administered <6 months after the second dose	
Measles, mumps, and rubella	N/A	4 weeks			
Varicella	N/A	3 months if younger than age 13 years. 4 weeks if age 13 years or older			
Dengue	9 years	6 months	6 months		

Table 3

# Recommended Child and Adolescent Immunization Schedule by Medical Indication, United States, 2025

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Always use this table in conjunction with Table 1 and the Notes that follow. Medical conditions are often not mutually exclusive. If multiple conditions are present, refer to guidance in all relevant columns. See Notes for medical conditions not listed.

Vaccine and other immunizing agents	Pregnancy	Immunocompromised (excluding HIV infection) <sup>a</sup>	HIV infection CD4 percentage and count <sup>a</sup> <15% or <200/mm <sup>3</sup> ≥15% and ≥200/mm <sup>3</sup>	CSF leak or cochlear implant	Asplenia or persistent complement component deficiencies	Heart disease or chronic lung disease (CLD)	Kidney failure, End-stage renal disease or on dialysis	Chronic liver disease	Diabetes
RSV-mAb (nirsevimab, clesrovimab)		1 dose clesrovimab or nirsevimab during 1 <sup>st</sup> RSV season depending on maternal RSV vaccination status (See Notes)							
		1 dose nirsevimab 2 <sup>nd</sup> RSV season (See Notes)				1 dose nirsevimab 2 <sup>nd</sup> RSV season for CLD (See Notes)			
Hepatitis B									
Rotavirus		SCID <sup>b</sup>							
DTaP/Tdap	DTaP: not applicable Tdap: 1 dose each pregnancy								
Hib		HCT <sup>c</sup> : 3 doses	See Notes		See Notes				
Pneumococcal									
IPV									
COVID-19	*	See Notes							
Influenza inactivated, recombinant		Solid organ transplant: 18 yrs (See Notes)							
LAIV3						Asthma, wheezing: 2–4 years <sup>d</sup>			
MMR	**								
VAR	**								
Hepatitis A									
HPV	**	3-dose series (See Notes)							
MenACWY									
MenB									
RSV (Abrysvo)	Seasonal administration (See Notes)								
Dengue									
Mpox	See Notes								

\*For more information, refer to <https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/12/covid-19-vaccination-considerations-for-obstetric-gynecologic-care>

- Recommended for all age-eligible children who lack documentation of a complete vaccination series
- Not recommended for all children, but recommended for some children based on increased risk for or severe outcomes from disease
- Recommended for all age-eligible children, and additional doses may be necessary based on medical condition or other indications. See Notes.
- Precaution: Might be indicated if benefit of protection outweighs risk of adverse reaction
- Contraindicated or not recommended. \*\*Vaccinate after pregnancy, if indicated

a. For additional information regarding immunization in immunocompromised children, see <https://publications.aap.org/redbook/book/755/chapter/14074446/Immunization-and-Other-Considerations-in>

b. Severe combined immunodeficiency

c. Hematopoietic cell transplantation

d. LAIV3 contraindicated for children 2–4 years of age with asthma or wheezing during the preceding 12 months



### Additional information

- For calculating intervals between doses, 4 weeks = 28 days. Intervals of  $\geq 4$  months are determined by calendar months.
- Within a number range (eg, 12–18), a dash (–) should be read as “through.”
- Vaccine doses administered  $\leq 4$  days before the minimum age or interval are considered valid. Doses of any vaccine administered  $\geq 5$  days earlier than the minimum age or minimum interval should not be counted as valid and should be repeated as age appropriate. **The repeat dose should be spaced after the invalid dose by the recommended minimum interval.** For further details, see <https://publications.aap.org/redbook/book/755/chapter/14074243/Immunization-Schedule-and-Timing-of-Vaccines>.
- Information on travel vaccination requirements and recommendations is available at <https://publications.aap.org/redbook/book/755/chapter/14074567/International-Travel>.
- For vaccination of persons with immunodeficiencies, see <https://publications.aap.org/redbook/book/755/chapter/14074446/Immunization-and-Other-Considerations-in>.
- For information about vaccination in the setting of a vaccine-preventable disease outbreak, contact your state or local health department.
- The National Vaccine Injury Compensation Program (VICP) is a no-fault alternative to the traditional legal system for resolving vaccine injury claims. All vaccines included in the child and adolescent vaccine schedule are covered by VICP except dengue, PPSV23, RSV, Mpox and COVID-19 vaccines. Mpox and COVID-19 vaccines are covered by the Countermeasures Injury Compensation Program (CICP). For more information, see [www.hrsa.gov/vaccinecompensation](http://www.hrsa.gov/vaccinecompensation) (Accessed August 11, 2025) or [www.hrsa.gov/cicp](http://www.hrsa.gov/cicp) (Accessed August 11, 2025).

### COVID-19 vaccination

(minimum age: 6 months [Moderna Spikevax], 5 years [Pfizer-BioNTech Comirnaty], 12 years [Novavax Nuvaxovid, Moderna mNEXSPIKE])

**Refer to the AAP's COVID-19 Vaccine Dosing for a visual quick reference guide, [www.aap.org/CovidVaccineGuide](http://www.aap.org/CovidVaccineGuide).**

*Trade names are used for Moderna because there is more than 1 Moderna product available.*

### Routine vaccination

#### Everyone age 6–23 months

- **Unvaccinated** (ie, never received any COVID-19 vaccine doses):
  - 2 doses Moderna Spikevax 0, 4–8 weeks
- **Incomplete initial vaccination series:**
  - **1 dose Moderna:** complete initial series with 1 dose 4–8 weeks after most recent dose of Spikevax
  - **1 dose Pfizer-BioNTech:** complete initial series with 2 doses Moderna Spikevax 8 weeks apart (administer dose 1 4–8 weeks after most recent dose)
  - **2 doses Pfizer-BioNTech:** complete initial series with 1 dose Moderna Spikevax at least 8 weeks after the most recent dose
- **Completed initial vaccination series:**
  - **1 dose Moderna Spikevax** at least 8 weeks after the most recent dose

### Special situations

**Age 2–18 years in the following risk groups\*:** persons at high risk of severe COVID-19, residents of long-term care facilities or other congregate settings, persons who have never been vaccinated against COVID-19, persons whose household contacts are at high risk for severe COVID-19

- **Ages 2–4 years:** 1 dose of Moderna Spikevax regardless of previous vaccination status at least 8 weeks after the most recent dose
- **Ages 5–11 years:** 1 dose of Moderna Spikevax or Pfizer-BioNTech Comirnaty regardless of previous vaccination status at least 8 weeks after the most recent dose
- **Ages 12–18 years:**
  - 1 dose of Moderna Spikevax, Pfizer-BioNTech Comirnaty, or Novavax Nuvaxovid regardless of previous vaccination status at least 8 weeks after the most recent dose
  - 1 dose of Moderna mNEXSPIKE regardless of previous vaccination status at least 12 weeks after the last dose was received

Children 2 through 18 years of age not included in the risk groups above whose parent or guardian desires their protection from COVID-19 should be offered a single dose of age-appropriate COVID-19 vaccine.

Use any available COVID-19 vaccine appropriate by age and health status that is approved by the FDA through a biologics license application. The most updated version of the COVID-19 vaccine that is available should be used.

\*Refer to the AAP's COVID-19 Vaccine Policy Statement for more information on risk groups, <https://doi.org/10.1542/peds.2025-073924>.

### Persons who are moderately or severely immunocompromised.

People eligible for additional doses include those who are receiving active cancer treatment for tumors or cancers of the blood, those who received an organ transplant and are taking medicine to suppress the immune system, those who received a hematopoietic cell transplant within the last 2 years or are taking medicine to suppress the immune system, those with moderate or severe primary immunodeficiency (such as DiGeorge syndrome, Wiskott-Aldrich syndrome), those with advanced or untreated HIV infection, and those with active treatment with high-dose corticosteroids or other drugs that may suppress an immune response. For revaccination guidance for children with hematologic malignancy post-hematopoietic cell transplant or CAR T-cell therapy, refer to: <https://doi.org/10.1111/tid.14109>.

