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Clinical Decision Tool Reviews

US Immunization Schedule

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Abstract

Immunization schedules are based on extensive safety and efficacy research. Clinical trials and population-based research are used to determine optimal schedules for immunization to prevent serious and potentially fatal diseases. Changes to the Centers for Disease Control and Prevention recommended vaccination schedule made in 2025 and 2026 were not evidence-based and are no longer supported by professional organizations. The CDC recommendations formerly referenced here have now been replaced by recommended schedules from the American Academy of Pediatrics and the American Academy of Family Physicians.

I. HOW TO USE

When to Use

Use for pediatric and adult patients to determine recommended vaccinations by age.

Pearls / Pitfalls

- This calculator is meant to provide a general schedule of vaccination doses. Clinical judgment and knowledge of past vaccination and the patient's medical history should guide the decision to provide vaccinations to patients.
- Be aware of appropriate interval dosing and catch-up schedules. Giving a vaccine prior to the appropriate interval may invalidate it and require revaccination.
- Live vaccines are ***contraindicated*** in pregnancy and certain immunocompromising conditions*. If you are evaluating a patient who could be pregnant, ensure pregnancy is ruled out prior to administering a live vaccine.
  - *One exclusion is HIV with CD4 ≥ 15% and total CD4 count ≥ 200/mm^3

Why Use

Vaccines are safe and effective in the prevention of various infectious diseases. Different vaccines are recommended for administration at different ages, and for many vaccines repeat dosing is required to renew and maintain adequate immunity.

II. NEXT STEPS

Advice

- Discuss vaccination and immunization safety with the patient, and have a full understanding of the patient's history before administration.
- Determine pregnancy status if administering a live vaccine. Live vaccines are **contraindicated** in pregnancy.
- COVID-19 vaccination recommendations change frequently; consult the American Academy of Pediatrics or the American Academy of Family Physicians for the most up-to-date information.
- It's currently recommended that all patients 6 months of age and older receive a seasonally updated COVID vaccine, especially those who are high risk, older than 65, or who have never received a COVID vaccine.
- Pneumococcal vaccination is now recommended for adults ages 50 and older.

- There are many pneumococcal vaccine options including pneumococcal conjugate vaccines (PCV15, PCV20, and PCV21) and pneumococcal polysaccharide vaccine (PPSV23); follow evidence-based recommendations to ensure your patient receives the most appropriate vaccination based on their medical history.

Management

Recommend and administer immunizations based on these schedules.

Always take into account the immunizations a patient has already received in determining the need for repeat doses. If immunization history is not known, the AAP and AAFP offer guidance on when to provide catch-up or repeat doses.

High risk conditions may alter recommended vaccines. Consider the presence of HIV, cochlear implants, malignancy, sickle cell disease, and other conditions that may necessitate or obviate certain vaccines such as live vaccines.

Immunization counseling is an important part of care. Direct patients toward scientifically validated resources such as policy statements and patient-facing websites from the American Academy of Pediatrics or the American Academy of Family Physicians, for example.

"Delayed" or customized schedules are not recommended. The recommended vaccinations schedules are validated for both efficacy and safety.

Critical Actions

Live vaccines are **contraindicated** in pregnancy. The oral polio vaccine is not used in the US but is used elsewhere, and it is a live vaccine that therefore should not be used in pregnant patients. Live vaccines routinely used and licensed for use in the US include Varicella, intranasal influenza, MMR, and rotavirus. Other live vaccines may be available for specific populations (e.g. military personnel) and for travel.

Patients with immune compromising and other high risk conditions may have different vaccine schedules and recommendations. These may include children and adults with sickle cell disease, cochlear implants, and cancers. These guidelines are not listed in this calculator, and vaccination recommendations for these patients should be addressed collaboratively with their subspecialist teams or a travel medicine or infectious disease consultant.

