

Table 1

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

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 green bars. To determine minimum intervals between doses, see the catch-up schedule (Table 2).

Vaccine and other immunizing agents	Birth	1 mo	2 mos	4 mos	6 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])	1 dose (8 through 19 months), See Notes																	
Hepatitis B (HepB)	1 st dose	← 2 nd dose →		← 3 rd dose →														
Rotavirus (RV): RV1 (2-dose series), RV5 (3-dose series)	1 st dose		2 nd dose	See Notes														
Diphtheria, tetanus, acellular pertussis (DTaP <7 yrs)	1 st dose		2 nd dose	3 rd dose	← 4 th dose →													
<i>Haemophilus influenzae</i> type b (Hib)	1 st dose		2 nd dose	3 rd dose	← 3 rd or 4 th dose → See Notes		← 4 th dose →											
Pneumococcal conjugate (PCV15, PCV20)	1 st dose		2 nd dose	3 rd dose	← 4 th dose →													
Inactivated poliovirus (IPV <18 yrs)	1 st dose		2 nd dose	3 rd dose	← 3 rd dose →													
COVID-19 (1vCOV-mRNA, 1vCOV-aPS)	1 or more doses of updated (2023–2024 Formula) vaccine (See Notes)																	
Influenza (IIV4)	Annual vaccination 1 or 2 doses																	
Influenza (LAIV4)	Annual vaccination 1 dose only																	
Measles, mumps, rubella (MMR)	See Notes		← 1 st dose →		← 2 nd dose →		Annual vaccination 1 or 2 doses											
Varicella (VAR)	See Notes		← 1 st dose →		← 2 nd dose →		Annual vaccination 1 dose only											
Hepatitis A (HepA)	See Notes		2-dose series, See Notes															
Tetanus, diphtheria, acellular pertussis (Tdap ≥7 yrs)	1 dose																	
Human papillomavirus (HPV)	See Notes																	
Meningococcal (MenACWY-CRM ≥2 mos, MenACWY-TT ≥2 years)	1 st dose																	
Meningococcal B (MenB-4C, MenB-FHbp)	2 nd dose																	
Respiratory syncytial virus vaccine (RSV [Abrysvo])	See Notes																	
Dengue (DEN4CYD; 9–16 yrs)	Seasonal administration during pregnancy, See Notes																	
Mpox	Seropositive in endemic dengue areas (See Notes)																	

- Range of recommended ages for all children
- Range of recommended ages for catch-up vaccination
- Range of recommended ages for certain high-risk groups
- Recommended vaccination can begin in this age group
- Recommended vaccination based on shared clinical decision-making
- No recommendation/not applicable

Appendix

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

Guide to Contraindications and Precautions to Commonly Used Vaccines

Adapted from Table 4-1 in *Advisory Committee on Immunization Practices (ACIP) General Best Practice Guidelines for Immunization: Contraindication and Precautions, Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices—United States, 2023–24* (Influenza Season | MMWR (cdc.gov), Contraindications and Precautions for COVID-19 Vaccination, and Contraindications and Precautions for JYNNEOS Vaccination)