### Age 6 months–4 years moderately or severely immunocompromised

- **Unvaccinated:**
  - 4 doses (**3-dose initial series Moderna Spikevax** at 0, 4 weeks, and at least 4 weeks after dose 2, followed by 1 dose Moderna Spikevax 6 months later [minimum interval 2 months]). May administer additional doses.\*\*
- **Incomplete initial 3-dose vaccination series:**
  - **Previous vaccination with Moderna**
    - **1 dose Moderna:** complete initial series with 2 doses Moderna Spikevax at least 4 weeks apart (administer dose 1 Moderna Spikevax 4 weeks after most recent dose), followed by 1 dose Moderna Spikevax 6 months later (minimum interval 2 months). May administer additional doses of Moderna Spikevax.\*\*
    - **2 doses Moderna:** complete initial series with 1 dose Moderna Spikevax at least 4 weeks after most recent dose, followed by 1 dose Moderna Spikevax 6 months later (minimum interval 2 months). May administer additional doses of Moderna Spikevax.\*\*





## COVID-19 vaccination—continued

- **Previous vaccination with Pfizer-BioNTech**
  - **1 dose Pfizer-BioNTech:** complete initial series with 2 doses Moderna Spikevax at least 8 weeks apart (administer dose 1 Moderna Spikevax 4 weeks after most recent dose), followed by 1 dose Moderna Spikevax 6 months later (minimum interval 2 months). May administer additional doses of Moderna Spikevax.\*\*
  - **2 doses Pfizer-BioNTech:** complete initial series with 1 dose Moderna Spikevax at least 8 weeks after most recent dose, followed by 1 dose Moderna Spikevax 6 months later (minimum interval 2 months).
- **Previously completed initial 3-dose vaccination series with:**
  - **3 or more doses Moderna:** 2 doses Moderna Spikevax 6 months apart (minimum interval 2 months). Administer dose 1 at least 8 weeks after the most recent dose. May administer additional doses of Moderna Spikevax.\*\*
  - **3 or more doses Pfizer-BioNTech:** 2 doses Moderna Spikevax 6 months apart (minimum interval 2 months). Administer dose 1 at least 8 weeks after the most recent dose. May administer additional doses of Moderna Spikevax.\*\*

### Age 5–11 years moderately or severely immunocompromised

Use vaccine from the same manufacturer for all doses in the initial vaccination series.

- **Unvaccinated:**
  - 4 doses (**3-dose initial series Moderna Spikevax** at 0, 4 weeks, and at least 4 weeks after dose 2, followed by 1 dose Moderna Spikevax or Pfizer-BioNTech 6 months later [minimum interval 2 months]). May administer additional doses.\*\*
  - 4 doses (**3-dose initial series Pfizer-BioNTech** at 0, 3 weeks, and at least 4 weeks after dose 2, followed by 1 dose Moderna Spikevax or Pfizer-BioNTech 6 months later [minimum interval 2 months]). May administer additional doses.\*\*
- **Incomplete initial 3-dose vaccination series:**
  - **Previous vaccination with Moderna**
    - **1 dose Moderna Spikevax:** complete initial series with 2 doses Moderna a Spikevax t least 4 weeks apart (administer dose 1 Moderna Spikevax 4 weeks after most recent dose), followed by 1 dose Moderna Spikevax or Pfizer-BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna Spikevax or Pfizer-BioNTech.\*\*

- **2 doses Moderna Spikevax:** complete initial series with 1 dose Moderna Spikevax at least 4 weeks after most recent dose, followed by 1 dose Moderna Spikevax or Pfizer BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna Spikevax or Pfizer-BioNTech.\*\*
- **Previous vaccination with Pfizer-BioNTech**
  - **1 dose Pfizer-BioNTech:** complete initial series with 2 doses Pfizer-BioNTech at least 4 weeks apart (administer dose 1 Pfizer-BioNTech 3 weeks after most recent dose), followed by 1 dose Moderna Spikevax or Pfizer-BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna or Pfizer-BioNTech.\*\*
  - **2 doses Pfizer-BioNTech:** complete initial series with 1 dose Pfizer-BioNTech at least 4 weeks after most recent dose, followed by 1 dose Moderna Spikevax or Pfizer-BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna Spikevax or Pfizer-BioNTech.\*\*

### Completed initial 3-dose vaccination series with:

- **3 or more doses Moderna or 3 or more doses Pfizer-BioNTech:** 2 doses Moderna or Pfizer-BioNTech 6 months apart (minimum interval 2 months). Administer dose 1 at least 8 weeks after the most recent dose. May administer additional doses of Moderna or Pfizer-BioNTech.\*\*

### Age 12–18 years moderately or severely immunocompromised

Use vaccine from the same manufacturer for all doses in the initial vaccination series. Either Moderna product (Spikevax or mNEXSPIKE) can be used unless otherwise specified.

- **Unvaccinated:**
  - 4 doses (**3-dose initial series Moderna** at 0, 4 weeks, and at least 4 weeks after dose 2, followed by 1 dose Moderna or Novavax or Pfizer-BioNTech 6 months later [minimum interval 2 months]). May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*
  - 4 doses (**3-dose initial series Pfizer-BioNTech** at 0, 3 weeks, and at least 4 weeks after dose 2, followed by 1 dose Moderna or Novavax or Pfizer-BioNTech 6 months later [minimum interval 2 months]). May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*

- 3 doses (**2-dose initial series Novavax** at 0, 3 weeks, followed by 1 dose Moderna or Novavax or Pfizer-BioNTech 6 months later [minimum interval 2 months]). May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*
- **Incomplete initial vaccination series:**
  - **Previous vaccination with Moderna**
    - **1 dose Moderna:** complete initial series with 2 doses Moderna at least 4 weeks apart (administer dose 1 Moderna 4 weeks after most recent dose), followed by 1 dose Moderna or Novavax or Pfizer-BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*
    - **2 doses Moderna:** complete initial series with 1 dose Moderna at least 4 weeks after most recent dose, followed by 1 dose Moderna or Novavax or Pfizer-BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*
  - **Previous vaccination with Pfizer-BioNTech**
    - **1 dose Pfizer-BioNTech:** complete initial series with 2 doses Pfizer-BioNTech at least 4 weeks apart (administer dose 1 Pfizer-BioNTech 3 weeks after most recent dose), followed by 1 dose Moderna or Novavax or Pfizer-BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*
    - **2 doses Pfizer-BioNTech:** complete initial series with 1 dose Pfizer-BioNTech at least 4 weeks after most recent dose, followed by 1 dose Moderna or Novavax or Pfizer-BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*
  - **Previous vaccination with Novavax**
    - **1 dose Novavax:** complete initial series with 1 dose Novavax at least 3 weeks after most recent dose, followed by 1 dose Moderna or Novavax or Pfizer-BioNTech 6 months later (minimum interval 2 months). May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*



## COVID-19 vaccination—continued

- **Completed initial 3-dose vaccination series with:**
  - **3 or more doses Moderna or 3 or more doses Pfizer-BioNTech:** 2 doses Moderna or Novavax or Pfizer-BioNTech 6 months apart (minimum interval 2 months). Administer dose 1 at least 8 weeks after the most recent dose. May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*
  - **2 or more doses Novavax:** 2 doses Moderna or Novavax or Pfizer-BioNTech 6 months apart (minimum interval 2 months). Administer dose 1 at least 8 weeks after the most recent dose. May administer additional doses of Moderna or Novavax or Pfizer-BioNTech.\*\*

**\*\*Additional doses of COVID-19 vaccine for moderately or severely immunocompromised:** based on shared clinical decision making and administered at least 2 months after the most recent dose.

Dengue vaccination  
(minimum age: 9 years)

## Routine vaccination

- Age 9–16 years living in areas with endemic dengue **AND** have laboratory confirmation of previous dengue infection
  - 3-dose series administered at 0, 6, and 12 months
- Endemic areas include Puerto Rico, American Samoa, US Virgin Islands, Federated States of Micronesia, Republic of Marshall Islands, and the Republic of Palau. For updated guidance on dengue endemic areas and pre-vaccination laboratory testing see [www.cdc.gov/mmwr/volumes/70/rr/rr7006a1.htm?cid=rr7006a1\\_w](https://www.cdc.gov/mmwr/volumes/70/rr/rr7006a1.htm?cid=rr7006a1_w) (Accessed August 11, 2025).
- Dengue vaccine should not be administered to children traveling to or visiting endemic dengue areas.