III. EVIDENCE

Evidence Appraisal

There has been extensive discourse and controversy over the safety of vaccines and their links to chronic illnesses including autism. The specific link between vaccines and autism, initially suggested by a paper that was subsequently retracted for falsified data, has been extensively debunked by decades of research on the topic. The consensus of professional organizations and the scientific community is that vaccines are safe, effective, and do not cause or increase the risk of autism. Additional research has shown that vaccines do not increase the risk of infection from diseases not targeted by vaccines (Glanz et al., 2018).

Formula

See tables

Facts & Figures

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
Haemophilus influenzae 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)	ccIIV3	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	Penmenvy
Mpox vaccine	Mpox	JYNNEOS
Pneumococcal conjugate vaccine	PCV15	Vaxneuvance
	PCV20	Prevnar 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 *Haemophilus influenzae* type b vaccine	DTaP-IPV/Hib	Pentacel
DTaP and inactivated poliovirus vaccine	DTaP-IPV	Kinrix Quadracel
DTaP, inactivated poliovirus, *Haemophilus influenzae* 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.

Updated November 21, 2025

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 (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 (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.

Helpful information

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

For the most up-to-date version, visit AAP.org/ImmunizationSchedule

Recommended Adult Immunization Schedule by Age Group

Vaccine	19-26 years	27-49 years	50-64 years	≥65 years
COVID-19	1 or more doses of 2025-2026 vaccine (See Notes)			2 or more doses of 2025-2026 vaccine (See Notes)
Influenza inactivated (IIV3, ccIIV3) **Influenza recombinant** (RIV3	1 dose annually			1 dose annually (HO-IIV3,R IV3o, r allV3 preferred)
Influenza inactivated (allV3; HD-IIV3) **Influenza recombinant** (RIV3)	Solid organ transplant (See Notes)			
Influenza live, attenuated (LAIV3)	1 dose annually			
Respiratory syncytial virus (RSV)	Seasonal administration during pregnancy (See Notes)		50 through 74 years (See Notes)	≥ 75 years
Tetanus, diphtheria, pertussis (TdaporTd)	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (See Notes)			
	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For health care personnel (See Notes)
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (See Notes)		2 doses	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PCV21, PPSV23)			See Notes	See Notes
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine			2, 3, or 4 doses depending on vaccine
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication (See Notes for booster recommendations)			
Meningococcal B (MenB)	19 through 23 years	2 or 3 doses depending on vaccine and indication (See Notes for booster recommendations)		
Haemophilus influenzae type b (HibI)	1 or 3 doses depending on indication			
Mpox	2 doses			

Complete 3-dose series if incompletely vaccinated. Self-report of previous doses acceptable (See Notes)

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of immunity

Recommended vaccination for adults with an additional risk factor or another indication

Recommended vaccination based on shared clinical decision-making

No Guidance/ Not Applicable

LITERATURE

Original/Primary

https://publications.aap.org/redbook/resources/15585

Persistent link: https://aap.org/immunizationschedule

Recommended child and adolescent immunization schedule for ages 18 or younger. American Academy of Pediatrics, 2025.

https://www.aafp.org/dam/AAFP/documents/patient_care/immunizations/2025%20adult%20Schedule.pdf

Alternate link: https://www.guidelinecentral.com/guideline/4865972/

Recommended immunization schedule by age group - adults 19 and older. American Academy of Family Physicians, 2025.

Other References (including meta-analyses, CPGs, and impact analyses)

https://www.healthychildren.org/English/safety-prevention/immunizations/Pages/vaccine-studies-examine-the-evidence.aspx

Vaccine safety: Examine the evidence. Healthychildren.org, American Academy of Pediatrics. Updated 11/20/2025

https://jamanetwork.com/journals/jama/fullarticle/2673970

Glanz JM, Newcomer SR, Daley MF, et al. Association Between Estimated Cumulative Vaccine Antigen Exposure Through the First 23 Months of Life and Non–Vaccine-Targeted Infections From 24 Through 47 Months of Age. JAMA. 2018;319(9):906–913. doi:10.1001/jama.2018.0708