Vaccines and other Immunizing Agents	Contraindicated or Not Recommended ¹	Precautions ²
COVID-19 mRNA vaccines (Pfizer-BioNTech, Moderna)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of an mRNA COVID-19 vaccine⁴ 	<ul style="list-style-type: none"> Diagnosed non-severe allergy (e.g., urticaria beyond the injection site) to a component of an mRNA COVID-19 vaccine⁵; or non-severe, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of an mRNA COVID-19 vaccine Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A) Moderate or severe acute illness, with or without fever
COVID-19 protein subunit vaccine (Novavax)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a component of a Novavax COVID-19 vaccine⁴ 	<ul style="list-style-type: none"> Diagnosed non-severe allergy (e.g., urticaria beyond the injection site) to a component of Novavax COVID-19 vaccine⁵; or non-severe, immediate (onset less than 4 hours) allergic reaction after administration of a previous dose of a Novavax COVID-19 vaccine Myocarditis or pericarditis within 3 weeks after a dose of any COVID-19 vaccine Multisystem inflammatory syndrome in children (MIS-C) or multisystem inflammatory syndrome in adults (MIS-A) Moderate or severe acute illness, with or without fever
Influenza, egg-based, inactivated injectable (IIV4)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, cclIV, RIV, or LAIV of any valency) Severe allergic reaction (e.g., anaphylaxis) to any vaccine component¹ (excluding egg) 	<ul style="list-style-type: none"> Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine Moderate or severe acute illness with or without fever
Influenza, cell culture-based inactivated injectable (ccIIV4) [Flucelvax Quadrivalent]	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) to any cclIV of any valency, or to any component² of ccIIV4 	<ul style="list-style-type: none"> Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, RIV, or LAIV of any valency, if using ccIIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. Moderate or severe acute illness with or without fever
Influenza, recombinant injectable (RIV4) [Flublok Quadrivalent]	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) to any RIV of any valency, or to any component³ of RIV4 	<ul style="list-style-type: none"> Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, cclIV, or LAIV of any valency, if using RIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. Moderate or severe acute illness with or without fever
Influenza, live attenuated (LAIV4) [Flumist Quadrivalent]	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, cclIV, RIV, or LAIV of any valency) Severe allergic reaction (e.g., anaphylaxis) to any vaccine component⁴ (excluding egg) Children age 2–4 years with a history of asthma or wheezing Anatomic or functional asplenia Immunocompromised due to any cause including, but not limited to, medications and HIV infection Close contacts or caregivers of severely immunosuppressed persons who require a protected environment Pregnancy Cochlear implant Active communication between the cerebrospinal fluid (CSF) and the oropharynx, nasopharynx, nose, ear or any other cranial CSF leak Children and adolescents receiving aspirin or salicylate-containing medications 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 	<ul style="list-style-type: none"> Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine Asthma in persons age 5 years old or older Persons with underlying medical conditions other than those listed under contraindications that might predispose to complications after wild-type influenza virus infection, e.g., chronic pulmonary, cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus) Moderate or severe acute illness with or without fever

1. When a contraindication is present, a vaccine should **NOT** be administered. Kroger A, Bahta L, Hunter P. *ACIP General Best Practice Guidelines for Immunization*.
 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. Kroger A, Bahta L, Hunter P. *ACIP General Best Practice Guidelines for Immunization*.
 3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. See [package inserts for U.S.-licensed vaccines](#).
 4. See [package inserts and FDA EUA fact sheets](#) for a full list of vaccine ingredients. mRNA COVID-19 vaccines contain polyethylene glycol (PEG).