Diphtheria, tetanus, and acellular pertussis (DTaP) vaccination  
(minimum age: 6 weeks [4 years for Kinrix or Quadracel])

## Routine vaccination

- 5-dose series (3-dose primary series at age 2, 4, and 6 months, followed by booster doses at ages 15–18 months and 4–6 years)
  - **Prospectively:** Dose 4 may be administered as early as age 12 months if at least 6 months have elapsed since dose 3.
  - **Retrospectively:** A 4<sup>th</sup> dose that was inadvertently administered as early as age 12 months may be counted if at least 4 months have elapsed since dose 3.

## Catch-up vaccination

- Dose 5 is not necessary if dose 4 was administered at age 4 years or older and at least 6 months after dose 3.
- For other catch-up guidance, see [Table 2](#).

## Special situations

- **Children younger than age 7 years with a contraindication specific to the pertussis component of DTaP:** May administer Td for all recommended remaining doses in place of DTaP. Encephalopathy within 7 days of vaccination when not attributable to another identifiable cause is the only contraindication specific to the pertussis component of DTaP. For additional information, see <https://publications.aap.org/redbook/book/755/chapter/14076838/Diphtheria>.
- **Wound management in children younger than age 7 years with history of 3 or more doses of tetanus toxoid-containing vaccine:** For all wounds except clean and minor wounds, administer DTaP if more than 5 years since last dose of tetanus toxoid-containing vaccine. For detailed information, see [www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm](https://www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm) (Accessed August 11, 2025).

Haemophilus influenzae type b (Hib) vaccination  
(minimum age: 6 weeks)

## Routine vaccination

- **ActHIB, Hiberix, Pentacel, or Vaxelis:** 4-dose series (3-dose primary series at age 2, 4, and 6 months, followed by a booster dose\* at age 12–15 months)
  - \*Vaxelis is not recommended for use as a booster dose. A different Hib-containing vaccine should be used for the booster dose.
- **PedvaxHIB:** 3-dose series (2-dose primary series at age 2 and 4 months, followed by a booster dose at age 12–15 months)
- **American Indian and Alaska Native infants:** Vaxelis and PedvaxHIB preferred over other Hib vaccines for the primary series.

## Catch-up vaccination

- **Dose 1 at age 7–11 months:** Administer dose 2 at least 4 weeks later and dose 3 (final dose) at age 12–15 months or 8 weeks after dose 2 (whichever is later).
- **Dose 1 at age 12–14 months:** Administer dose 2 (final dose) at least 8 weeks after dose 1.
- **Dose 1 before age 12 months and dose 2 before age 15 months:** Administer dose 3 (final dose) at least 8 weeks after dose 2.
- **2 doses of PedvaxHIB before age 12 months:** Administer dose 3 (final dose) at age 12–59 months and at least 8 weeks after dose 2.
- **1 dose administered at age 15 months or older:** No further doses needed
- **Unvaccinated at age 15–59 months:** Administer 1 dose.
- **Previously unvaccinated children age 60 months or older who are not considered high risk:** Catch-up vaccination not required.

For other catch-up guidance, see [Table 2](#). Vaxelis can be used for catch-up vaccination in children younger than age 5 years. Follow the catch-up schedule even if Vaxelis is used for one or more doses. For detailed information on use of Vaxelis, see [www.cdc.gov/mmwr/volumes/69/wr/mm6905a5.htm](https://www.cdc.gov/mmwr/volumes/69/wr/mm6905a5.htm) (Accessed August 11, 2025).



### *Haemophilus influenzae* type b (Hib) vaccination— *continued*

#### Special situations

##### • Chemotherapy or radiation treatment:

##### **Age 12–59 months**

- Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
- 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

*Doses administered within 14 days of starting therapy or during therapy should be repeated at least 3 months after therapy completion.*

##### • Hematopoietic cell transplant (HCT):

- 3-dose series 4 weeks apart starting 6 to 12 months after successful transplant, regardless of Hib vaccination history

##### • Anatomic or functional asplenia (including sickle cell disease):

##### **Age 12–59 months**

- **Unvaccinated or only 1 dose before age 12 months:** 2 doses, 8 weeks apart
- **2 or more doses before age 12 months:** 1 dose at least 8 weeks after previous dose

##### *Unvaccinated\* persons age 5 years or older*

- 1 dose

##### • Elective splenectomy:

##### *Unvaccinated\* persons age 15 months or older*

- 1 dose (preferably at least 14 days before procedure)

##### • HIV infection:

##### **Age 12–59 months**

- Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
- 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

##### *Unvaccinated\* persons age 5–18 years*

- 1 dose

##### • Immunoglobulin deficiency, early component complement deficiency, or early component complement inhibitor use:

##### **Age 12–59 months**

- Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
- 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

*\*Unvaccinated = Less than routine series (through age 14 months)*

**or no doses (age 15 months or older)**

### Hepatitis A (HepA) vaccination (minimum age: 12 months for routine vaccination)

#### Routine vaccination

- **2-dose series** (minimum interval: 6 months) at age 12–23 months

#### Catch-up vaccination

- **Unvaccinated persons through age 18 years should complete a 2-dose series** (minimum interval: 6 months).
- Persons who previously received 1 dose at age 12 months or older should receive dose 2 at least 6 months after dose 1.
- Adolescents age 18 years or older may receive HepA-HepB (Twinrix) as a 3-dose series (0, 1, and 6 months) or 4-dose series (3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months).

#### International travel

- Persons traveling to or working in countries with high or intermediate endemic hepatitis A (<https://publications.aap.org/redbook/book/755/chapter/14074567/International-Travel>):
  - Infants age 6–11 months: 1 dose before departure; revaccinate with 2 doses (separated by at least 6 months) between age 12–23 months.
  - Unvaccinated age 12 months or older: Administer dose 1 as soon as travel is considered.

### Hepatitis B (HepB) vaccination (minimum age: birth)

#### Routine vaccination

##### • Mother is HBsAg-negative

- 3-dose series at age 0, 1–2, 6–18 months (**use monovalent HepB vaccine for doses administered before age 6 weeks**)
  - Birth weight  $\geq 2000$  grams: 1 dose within 24 hours of birth if medically stable
  - Birth weight  $< 2000$  grams: 1 dose at chronological age 1 month or hospital discharge (whichever is earlier and even if weight is still  $< 2000$  grams)

- Infants who did not receive a birth dose should begin the series as soon as possible (see Table 2 for minimum intervals).
- Administration of 4 doses is permitted when a combination vaccine containing HepB is used after the birth dose.

- **Minimum intervals (see Table 2):** when 4 doses are administered, substitute “dose 4” for “dose 3” in these calculations.

- **Final (3<sup>rd</sup> or 4<sup>th</sup>) dose:** age 6–18 months (**minimum age 24 weeks**)

##### • Mother is HBsAg-positive

- **Birth dose (monovalent HepB vaccine only):** administer HepB vaccine and hepatitis B immune globulin (HBIG) in separate limbs within 12 hours of birth, regardless of birth weight.
- **Birth weight  $< 2000$  grams:** administer 3 additional doses of HepB vaccine beginning at age 1 month (total of 4 doses).
- **Final (3<sup>rd</sup> or 4<sup>th</sup>) dose:** administer at age 6 months (**minimum age 24 weeks**).
- Test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose. Do not test before age 9 months.





### Hepatitis B (HepB) vaccination—continued

#### • Mother is HBsAg-unknown

If other evidence suggestive of maternal hepatitis B infection exists (eg, presence of HBV DNA, HBeAg-positive, or mother known to have chronic hepatitis B infection), manage infant as if mother is HBsAg-positive.

#### • Birth dose (monovalent HepB vaccine only):

- Birth weight  $\geq 2000$  grams: administer **HepB vaccine** within 12 hours of birth. Determine mother's HBsAg status as soon as possible. If mother is determined to be HBsAg-positive, administer **HBIG** as soon as possible (in separate limb), but no later than 7 days of age.
- Birth weight  $< 2000$  grams: administer **HepB vaccine** and **HBIG** (in separate limbs) within 12 hours of birth. Administer 3 additional doses of **HepB vaccine** beginning at age 1 month (total of 4 doses).

