

Summary of Rules for Childhood and Adolescent Immunization*

Adapted from ACIP, AAP, and AAFP by
Immunization Action Coalition, March 2004

Vaccine	Ages usually given and other guidelines	If child falls behind	Precautions and contraindications
Hepatitis B <i>Give IM</i>	<ul style="list-style-type: none"> Vaccinate all children 0 through 18yrs of age. Vaccinate all newborns with monovalent vaccine prior to hospital discharge. Give dose #2 at 1–4m and dose #3 at 6–18m (the last dose in the infant series should not be given earlier than age 24wks). After the first dose, the series may be completed with single-antigen vaccine or up to 3 doses of Comvax (2m, 4m, 12–15m of age) or Pediarix (2m, 4m, 6m of age). Although not the preferred schedule, dose #1 can be given as late as age 2m of age if the mother has written documentation of HBsAg-negative status at the time of child’s birth. If mother is HBsAg-positive: give the newborn HBIG + dose #1 within 12hrs of birth, #2 at 1–2m, and #3 at 6m of age. If mother’s HBsAg status is unknown: give the newborn dose #1 within 12hrs of birth, #2 at 1–2m, and #3 at 6m of age. If mother is subsequently found to be HBsAg positive, give infant HBIG within 7d of birth. May give with all other vaccines. 	<ul style="list-style-type: none"> Do not restart series, no matter how long since previous dose. 3-dose series can be started at any age. Minimum spacing for children and teens: 4wks between #1 & #2, and 8wks between #2 & #3. Overall there must be ≥16wks between #1 & #3 (e.g., 0-, 2-, 4m; 0-, 1-, 4m). 	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin-bottom: 10px;"> <p style="text-align: center;">Special Notes on Hepatitis B Vaccine</p> <p>Dosing of hepatitis B vaccines: Vaccine brands are interchangeable for 3-dose schedules. For persons 0 through 19yrs of age, give 0.5 mL of either Engerix-B or Recombivax HB.</p> <p>Alternative dosing schedule for unvaccinated adolescents age 11 through 15yrs: Give 2 doses Recombivax HB 1.0mL (adult formulation) spaced 4–6m apart. (Engerix-B is not licensed for a 2-dose schedule.)</p> <p>For premature infants: Consult <i>2003 AAP Red Book</i> (p. 66–68) as hep B vaccination recommendations for premies may differ from routine infant schedule.</p> </div> <p>Contraindication for DTaP only: Previous encephalopathy within 7d after DTP/DTaP.</p> <p>Precautions for DTaP: The following are precautions, not contraindications. When these conditions are present, the individual child’s disease risk should be carefully assessed. In situations when the benefit outweighs the risk (e.g., community pertussis outbreak), vaccination should be considered.</p> <ul style="list-style-type: none"> Temperature ≥105°F (40.5°C) within 48hrs after previous dose. Continuous crying lasting ≥3hrs within 48hrs after previous dose. Previous convulsion within 3d after immunization. Pale or limp episode or collapse within 48hrs after previous dose. Unstable progressive neurologic problem (defer until stable).
DTaP (Diphtheria, tetanus, acellular pertussis) <i>Give IM</i>	<ul style="list-style-type: none"> Give at 2m, 4m, 6m, 15–18m, 4–6yrs of age. May give dose #1 as early as 6wks of age. May give #4 as early as 12m of age if 6m have elapsed since #3 and the child is unlikely to return at age 15–18m. Do not give DTaP to children ≥7yrs of age (give Td). May give with all other vaccines. It is preferable but not mandatory to use the same DTaP product for all doses. 	<ul style="list-style-type: none"> #2 & #3 may be given 4wks after previous dose. #4 may be given 6m after #3. If #4 is given before 4th birthday, wait at least 6m for #5 (4–6yrs of age). If #4 is given after 4th birthday, #5 is not needed. 	<p>Contraindication for DTaP only: Previous encephalopathy within 7d after DTP/DTaP.</p> <p>Precautions for DTaP: The following are precautions, not contraindications. When these conditions are present, the individual child’s disease risk should be carefully assessed. In situations when the benefit outweighs the risk (e.g., community pertussis outbreak), vaccination should be considered.</p> <ul style="list-style-type: none"> Temperature ≥105°F (40.5°C) within 48hrs after previous dose. Continuous crying lasting ≥3hrs within 48hrs after previous dose. Previous convulsion within 3d after immunization. Pale or limp episode or collapse within 48hrs after previous dose. Unstable progressive neurologic problem (defer until stable).