Appendix

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

Vaccines and other Immunizing Agents

Contraindicated or Not Recommended¹

Precautions²

Dengue (DENACYD)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) Lack of laboratory confirmation of a previous Dengue infection 	<ul style="list-style-type: none"> Pregnancy HIV infection without evidence of severe immunosuppression Moderate or severe acute illness with or without fever
Diphtheria, tetanus, pertussis (DTaP)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ For DTaP only: Encephalopathy (e.g., 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 	<ul style="list-style-type: none"> G Guillain-Barré syndrome (GBS) within 6 weeks after previous dose of tetanus-toxoid–containing vaccine 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 For DTaP only: Progressive neurologic disorder, including infantile spasms, uncontrolled epilepsy, progressive encephalopathy; defer DTaP until neurologic status clarified and stabilized Moderate or severe acute illness with or without fever
<i>Haemophilus influenzae</i> type b (Hib)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ Less than age 6 weeks 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Hepatitis A (HepA)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ including neomycin 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Hepatitis B (HepB)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ including yeast Pregnancy; <i>Hepatitis B and PreHevBrio are not recommended due to lack of safety data in pregnant persons. Use other hepatitis B vaccines if HepB is indicated⁴.</i> 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Hepatitis A-Hepatitis B vaccine (HepA-HepB) [Twinrix]	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ including neomycin and yeast 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Human papillomavirus (HPV)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ Pregnancy; <i>HPV vaccination not recommended.</i> 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Measles, mumps, rubella (MMR)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) History of thrombocytopenia or thrombocytopenic purpura
Measles, mumps, rubella, and varicella (MMRV)	<ul style="list-style-type: none"> Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) Pregnancy Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent 	<ul style="list-style-type: none"> Need for tuberculin skin testing or interferon-gamma release assay (IGRA) testing Moderate or severe acute illness with or without fever For MMRV only: Personal or family (i.e., sibling or parent) history of seizures of any etiology
Meningococcal ACWY (MenACWY)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> For MenACWY-CRM only: Preterm birth if less than age 9 months Moderate or severe acute illness with or without fever
Meningococcal CRM (MenCVJ)	<ul style="list-style-type: none"> For MenACWY-CRM only: severe allergic reaction to any diphtheria toxoid—or CRM197—containing vaccine 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Meningococcal TT (MenQuadfi)	<ul style="list-style-type: none"> For MenACWY-TT only: severe allergic reaction to a tetanus toxoid-containing vaccine 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Meningococcal B (MenB)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Pregnancy For MenB-4C only: Latex sensitivity Moderate or severe acute illness with or without fever
MenB-4C (Bexsero)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
MenB-FHbp (Trumenba)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Meningococcal ABCWY (MenACWY-TT/MenB-FHbp) [Penbraya]	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Mpox (Dynneos)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Pneumococcal conjugate (PCV)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ Severe allergic reaction (e.g., anaphylaxis) to any diphtheria-toxoid-containing vaccine or its component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Pneumococcal polysaccharide (PPSV23)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Poliovirus vaccine, inactivated (IPV)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Pregnancy Moderate or severe acute illness with or without fever
RSV monoclonal antibody (RSV-mAb)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Respiratory syncytial virus vaccine (RSV)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Rotavirus (RV)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
RV1 [Rotarix]	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ Severe combined immunodeficiency (SCID) History of intussusception 	<ul style="list-style-type: none"> Altered immunocompetence other than SCID Chronic gastrointestinal disease RV1 only: Spina bifida or bladder exstrophy Moderate or severe acute illness with or without fever
RV5 [Rotateq]	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ 	<ul style="list-style-type: none"> Moderate or severe acute illness with or without fever
Tetanus, diphtheria, and acellular pertussis (Tdap)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ For Tdap only: Encephalopathy (e.g., 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 	<ul style="list-style-type: none"> G Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus-toxoid–containing vaccine 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 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 Moderate or severe acute illness with or without fever
Tetanus, diphtheria (Td)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) Pregnancy Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent 	<ul style="list-style-type: none"> Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) Use of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination) Use of aspirin or aspirin-containing products Moderate or severe acute illness with or without fever Moderate or severe acute illness with or without fever If using MMRV, see MMRV/MMRV for additional precautions
Varicella (VAR)	<ul style="list-style-type: none"> Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component³ Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) Pregnancy Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent 	<ul style="list-style-type: none"> Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) Use of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination) Use of aspirin or aspirin-containing products Moderate or severe acute illness with or without fever Moderate or severe acute illness with or without fever

1. When a contraindication is present, a vaccine should NOT be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html

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. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html

3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states.

4. For information on the pregnancy exposure registries for persons who were inadvertently vaccinated with HepIsav-B or PreHevBrio while pregnant, please visit hepIsavBpregnancyregistry.com or www.prehevbrio.com/#safety.

5. Full prescribing information for BE/FORTUS (nirsevimab-alip) www.accessdata.fda.gov/drugsatfda_docs/label/2023/761328s000lbl.pdf

Addendum

Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

In addition to the recommendations presented in the previous sections of this immunization schedule, ACIP has approved the following recommendations by majority vote since October 26, 2023. The following recommendations have been adopted by the CDC Director and are now official. Links are provided if these recommendations have been published in *Morbidity and Mortality Weekly Report (MMWR)*.

Vaccines	Recommendations	Effective Date of Recommendation*
COVID-19 (Moderna, Pfizer-BioNTech, Novavax)	<ul style="list-style-type: none">ACIP recommends 2024-2025 COVID-19 vaccines as authorized or approved by FDA in persons ≥ 6 months of age.	June 27, 2024
Influenza	<ul style="list-style-type: none">ACIP reaffirms the recommendation for routine annual influenza vaccination of all persons aged ≥ 6 months who do not have contraindications.ACIP recommends high-dose inactivated (HD-IV3) and adjuvanted inactivated (aIV3) influenza vaccines as acceptable options for influenza vaccination of solid organ transplant recipients aged 18 through 64 years who are on immunosuppressive medication regimens, without a preference over other age-appropriate IV3s or RIV3.	June 27, 2024
Vaxelis (DTaP-IPV-Hib-HepB)	<ul style="list-style-type: none">ACIP recommends DTaP-IPV-HepB (Vaxelis[®]) should be included with PRP-OMP (PedvaxHIB[®]) in the preferential recommendation for American Indian and Alaska Native infants based on the <i>Haemophilus influenzae</i> type b (Hib) component.	June 26, 2024

*The effective date is the date when the CDC director adopted the recommendation and when the ACIP recommendation became official.