#### • Final (3<sup>rd</sup> or 4<sup>th</sup>) dose: administer at age 6 months (minimum age 24 weeks).

- If mother is determined to be HBsAg-positive or if status remains unknown, test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose. Do not test before age 9 months.

### Catch-up vaccination

- Unvaccinated persons should complete a 3-dose series at 0, 1–2, 6 months. See [Table 2](#) for minimum intervals.
- Adolescents age 11–15 years may use an alternative 2-dose schedule with at least 4 months between doses (adult formulation Recombivax HB only).
- Adolescents age 18 years may receive:
  - **Heplisav-B**: 2-dose series at least 4 weeks apart.
  - **HepA-HepB (Twinrix)**: 3-dose series (0, 1, and 6 months) or 4-dose series (3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months).

### Special situations

- Revaccination is generally not recommended for persons with a normal immune status who were vaccinated as infants, children, adolescents, or adults.
- **Post-vaccination serology testing and revaccination** (if anti-HBs  $< 10$  mIU/mL) is recommended for certain populations, including:
  - Infants born to HBsAg-positive mothers
  - Persons who are predialysis or on maintenance dialysis
  - Other immunocompromised persons
- For detailed revaccination recommendations, see <http://dx.doi.org/10.15585/mmwr.r6701a1> (Accessed August 11, 2025).

### Human papillomavirus (HPV) vaccination (minimum age: 9 years)

#### Routine and catch-up vaccination

- The AAP recommends starting the series **between the ages of 9 and 12 years**, at an age the pediatric health care professional deems optimal for acceptance and completion of the vaccination series.
- Catch-up HPV vaccination recommended for all persons through age 18 years if not adequately vaccinated.
- 2- or 3-dose series depending on age at initial vaccination:
  - **Age 9–14 years at initial vaccination**: 2-dose series at 0, 6–12 months (minimum interval: 5 months; repeat dose if administered too soon)
  - **Age 15 years or older at initial vaccination**: 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2 = 4 weeks; dose 2 to dose 3 = 12 weeks; dose 1 to dose 3 = 5 months; repeat dose if administered too soon)
- No additional dose recommended when any HPV vaccine series **of any valency** has been completed using recommended dosing intervals.

#### Special situations

- **Immunocompromising conditions, including HIV infection**: 3-dose series, even for those who initiate vaccination at age 9 through 14 years.
- **History of sexual abuse or assault**: Start at age 9 years.
- **Pregnancy**: Pregnancy testing not needed before vaccination; HPV vaccination not recommended until after pregnancy; no intervention needed if vaccinated while pregnant.

### Influenza vaccination

(minimum age: 6 months [IIV3], 2 years [LAIV3], 9 years [recombinant influenza vaccine, RIV3])

#### Routine vaccination

- Use any influenza vaccine appropriate for age and health status annually:
  - **Age 6 months–8 years** who have received fewer than 2 influenza vaccine doses before July 1, 2025, or whose influenza vaccination history is unknown: 2 doses, separated by at least 4 weeks. Administer dose 2 even if the child turns 9 years between receipt of dose 1 and dose 2.
  - **Age 6 months–8 years** who have received at least 2 influenza vaccine doses before July 1, 2025: 1 dose.
  - **Age 9 years or older**: 1 dose.
  - **Age 18 years solid organ transplant recipients receiving immunosuppressive medications**: high-dose inactivated (HD-IIV3) and adjuvanted inactivated (aIIV3) influenza vaccines are acceptable options. No preference over other age-appropriate IIV3 or RIV3.
- For the 2025–2026 season, see the AAP recommendations at <https://doi.org/10.1542/peds.2025-073620>.

#### Special situations

- **Close contacts (eg, household contacts) of severely immunosuppressed persons who require a protected environment**: should not receive LAIV3. If LAIV3 is given, they should avoid contact with, or caring for such immunosuppressed persons for 7 days after vaccination.

**Note:** Persons with an egg allergy can receive any influenza vaccine (egg-based or non-egg based) appropriate for age and health status.



### Measles, mumps, and rubella (MMR) vaccination (minimum age: 12 months for routine vaccination)

#### Routine vaccination

- 2-dose series at age 12–15 months, age 4–6 years
- MMR or measles, mumps, rubella, and varicella (MMRV)\* may be administered

**Note:** The AAP expresses no preference between MMR plus monovalent varicella vaccine or MMRV for toddlers receiving their first immunization of this kind. Parents should be counseled about the rare possibility of their child developing a febrile seizure 1 to 2 weeks after immunization with MMRV for the 1<sup>st</sup> immunizing dose. For the 2<sup>nd</sup> dose at 4–6 years, MMRV generally is preferred over MMR plus monovalent varicella to minimize the number of injections.

#### Catch-up vaccination

- **Unvaccinated children and adolescents:** 2-dose series at least 4 weeks apart\*
- The maximum age for use of MMRV\* is 12 years.

#### Special situations

- **International travel**
  - **Infants age 6–11 months:** 1 dose at least 2 weeks before departure; revaccinate with 2-dose series at age 12–15 months (12 months for children in high-risk areas) and dose 2 as early as 4 weeks later.\*
  - **Children age 12 months or older:**
    - Unvaccinated: 2-dose series (separated by at least 4 weeks\*) with the 2<sup>nd</sup> dose given at least 2 weeks before departure
    - Previously received 1 dose: administer dose 2 at least 4 weeks after dose 1\*
- In mumps outbreak settings, for information about additional doses of MMR (including 3<sup>rd</sup> dose of MMR), see [www.cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm](http://www.cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm) (Accessed August 11, 2025).

\***Note:** If MMRV is used, the minimum interval between MMRV doses is 3 months.

### Meningococcal serogroup A, C, W, Y (MenACWY) vaccination

(minimum age: 2 months [MenACWY-CRM, Menveo], 2 years [MenACWY-TT, MenQuadfi], 10 years [MenACWY-TT/MenB-FHbp, Penbraya; MenACWY-CRM/MenB-4C, Penmenvay])

#### Routine vaccination

- 2-dose series at age 11–12 years; 16 years

#### Catch-up vaccination

- **Age 13–15 years:** 1 dose now and booster at age 16–18 years (minimum interval: 8 weeks)
- **Age 16–18 years:** 1 dose

#### Special situations

**Anatomic or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (eg, eculizumab, ravulizumab) use:**

- **Menveo\*\***
  - Dose 1 at age 2 months: 4-dose series (additional 3 doses at age 4, 6, and 12 months)
  - Dose 1 at age 3–6 months: 3- or 4-dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)
  - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart
- **MenQuadfi**
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart

**Travel to countries with hyperendemic or epidemic meningococcal disease, including countries in the African meningitis belt or during the Hajj ([www.cdc.gov/travel/](http://www.cdc.gov/travel/)):**

- **Children younger than age 24 months:**
  - **Menveo\*\* (age 2–23 months)**
    - Dose 1 at age 2 months: 4-dose series (additional 3 doses at age 4, 6, and 12 months)
    - Dose 1 at age 3–6 months: 3- or 4-dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)
    - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
- **Children age 2 years or older:** 1 dose Menveo\*\* or MenQuadfi

**First-year college students who live in residential housing (if not previously vaccinated at age 16 years or older) or military recruits:** 1 dose Menveo\*\* or MenQuadfi

**Adolescent vaccination of children who received MenACWY prior to age 10 years:**

- **Children for whom boosters are recommended because of an ongoing increased risk of meningococcal disease** (eg, those with complement component deficiency, HIV, or asplenia): Follow the booster schedule for persons at increased risk.
- **Children for whom boosters are not recommended** (eg, a healthy child who received a single dose for travel to a country where meningococcal disease is endemic): Administer MenACWY according to the recommended adolescent schedule with dose 1 at age 11–12 years and dose 2 at age 16 years.

\*\* Menveo has 2 formulations: lyophilized and liquid. The liquid formulation should not be used before age 10 years. See <https://www.menveohcp.com/dosing>.

**Note:** For MenACWY booster dose recommendations for groups listed under “Special situations” and in an outbreak setting and additional meningococcal vaccination information, see [www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm](http://www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm) (Accessed August 11, 2025).