DT <i>Give IM</i>	<ul style="list-style-type: none"> Give to children <7yrs of age if child had a serious reaction to “P” in DTaP/DTP or if parents refuse the pertussis component. May give with all other vaccines. 		
Td <i>Give IM</i>	<ul style="list-style-type: none"> Use Td, not tetanus toxoid (TT), for persons ≥7yrs of age for all indications. A booster dose is recommended for children 11–12yrs of age if 5yrs have elapsed since last dose. Then boost every 10yrs. May give with all other vaccines. 	<ul style="list-style-type: none"> For unvaccinated patients: give dose #1 now, give 2nd dose 4wks later, give 3rd dose 6m after #2, then give booster every 10yrs. 	
MMR (Measles, mumps, rubella) <i>Give SC</i>	<ul style="list-style-type: none"> Give #1 at 12–15m of age. Give #2 at 4–6yrs of age. Make sure that all children and teens over 4–6yrs of age have received both doses of MMR. If a dose was given before 12m of age, it doesn’t count as the first dose, so give #1 at 12–15m of age with a minimum interval of 4wks between the invalid dose and dose #1. May give with all other vaccines. If MMR and Var (and/or yellow fever vaccine) are not given on the same day, space them ≥28d apart. 2 doses of MMR are recommended for all children ≤18yrs of age. Do not withhold vaccine from children of pregnant women. 	<ul style="list-style-type: none"> Dose should be given whenever it is noted that a child is behind. Exception: If MMR and Var (and/or yellow fever vaccine) are not given on the same day, space them ≥28d apart. Dose #2 can be given at any time if at least 28d have elapsed since dose #1 and both doses are administered after 1yr of age. 	<ul style="list-style-type: none"> Pregnancy or possibility of pregnancy within 4 weeks. If blood, plasma, and/or immune globulin were given in past 11m, see ACIP statement <i>General Recommendations on Immunization</i>[†] regarding time to wait before vaccinating. HIV is NOT a contraindication unless severely immunocompromised. Immunocompromised persons (e.g., because of cancer, leukemia, lymphoma). Note: For patients on high-dose immunosuppressive therapy, consult ACIP recommendations[†] regarding delay time. Note: MMR is not contraindicated if a PPD test was recently applied. If PPD and MMR not given on same day, delay PPD for 4–6wks after MMR.
Varicella (Var) (Chickenpox) <i>Give SC</i>	<ul style="list-style-type: none"> Give at 12–18m of age. Vaccinate all children ≥12m of age including all adolescents who have not had chickenpox. May use as postexposure prophylaxis if given within 3–5d. May give with all other vaccines. If Var and MMR (and/or yellow fever vaccine) are not given on the same day, space them ≥28d apart. Do not withhold vaccine from children of pregnant women. 	<ul style="list-style-type: none"> Do not give to children <12m of age. Susceptible children <13yrs of age should receive 1 dose. Susceptible persons ≥13yrs of age should receive 2 doses 4–8wks apart. 	<ul style="list-style-type: none"> Pregnancy or possibility of pregnancy within 4 weeks. If blood, plasma, and/or immune globulin (IG or VZIG) were given in past 11m, see ACIP statement <i>General Recommendations on Immunization</i>[†] regarding time to wait before vaccinating. Persons immunocompromised because of high doses of systemic steroids, cancer, leukemia, lymphoma, or immunodeficiency. Note: For patients with humoral immunodeficiency, HIV infection, or leukemia, or for patients on high doses of systemic steroids, see ACIP recommendations.[†] For children taking salicylates, see ACIP recommendations.[†]