Children age 10 years or older may receive a single dose of Penbraya or Penmenvay as an alternative to separate administration of MenACWY and MenB when both vaccines would be given on the same clinic day (see “Meningococcal serogroup B vaccination” section below for more information).



**Meningococcal serogroup B (MenB) vaccination**  
(minimum age: 10 years [MenB-4C, Bexsero;  
MenB-FHbp, Trumenba; MenACWY-TT/MenB-FHbp,  
Penbraya; MenACWY-CRM/MenB-4C, Penmenvy])

### Shared clinical decision making

- **Adolescents not at increased risk age 16–23 years (preferred age 16–18 years)\* based on shared clinical decision making.**
- **Bexsero or Trumenba (use same brand for all doses):** 2-dose series at least 6 months apart (if dose 2 is administered earlier than 6 months, administer dose 3 at least 4 months after dose 2)

\*To optimize rapid protection (eg, for students starting college in less than 6 months), a 3-dose series (0, 1–2, 6 months) may be administered.

For additional information on shared clinical decision making for MenB, see <https://www.immunize.org/ask-experts/topic/menb>.

### Special situations

**Anatomic or functional asplenia (including sickle cell disease), persistent complement component deficiency, complement inhibitor (eg, eculizumab, ravulizumab) use.**

- **Bexsero or Trumenba (use same brand for all doses including booster doses)** 3-dose series at 0, 1–2, 6 months (if dose 2 was administered at least 6 months after dose 1, dose 3 not needed; if dose 3 is administered earlier than 4 months after dose 2, a 4<sup>th</sup> dose should be administered at least 4 months after dose 3).

For MenB **booster dose recommendations** for groups listed under “Special situations” and in an outbreak setting and additional meningococcal vaccination information, see [www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm](http://www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm) (Accessed August 11, 2025).

**Note:** MenB vaccines may be administered simultaneously with MenACWY vaccines if indicated, but at a different anatomic site, if feasible.

- Children aged 10 years or older may receive a dose of Penbraya (MenACWY-TT/MenB-FHbp) or Penmenvy (MenACWY-CRM/MenB-4C) as an alternative to separate administration of MenACWY and MenB when both vaccines would be given on the same clinic day.
- For age-eligible children not at increased risk: if Penbraya is used for dose 1, MenB, MenB-FHbp (Trumenba) should be administered for dose 2 of MenB. If Penmenvy is used for dose 1, MenB, MenB-4C (Bexsero) should be administered for dose 2 of MenB. Meningococcal vaccine products from different manufacturers are not interchangeable.

- For age-eligible children at increased risk: Penbraya or Penmenvy may be used for additional MenACWY and MenB doses (including booster doses) if both would be given on the same clinic day and at least 6 months have passed since most recent Penbraya or Penmenvy dose. As above, patients must receive a vaccine product from the same manufacturer for all doses, including booster doses.

**Mpox vaccination**  
(minimum age: 18 years [JYNNEOS])

### Special situations

- Age 18 years and at risk for mpox infection: complete 2-dose series, 28 days apart.

#### Risk factors for mpox infection include:

- Persons who are gay, bisexual, and other man who has sex with men (MSM), transgender, or nonbinary people who in the past 6 months have had:
  - A new diagnosis of at least 1 sexually transmitted infection
  - More than 1 sex partner
  - Sex at a commercial sex venue
  - Sex in association with a large public event in a geographic area where mpox transmission is occurring
- Persons who are sexual partners of the persons described above
- Persons who anticipate experiencing any of the situations described above
- **Pregnancy:** There is currently no recommendation for JYNNEOS use in pregnancy because of lack of safety data in pregnant women. Pregnant women with any risk factor described above may receive JYNNEOS.

For detailed information, see <https://publications.aap.org/redbook/book/755/chapter/14079669/Mpox>.

**Pneumococcal vaccination**  
(minimum age: 6 weeks [PCV15], [PCV 20]; 2 years [PPSV23])

### Routine vaccination with PCV

- 4-dose series at 2, 4, 6, 12–15 months

### Catch-up vaccination with PCV

- Healthy children ages 2–4 years with any incomplete\*\* PCV series: 1 dose PCV
- For other catch-up guidance, see [Table 2](#).

**Note:** For children **without** risk conditions, PCV20 is not indicated if they have received 4 doses of PCV13 or PCV15 or another age appropriate complete PCV series.

### Special situations

**Children and adolescents with cerebrospinal fluid leak, chronic heart disease, chronic kidney disease (excluding maintenance dialysis and nephrotic syndrome), chronic liver disease, chronic lung disease (including moderate persistent or severe persistent asthma), cochlear implant, or diabetes mellitus:**

#### Age 2–5 years

- Any incomplete\*\* PCV series with:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after the most recent PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (at least 8 weeks after the most recent dose and administered at least 8 weeks apart)
- Completed recommended PCV series but have not received PPSV23.
  - Previously received at least 1 dose of PCV20: no further PCV or PPSV23 doses needed
  - Not previously received PCV20: administer 1 dose PCV20 or 1 dose PPSV23 administered at least 8 weeks after the most recent PCV dose





## Pneumococcal vaccination—continued

## Age 6–18 years

- Not previously received any dose of PCV13, PCV15, or PCV20: administer 1 dose of PCV15 or PCV20. If PCV15 is used and no previous receipt of PPSV23, administer 1 dose of PPSV23 at least 8 weeks after the PCV15 dose.<sup>†</sup>
- Received PCV before age 6 years but have not received PPSV23:
  - Previously received at least 1 dose of PCV20: no further PCV or PPSV23 doses needed
  - Not previously received PCV20: 1 dose PCV20 or 1 dose PPSV23 administered at least 8 weeks after the most recent PCV dose.
- Received PCV13 only at or after age 6 years: administer 1 dose PCV20 or 1 dose PPSV23 at least 8 weeks after the most recent PCV13 dose.
- Received 1 dose PCV13 and 1 dose PPSV23 at or after age 6 years: no further doses of any PCV or PPSV23 indicated.

**Children and adolescents on maintenance dialysis, or with immunocompromising conditions such as nephrotic syndrome; congenital or acquired asplenia or splenic dysfunction; congenital or acquired immunodeficiencies; diseases and conditions treated with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, Hodgkin disease, and solid organ transplant; HIV infection; or sickle cell disease or other hemoglobinopathies:**

## Age 2–5 years

- Any incomplete\*\* PCV series:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after the most recent PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (at least 8 weeks after the most recent dose and administered at least 8 weeks apart)
- Completed recommended PCV series but have not received PPSV23
  - Previously received at least 1 dose of PCV20: no further PCV or PPSV23 doses needed
  - Not previously received PCV20: administer 1 dose PCV20 or 1 dose PPSV23 at least 8 weeks after the most recent PCV dose. If PPSV23 is used, administer 1 dose of PCV20 or dose 2 PPSV23 at least 5 years after dose 1 PPSV23.

## Age 6–18 years

- Not previously received any dose of PCV13, PCV15, or PCV20: administer 1 dose of PCV15 or 1 dose of PCV20. If PCV15 is used and no previous receipt of PPSV23, administer 1 dose of PPSV23 at least 8 weeks after the PCV15 dose.<sup>†</sup>
- Received PCV before age 6 years but have not received PPSV23:
  - Previously received at least 1 dose of PCV20: no additional dose of PCV or PPSV23
  - Not previously received PCV20: administer 1 dose PCV20 or 1 dose PPSV23 at least 8 weeks after the most recent PCV dose. If PPSV23 is used, administer either PCV20 or dose 2 PPSV23 at least 5 years after dose 1 PPSV23.
- Received PCV13 only at or after age 6 years: administer 1 dose PCV20 or 1 dose PPSV23 at least 8 weeks after the most recent PCV13 dose. If PPSV23 is used, administer 1 dose of PCV20 or dose 2 PPSV23 at least 5 years after dose 1 PPSV23.
- Received 1 dose PCV13 and 1 dose PPSV23 at or after age 6 years: administer 1 dose PCV20 or 1 dose PPSV23 at least 8 weeks after the most recent PCV13 dose and at least 5 years after dose 1 PPSV23.