Do not give any vaccine if patient (1) has had an anaphylactic reaction to a prior dose of the vaccine or any of its components or (2) has a moderate or severe acute illness. (Minor illness is not a reason to postpone vaccination.)

Summary of Rules for Childhood and Adolescent Immunization* (continued)

Vaccine	Ages usually given and other guidelines	If child falls behind	Precautions and contraindications
Polio (IPV) Give SC or IM	<ul style="list-style-type: none"> Give at 2m, 4m, 6–18m, and 4–6yrs of age. May give #1 as early as 6wks of age. Not routinely recommended for those ≥18yrs of age (except certain travelers). May give with all other vaccines. 	<ul style="list-style-type: none"> All doses should be separated by at least 4wks. If #3 of an all-IPV series is given at ≥4yrs of age, dose #4 is not needed. 	Do not give any vaccine if patient (1) has had an anaphylactic reaction to a prior dose of the vaccine or any of its components or (2) has a moderate or severe acute illness. (Minor illness is not a reason to postpone vaccination.)
Hib (<i>Haemophilus influenzae</i> type b) Give IM	<ul style="list-style-type: none"> HibTITER (HbOC) & ActHib (PRP-T): give at 2m, 4m, 6m, 12–15m (booster dose). PedvaxHIB or Comvax (containing PRP-OMP): give at 2m, 4m, 12–15m. Dose #1 of Hib vaccine may be given as early as 6wks of age but no earlier. The last dose (booster dose) is given no earlier than 12m of age and a minimum of 8wks after the previous dose. May give with all other vaccines. Hib vaccines are interchangeable; however, if different brands of Hib vaccines are administered, a total of three doses are necessary to complete the primary series in infants. Any Hib vaccine may be used for the booster dose. Hib is not routinely given to children ≥5yrs of age. 	<p>Rules for all Hib vaccines:</p> <ul style="list-style-type: none"> If #1 was given at 12–14m, give a booster dose in 8wks. Give only 1 dose to unvaccinated children ≥15m and <5yrs of age. <p>Rules for HibTITER and ActHib:</p> <ul style="list-style-type: none"> #2 and #3 may be given 4 wks after previous dose. If #1 was given at 7–11m, only 3 doses are needed; #2 is given 4–8wks after #1, then boost at 12–15m (and must be ≥8wks after dose #2). <p>Rules for PedvaxHIB and Comvax:</p> <ul style="list-style-type: none"> #2 may be given 4wks after dose #1 	
Hepatitis A Give IM	<ul style="list-style-type: none"> Vaccinate children ≥2yrs old who live in areas with historically elevated rates of hepatitis A, as well as children who have specific risk factors. (See ACIP statement[†] and column to right for details.) Children who travel outside of the U.S. (except to W. Europe, New Zealand, Australia, Canada, or Japan). Dose #2 is given a minimum of 6m after dose #1. Dose #1 may not be given earlier than 2yrs of age. May give with all other vaccines. 	<ul style="list-style-type: none"> Do not restart series, no matter how long since previous dose. Hepatitis A vaccine brands are interchangeable. Consult your local/state public health authority for information regarding your city, county, or state hepatitis A rates. States with historically elevated rates (average ≥10 cases per 100,000 population from 1987-1997) include the following: AL, AZ, AK, CA, CO, ID, MO, MT, NV, NM, OK, OR, SD, TX, UT, WA, and WY. 	
Influenza Give IM or intranasally	<ul style="list-style-type: none"> Vaccinate all children ages 6–23 months. Vaccinate children ≥24m of age with risk factors as defined by ACIP.[†] Use trivalent inactivated influenza vaccine (TIV) for children 6–59m, and either TIV or live attenuated influenza vaccine (LAIV) for children ≥5yrs of age who have no contraindications. Give 2 doses to first-time vaccinees <9yrs of age, separated by ≥4wks for TIV or ≥6wks for LAIV. Give 0.25 mL dose (TIV) to infants 6–35m and 0.5 mL dose if age ≥3yrs. May give with all other vaccines. 	<ul style="list-style-type: none"> If previously unvaccinated child <9 yrs does not receive 2nd dose during initial vaccination season, give only 1 dose the following season. 	
Pneumococcal	PCV Give IM	<ul style="list-style-type: none"> Give at 2m, 4m, 6m, and 12–15m of age. Dose #1 may be given as early as 6wks of age. For unvaccinated high-risk children (defined below) 24–59m of age, give 2 doses ≥8wks apart. If PPV not previously given, administer PPV ≥8wks after final dose of PCV. For unvaccinated moderate-risk children (defined below) 24–59m of age, consider giving 1 dose. May give 1 dose to unvaccinated healthy children 24–59m. PCV is not routinely given to children ≥5yrs of age. May give with all other vaccines. <p>High-risk children: Those with sickle cell disease; anatomic/functional asplenia; chronic cardiac, pulmonary, or renal disease; diabetes mellitus; CSF leak; HIV infection; or immunosuppression. Moderate-risk children: Children age 24–35m; children age 24–59m who attend group day care centers or are of Alaska Native, American Indian, or African American descent.</p>	
	PPV IM or SC	Give PPV to high-risk children ≥2yrs of age as recommended in the ACIP statement <i>Prevention of Pneumococcal Disease</i> (4/4/97). [†]	
Meningococcal Give SC	Vaccinate children ≥2yrs of age with risk factors. Discuss disease risk and vaccine availability with college students. Consult ACIP statement on meningococcal disease (6/30/00) for details. [†]		

* Licensed combination vaccines may be used whenever any components of the combination are indicated and the vaccine's other components are not contraindicated (except Trihibit, which may only be used as the 4th dose of the series). The following combination vaccines are currently licensed: Hib-HepB (Comvax), DTaP-HepB-IPV (Pediarix), DTaP-Hib (Trihibit), and HepA-HepB (Twinrix). Rules for use of combination vaccines consist of those applicable to each of the components.

† For more complete information, see the ACIP statements, which are published in the *MMWR*. To obtain them, visit www.cdc.gov/nip/publications/ACIP-list.htm or visit the Immunization Action Coalition's (IAC) website at www.immunize.org/acip For recommendations of the American Academy of Pediatrics (AAP), consult AAP's 2003

Red Book and the journal *Pediatrics*, or visit www.immunize.org/aap To view the AAFP/AAP/CDC Recommended Childhood and Adolescent Immunization Schedule—U.S., visit www.immunize.org/cdc/child-schedule.pdf

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