**Pregnancy:** no recommendation for PCV or PPSV23 because of limited data. Summary of existing data on pneumococcal vaccination during pregnancy can be found at [www.cdc.gov/mmwr/volumes/72/rr/rr7203a1.htm](http://www.cdc.gov/mmwr/volumes/72/rr/rr7203a1.htm) (Accessed August 11, 2025).

**\*\*Incomplete series = Not having received all doses in either the recommended series or an age-appropriate catch-up series. See Table 2 in ACIP pneumococcal recommendations at [stacks.cdc.gov/view/cdc/133252](http://stacks.cdc.gov/view/cdc/133252) (Accessed August 11, 2025).**

**†When both PCV15 and PPSV23 are indicated, administer all doses of PCV15 first. PCV15 and PPSV23 should not be administered during the same visit.**

Poliovirus vaccination  
(minimum age: 6 weeks)

## Routine vaccination

- 4-dose series at ages 2, 4, 6–18 months, 4–6 years; administer the final dose on or after age 4 years and at least 6 months after the previous dose.
- 4 or more doses of IPV can be administered before age 4 years when a combination vaccine containing IPV is used. However, a dose is still recommended on or after age 4 years and at least 6 months after the previous dose.

## Catch-up vaccination

- In the first 6 months of life, use minimum ages and intervals only for travel to a polio-endemic region or during an outbreak.
- **Adolescents age 18 years known or suspected to be unvaccinated or incompletely vaccinated:** administer remaining doses (1, 2, or 3 IPV doses) to complete a 3-dose primary series.<sup>††</sup> Unless there are specific reasons to believe they were not vaccinated, most persons aged 18 years or older born and raised in the United States can assume they were vaccinated against polio as children.

**Series containing oral poliovirus vaccine (OPV),** either mixed OPV-IPV or OPV-only series:

- Total number of doses needed to complete the series is the same as that recommended for the US IPV schedule. See [www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s\\_cid=mm6601a6\\_w](http://www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s_cid=mm6601a6_w) (Accessed August 11, 2025).
- Only trivalent OPV (tOPV) counts toward the US vaccination requirements.
- Doses of OPV administered before April 1, 2016, should be counted (unless specifically noted as administered during a campaign).
  - Doses of OPV administered on or after April 1, 2016, should not be counted.
- For guidance to assess doses documented as “OPV,” see [www.cdc.gov/mmwr/volumes/66/wr/mm6606a7.htm?s\\_cid=mm6606a7\\_w](http://www.cdc.gov/mmwr/volumes/66/wr/mm6606a7.htm?s_cid=mm6606a7_w) (Accessed August 11, 2025).
- For other catch-up guidance, see Table 2.

## Special situations

- **Adolescents aged 18 years at increased risk of exposure to poliovirus and completed primary series<sup>††</sup>:** may administer one lifetime IPV booster.

**††Note:** Complete primary series consists of at least 3 doses of IPV or trivalent oral poliovirus vaccine (tOPV) in any combination.

For detailed information, see: <https://publications.aap.org/redbook/book/755/chapter/14080623/Poliovirus-Infections>



**Respiratory syncytial virus (RSV) immunization**

(minimum age: birth [nirsevimab, RSV-mAb, Beyfortus; clesrovimab, RSV-mAb, Eflonsia])

**Routine vaccination**• **Infants < 8 months of age born during or entering their first RSV season\***

- Mother did not receive RSV vaccine or mother's RSV vaccination status is unknown or mother received RSV vaccine in previous pregnancy: administer 1 dose nirsevimab or clesrovimab within 1 week of birth—ideally during the birth hospitalization.
- Mother received RSV vaccine **less than 14 days** prior to delivery: administer 1 dose nirsevimab or clesrovimab within 1 week of birth—ideally during the birth hospitalization.
- Mother received RSV vaccine **at least 14 days** prior to delivery: nirsevimab/clesrovimab not needed but can be considered in rare circumstances at the discretion of health care providers.

Infants with prolonged birth hospitalization (eg, for prematurity) discharged October through March should be immunized shortly before or promptly after discharge.

**Special situations**

- **Ages 8–19 months with chronic lung disease of prematurity requiring medical support (eg, chronic corticosteroid therapy, diuretic therapy, or supplemental oxygen) any time during the 6-month period before the start of the second RSV season; severe immunocompromise; cystic fibrosis with either weight for length <10<sup>th</sup> percentile or manifestation of severe lung disease (eg, previous hospitalization for pulmonary exacerbation in the first year of life or abnormalities on chest imaging that persist when stable).\*\***
  - 1 dose nirsevimab shortly before start of second RSV season.\*

• **Ages 8–19 months who are American Indian or Alaska Native:**

1 dose nirsevimab shortly before start of second RSV season.\* American Indian and Alaska Native Children are included in the high-risk category, because they experience significantly higher rates of severe RSV disease and hospitalization associated with social drivers of health, with children living in rural and reservation communities most impacted.

• **Age-eligible and undergoing cardiac surgery with cardiopulmonary bypass\*\*:**

1 additional dose of nirsevimab or clesrovimab after surgery. See <https://products.sanofi.us/beyfortus/beyfortus.pdf> and [www.merck.com/product/usa/pi\\_circulars/e/enflonsia/enflonsia\\_pi.pdf](http://www.merck.com/product/usa/pi_circulars/e/enflonsia/enflonsia_pi.pdf).

**\*Note:** While the timing of the onset and duration of RSV season may vary, administration of RSV immunization is recommended October through March in most of the continental United States (optimally October through November or within 1 week of birth). Providers in jurisdictions with RSV seasonality that differs from most of the continental United States (eg, Alaska, jurisdiction with tropical climate) should follow guidance from public health authorities (eg, CDC, health departments) or regional medical centers on timing of administration based on local RSV seasonality.

For further guidance, see <https://publications.aap.org/redbook/book/755/chapter/14080939/Respiratory-Syncytial-Virus> and [www.aap.org/en/patient-care/respiratory-syncytial-virus-rsv-prevention/nirsevimab-frequently-asked-questions](http://www.aap.org/en/patient-care/respiratory-syncytial-virus-rsv-prevention/nirsevimab-frequently-asked-questions).

**Respiratory syncytial virus (RSV) vaccination**

(RSV [Abrysvo])

**Routine vaccination**

- **Pregnant at 32 weeks 0 days through 36 weeks and 6 days gestation from September through January in most of the continental United States and have not received RSV vaccine in previous pregnancy\*\*:** 1 dose Abrysvo. Administer RSV vaccine regardless of previous RSV infection.
  - Either maternal RSV vaccination with Abrysvo or infant immunization with nirsevimab or clesrovimab is recommended to prevent severe RSV disease in infants.
- **All other pregnant women:** RSV vaccine not recommended.
- **Subsequent pregnancies:** Additional doses not recommended. No data are available to inform whether additional doses are needed in subsequent pregnancies. Infants born to pregnant women who received RSV vaccine during a previous pregnancy should receive nirsevimab or clesrovimab.

**\*\*Note:** Providers in jurisdictions with RSV seasonality that differs from most of the continental United States (eg, Alaska, jurisdictions with tropical climate) should follow guidance from public health authorities (eg, CDC, health departments) or regional medical centers on timing of administration based on local RSV seasonality.

**Rotavirus vaccination**

(minimum age: 6 weeks)

**Routine vaccination**

- **Rotarix:** 2-dose series at age 2 and 4 months
- **RotaTaq:** 3-dose series at age 2, 4, and 6 months
- If any dose in the series is either **RotaTaq** or unknown, default to 3-dose series.

**Catch-up vaccination**

- Do not start the series on or after age 15 weeks, 0 days.
- The maximum age for the final dose is 8 months, 0 days.
- For other catch-up guidance, see [Table 2](#).

**Tetanus, diphtheria, and acellular pertussis (Tdap) vaccination**  
(minimum age: 11 years for routine vaccination, 7 years for catch-up vaccination)**Routine vaccination**

- **Age 11–12 years:** 1 dose Tdap (adolescent booster).
- **Pregnancy:** 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36.

**Note:** Tdap may be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.

**Catch-up vaccination**

- **Age 13–18 years who have not received Tdap:** 1 dose Tdap (adolescent booster).
- **Age 7–18 years not fully vaccinated\* with DTaP:** 1 dose Tdap as part of the catch-up series (preferably the first dose); if additional doses are needed, use Td or Tdap.
- **Tdap administered at age 7–10 years:**
  - **Age 7–9 years** who receive Tdap should receive the adolescent Tdap booster dose at age 11–12 years.
  - **Age 10 years** who receive Tdap do not need the adolescent Tdap booster dose at age 11–12 years.
- **DTaP inadvertently administered on or after age 7 years:**
  - **Age 7–9 years:** DTaP may count as part of catch-up series. Administer adolescent Tdap booster dose at age 11–12 years.
  - **Age 10–18 years:** Count dose of DTaP as the adolescent Tdap booster dose.
- For other catch-up guidance, see [Table 2](#).

**Special situations**

- **Wound management** in persons age 7 years or older with history of 3 or more doses of tetanus toxoid-containing vaccine: For clean and minor wounds, administer Tdap or Td if more than 10 years since last dose of tetanus toxoid-containing vaccine; for all other wounds, administer Tdap or Td if more than 5 years since last dose of tetanus toxoid-containing vaccine. Tdap is preferred for persons age 11 years or older who have not previously received Tdap or whose Tdap history is unknown. If a tetanus toxoid-containing vaccine is indicated for a pregnant adolescent, use Tdap.
- For detailed information, see [www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm](http://www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm) (Accessed August 11, 2025).

\***Fully vaccinated** = 5 valid doses of DTaP or 4 valid doses of DTaP if dose 4 was administered at age 4 years or older

**Varicella (VAR) vaccination**  
(minimum age: 12 months)**Routine vaccination**

- 2-dose series at age 12–15 months, 4–6 years.
- VAR or MMRV may be administered.\*\*
- Dose 2 may be administered as early as 3 months after dose 1 (a dose inadvertently administered after at least 4 weeks may be counted as valid).

**\*\*Note:** The AAP expresses no preference between MMR plus monovalent varicella vaccine or MMRV for toddlers receiving their first immunization of this kind. Parents should be counseled about the rare possibility of their child developing a febrile seizure 1 to 2 weeks after immunization with MMRV for the 1<sup>st</sup> immunizing dose. For the 2<sup>nd</sup> dose at 4–6 years, MMRV generally is preferred over MMR plus monovalent varicella to minimize the number of injections.

**Catch-up vaccination**

- Ensure persons age 7–18 years without evidence of immunity (see [www.cdc.gov/mmwr/pdf/rr/rr5604.pdf](http://www.cdc.gov/mmwr/pdf/rr/rr5604.pdf) [Accessed August 11, 2025]) have a 2-dose series:
  - **Age 7–12 years:** Routine interval: 3 months (a dose inadvertently administered after at least 4 weeks may be counted as valid).
  - **Age 13 years and older:** Routine interval: 4–8 weeks (minimum interval: 4 weeks)
- The maximum age for use of MMRV is 12 years.



## Guide to Contraindications and Precautions to Commonly Used Vaccines

Vaccines and other Immunizing Agents	Contraindicated or Not Recommended <sup>1</sup>	Precautions <sup>2</sup>
COVID-19 mRNA vaccines [Pfizer-BioNTech, Moderna]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a component of an mRNA COVID-19 vaccine<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Diagnosed nonsevere allergy (eg, urticaria beyond the injection site) to a component of an mRNA COVID-19 vaccine<sup>3</sup>; or nonsevere, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of an mRNA COVID-19 vaccine</li> <li>Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine</li> <li>Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A)</li> <li>Moderate or severe acute illness, with or without fever</li> </ul>
COVID-19 protein subunit vaccine [Novavax]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a component of a Novavax COVID-19 vaccine<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Diagnosed nonsevere allergy (eg, urticaria beyond the injection site) to a component of Novavax COVID-19 vaccine<sup>3</sup>; or nonsevere, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of a Novavax COVID-19 vaccine</li> <li>Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine</li> <li>Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A)</li> <li>Moderate or severe acute illness, with or without fever</li> </ul>
Influenza, egg-based, inactivated injectable (IIV3)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after previous dose of any influenza vaccine (ie, any egg-based IIV, cclIV, RIV, or LAIV of any valency)</li> <li>Severe allergic reaction (eg, anaphylaxis) to any vaccine component<sup>4</sup> (excluding egg)</li> </ul>	<ul style="list-style-type: none"> <li>Guillain-Barré syndrome within 6 weeks after a previous dose of any type of influenza vaccine</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
Influenza, cell culture-based inactivated injectable (ccIV3) [Flucelvax]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) to any ccIV of any valency, or to any component<sup>4</sup> of ccIV3</li> </ul>	<ul style="list-style-type: none"> <li>Guillain-Barré syndrome within 6 weeks after a previous dose of any type of influenza vaccine</li> <li>Persons with a history of severe allergic reaction (eg, anaphylaxis) after a previous dose of any egg-based IIV, RIV, or LAIV of any valency. If using ccIV3, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist.</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
Influenza, recombinant injectable (RIV3) [Flublok]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) to any RIV of any valency, or to any component<sup>4</sup> of RIV3</li> </ul>	<ul style="list-style-type: none"> <li>Guillain-Barré syndrome within 6 weeks after a previous dose of any type of influenza vaccine</li> <li>Persons with a history of severe allergic reaction (eg, anaphylaxis) after a previous dose of any egg-based IIV, cclIV, or LAIV of any valency. If using RIV3, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist.</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
Influenza, live attenuated (LAIV3) [Flumist]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after previous dose of any influenza vaccine (ie, any egg-based IIV, cclIV, RIV, or LAIV of any valency)</li> <li>Severe allergic reaction (eg, anaphylaxis) to any vaccine component<sup>4</sup> (excluding egg)</li> <li>Children age 2–4 years with a history of asthma or wheezing</li> <li>Anatomic or functional asplenia</li> <li>Immunocompromised from any cause including, but not limited to, medications and HIV infection</li> <li>Close contacts or caregivers of severely immunosuppressed persons who require a protected environment</li> <li>Pregnancy</li> <li>Cochlear implant</li> <li>Active communication between the cerebrospinal fluid (CSF) and the oropharynx, nasopharynx, nose, ear or any other cranial CSF leak</li> <li>Children and adolescents receiving aspirin or salicylate-containing medications</li> <li>Received influenza antiviral medications oseltamivir or zanamivir within the previous 48 hours, peramivir within the previous 5 days, or baloxavir within the previous 17 days</li> </ul>	<ul style="list-style-type: none"> <li>Guillain-Barré syndrome within 6 weeks after a previous dose of any type of influenza vaccine</li> <li>Asthma in persons age 5 years old or older</li> <li>Persons with underlying medical conditions other than those listed under contraindications that might predispose to complications after wild-type influenza virus infection, eg, chronic pulmonary, cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus)</li> <li>Moderate or severe acute illness with or without fever</li> </ul>

1. When a contraindication is present, a vaccine should **NOT** be administered.

2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction.

3. See package inserts for a full list of vaccine ingredients. mRNA COVID-19 vaccines contain polyethylene glycol (PEG) [www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states](https://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states) (Accessed August 11, 2025).

4. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. See [Package inserts for US-licensed vaccines](#) (Accessed August 11, 2025).

# Appendix

## Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2025

American Academy of Pediatrics

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Vaccines and other Immunizing Agents	Contraindicated or Not Recommended <sup>1</sup>	Precautions <sup>2</sup>
Dengue (DEN4CYD)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Severe immunodeficiency (eg, hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised)</li> <li>Lack of laboratory confirmation of a previous dengue infection</li> </ul>	<ul style="list-style-type: none"> <li>Pregnancy</li> <li>HIV infection without evidence of severe immunosuppression</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
Diphtheria, tetanus, pertussis (DTaP)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Encephalopathy (eg, coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of previous dose of DTP or DTaP</li> </ul>	<ul style="list-style-type: none"> <li>Guillain-Barré syndrome within 6 weeks after previous dose of tetanus toxoid-containing vaccine</li> <li>History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria toxoid-containing or tetanus toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus toxoid-containing vaccine</li> <li>For DTaP only: Progressive neurologic disorder, including infantile spasms, uncontrolled epilepsy, progressive encephalopathy; defer DTaP until neurologic status clarified and stabilized</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
<i>Haemophilus influenzae</i> type b (Hib)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Younger than age 6 weeks</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Hepatitis A (HepA)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup> including neomycin</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Hepatitis B (HepB)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup> including yeast</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Hepatitis A-Hepatitis B vaccine (HepA-HepB) [Twinrix]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup> including neomycin and yeast</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Human papillomavirus (HPV)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Pregnancy: HPV vaccination not recommended.</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Measles, mumps, and rubella (MMR) Measles, mumps, rubella, and varicella (MMRV)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Severe immunodeficiency (eg, hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised)</li> <li>Pregnancy</li> <li>Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent</li> <li>For MMRV only: HIV infection of any severity</li> </ul>	<ul style="list-style-type: none"> <li>Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product)</li> <li>History of thrombocytopenia or thrombocytopenic purpura</li> <li>Need for tuberculin skin testing or interferon-gamma release assay (IGRA) testing</li> <li>Moderate or severe acute illness with or without fever</li> <li>For MMRV only: Personal or family (ie, sibling or parent) history of seizures of any etiology</li> <li>If using MMRV, see Varicella/MMRV for additional precautions</li> </ul>
Meningococcal ACWY (MenACWY) MenACWY-CRM [Menveo] MenACWY-TT [MenQuadfi]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>For Men ACWY-CRM only: severe allergic reaction to any diphtheria toxoid—or CRM197—containing vaccine</li> <li>For MenACWY-TT only: severe allergic reaction to a tetanus toxoid-containing vaccine</li> </ul>	<ul style="list-style-type: none"> <li>For MenACWY-CRM only: Preterm birth if younger than age 9 months</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
Meningococcal B (MenB) MenB-4C [Bexsero] MenB-FHbp [Trumenba]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Pregnancy</li> <li>For MenB-4C only: Latex sensitivity</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
Meningococcal ABCWY (MenACWY-TT/MenB-FHbp) [Penbraya] (MenACWY-CRM/MenB-4C) [Penmenvay]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Severe allergic reaction to a tetanus toxoid-containing vaccine</li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Mpox [JYNNEOS]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Pneumococcal conjugate (PCV)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Severe allergic reaction (eg, anaphylaxis) to any diphtheria toxoid-containing vaccine or its component<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Pneumococcal polysaccharide (PPSV23)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>

1. When a contraindication is present, a vaccine should **NOT** be administered.

2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction.

3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for US-licensed vaccines are available at [www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states](https://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states) (Accessed August 11, 2025).



# Appendix

## Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2025

American Academy of Pediatrics

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Vaccines and other Immunizing Agents	Contraindicated or Not Recommended <sup>1</sup>	Precautions <sup>2</sup>
Poliovirus vaccine, inactivated (IPV)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Pregnancy</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
RSV monoclonal antibody (RSV-mAb)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>4</sup></li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Respiratory syncytial virus vaccine (RSV)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Moderate or severe acute illness with or without fever</li> </ul>
Rotavirus (RV) RV1 [Rotarix] RV5 [RotaTeq]	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Severe combined immunodeficiency (SCID)</li> <li>History of intussusception</li> </ul>	<ul style="list-style-type: none"> <li>Altered immunocompetence other than SCID</li> <li>Chronic gastrointestinal disease</li> <li>RV1 only: Spina bifida or bladder exstrophy</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
Tetanus, diphtheria, and acellular pertussis (Tdap) Tetanus, diphtheria (Td)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>For Tdap only: Encephalopathy (eg, coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of previous dose of DTP, DTaP, or Tdap</li> </ul>	<ul style="list-style-type: none"> <li>Guillain-Barré syndrome within 6 weeks after a previous dose of tetanus toxoid-containing vaccine</li> <li>History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria toxoid-containing or tetanus toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus toxoid-containing vaccine</li> <li>For Tdap only: Progressive or unstable neurological disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized</li> <li>Moderate or severe acute illness with or without fever</li> </ul>
Varicella (VAR) Measles, mumps, rubella, and varicella (MMRV)	<ul style="list-style-type: none"> <li>Severe allergic reaction (eg, anaphylaxis) after a previous dose or to a vaccine component<sup>3</sup></li> <li>Severe immunodeficiency (eg, hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised)</li> <li>Pregnancy</li> <li>Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent</li> <li>For MMRV only: HIV infection of any severity</li> </ul>	<ul style="list-style-type: none"> <li>Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product)</li> <li>Receipt of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination)</li> <li>Use of aspirin or aspirin-containing products</li> <li>Moderate or severe acute illness with or without fever</li> <li>If using MMRV, see MMR/MMRV for additional precautions</li> </ul>

1. When a contraindication is present, a vaccine should **NOT** be administered.

2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction.

3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for US-licensed vaccines are available at [www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states](http://www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states) (Accessed August 11, 2025).

4. Full prescribing information for BEYFORTUS (nirsevimab-alip) [www.accessdata.fda.gov/drugsatfda\\_docs/label/2023/761328s000lbl.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/label/2023/761328s000lbl.pdf) (Accessed August 11, 2025) and EFLONSIA (clesrovimab-cfor) [www.accessdata.fda.gov/drugsatfda\\_docs/label/2025/761432s000lbl.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/label/2025/761432s000lbl.pdf) (Accessed August 11, 2025).



The AAP has made the following changes since publication of the AAP Immunization Schedule on August 19, 2025.

### September 17, 2025

#### Page 10, MMR vaccination note

- Correction made to align with AAP Red Book policy expressing no preference between administering MMR plus monovalent varicella vaccine or MMRV for toddlers age 12–15 months of age receiving their first immunization of this kind.

#### Page 14, Varicella vaccination note

- Correction made to align with AAP Red Book policy expressing no preference between administering MMR plus monovalent varicella vaccine or MMRV for toddlers age 12–15 months of age receiving their first immunization of this kind.

### September 9, 2025

#### Page 1: List of Vaccines

- COVID-19: Typo under Trade name(s) column corrected — “Nuvaxavoid” to “Nuvaxovid”

#### Page 4, Table 3

- RSV-mAb Immunization: Added a blue bar to clarify all eligible children with the conditions listed should receive RSV-mAb in the 1<sup>st</sup> RSV season
- RSV-mAb Immunization: Added “nirsevimab” in purple bars to clarify only nirsevimab recommended for 2<sup>nd</sup> RSV season
- COVID-19 Vaccine: Updated “\*Referring to the Immunization Schedule endorsed by AAP in November 2024; will update as needed when the American College of Obstetricians and Gynecologists releases 2025–2026 guidance” to “\*For more information, refer to <https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/12/covid-19-vaccination-considerations-for-obstetric-gynecologic-care>”.

#### Page 5, COVID-19 vaccination notes

- Updated minimum age for Pfizer-BioNTech Comirnaty to 5 years
- Revised all COVID-19 vaccination notes to reflect the change in FDA approval of Pfizer-BioNTech Comirnaty from children 6 months of age and older to children 5 years of age and older.
- Removed Moderna mNEXSPIKE indication “for people who have previously received a COVID-19 vaccine” per the updated package insert.
- Replaced “These recommendations for the use of 2025-2026 COVID-19 vaccine are contingent upon the approval by the US Food and Drug Administration of updated COVID-19 vaccine products” with “Refer to the AAP’s COVID-19 Vaccine Dosing for a visual quick reference guide, [www.aap.org/CovidVaccineGuide](http://www.aap.org/CovidVaccineGuide). Trade names are used for Moderna because there is more than 1 Moderna product available.”
- Removed mention of emergency use authorization “Use any available COVID-19 vaccine appropriate by age and health status that is approved by the FDA through a biologics license application or authorized through emergency use authorization.”
- Paragraph on Persons who are moderately or severely immunocompromised — Added “For revaccination guidance for children with hematologic malignancy post-hematopoietic cell transplant or CAR T-cell therapy, refer to: <https://doi.org/10.1111/tid.14109>.”
- Section on Age 12–18 years moderately or severely immunocompromised added the statement “Either Moderna product (Spikevax or mNEXSPIKE) can be used unless otherwise specified.”

Vaccines	Recommendations	Effective Date of Recommendation
No new vaccines or vaccine recommendations to report		