

Recommendations for Preventive Pediatric Health Care

Bright Futures/American Academy of Pediatrics



Each child and family is unique; therefore, these Recommendations for Preventive Pediatric Health Care are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in satisfactory fashion. Additional visits may become necessary if circumstances suggest variations from normal.

Developmental, psychosocial, and chronic disease issues for children and adolescents may require frequent counseling and treatment visits separate from preventive care visits.

These guidelines represent a consensus by the American Academy of Pediatrics (AAP) and Bright Futures. The AAP continues to emphasize the great importance of continuity of care in comprehensive health supervision and the need to avoid fragmentation of care.

The recommendations in this statement do not indicate an exclusive course of treatment or standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

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AGE	INFANCY								EARLY CHILDHOOD					MIDDLE CHILDHOOD					ADOLESCENCE											
	Prenatal	Newborn	3-5 w	By 1 mo	2 mo	4 mo	6 mo	8 mo	12 mo	18 mo	24 mo	30 mo	3 y	4 y	6 y	7 y	8 y	9 y	10 y	11 y	12 y	13 y	14 y	15 y	16 y	17 y	18 y	19 y	20 y	21 y
HISTORY																														
Initial/Interval	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
MEASUREMENTS																														
Length/Height and Weight	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Head Circumference	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Weight for Length	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Body Mass Index																														
Blood Pressure*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
SENSORY SCREENING																														
Vision	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Hearing	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DEVELOPMENTAL/BEHAVIORAL ASSESSMENT																														
Developmental Screening†																														
Autism Screening†																														
Developmental Surveillance†	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Psychosocial/Behavioral Assessment	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Alcohol and Drug Use Assessment																														
PHYSICAL EXAMINATION†	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
PROCEDURES†																														
Newborn Metabolite/Hemoglobin Screening‡		←	•	→																										
Immunization†	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Hemostatic or Hemoglobin†						•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Lead Screening†						•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Tuberculin Test†				•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Dyslipidemia Screening†																														
STI Screening†																														
Cervical Dysplasia Screening†																														
ORAL HEALTH†							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
ANTICIPATORY GUIDANCE†	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

1. If a child cannot enter care for the full time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up to date at the earliest possible time.
 2. A parent still is encouraged to remain up to date at high risk, for both the parent, and for those who require a newborn screen. The parent will avoid the usual schedule, percutaneous medical history, and a discussion of benefits of breastfeeding and physical method of feeding per AAP statement "Breastfeeding: The Natural Way" (2005) [URL: <http://www.aappublications.org/pubs/newbornscreening/050705a>].
 3. Every infant should have a newborn evaluation after birth, breastfeeding encouraged, and intervention and support offered. Every infant should have an evaluation within 9 to 11 days of birth and within 48 to 72 hours after discharge from the hospital, to include evaluation for feeding and jaundice. Breastfeeding infants should receive formal breastfeeding evaluation, mother support, and instruction on assessment in AAP statement "Breastfeeding and the Use of Human Milk" (2005) [URL: <http://www.aappublications.org/pubs/newbornscreening/050705a>]. For newborn discharged in less than 48 hours after delivery, the infant must be reassessed within 48 hours of discharge per AAP statement "Hospital Stay for Healthy Term Newborns" (2004) [URL: <http://www.aappublications.org/pubs/newbornscreening/040704a>].
 4. Blood pressure measurement in infants and children with specific risk variables should be performed at visits between ages 3 years.
 5. If the patient is unimmunized, immunize within 8 weeks per the AAP statement "Eye Examination in Infants, Children, and Young Adults by Pediatricians" (2001) [URL: <http://www.aappublications.org/pubs/newbornscreening/010701a>].
 7. All newborns should be screened per AAP statement "Eye Exam: Pediatric Ophthalmology and Otolaryngology for Early Hearing Detection and Intervention Programs" (2006) [URL: <http://www.aappublications.org/pubs/newbornscreening/060706a>].

Joint Committee on Infant Hearing. Year 2007 position statement: principles and guidelines for early hearing detection and intervention programs. Pediatrics. 2007;120:898-911.
 8. AAP Council on Children With Disabilities, AAP Section on Developmental Disabilities Pediatrics, AAP Bright Futures Steering Committee, AAP Medical Home Initiatives for Children With Special Needs Project Advisory Committee. Identifying infants and young children with developmental disabilities in the medical home: an algorithm for development surveillance and screening. Pediatrics. 2005;116:977-985 [URL: <http://www.aappublications.org/pubs/newbornscreening/050705a>].
 9. Skjeltne VL, Herman BL, Johnson CP, et al. Identifying children with autism early? Pediatrics. 2002;110:1442-1453 [URL: <http://www.aappublications.org/pubs/newbornscreening/020702a>].
 10. At each visit, age-appropriate physical examination is required, with infant tightly undressed, state child undressed and suitably draped.
 11. Three may be modified, depending on entry point into schedule and individual need.
 12. Hemostatic and hemoglobin screening should be done according to state law. Results should be reviewed at visit and appropriate retesting or referral done as needed.
 13. Schedules per the Committee on Infantile Diseases, published annually in the January issue of Pediatrics. They will should be an opportunity to update and complete a child's immunizations.
 14. See AAP Pediatric Adolescent Immunization Schedule (2005) for a discussion of universal and selective screening options. See also Recommendations to prevent and control iron deficiency in the United States. IDWHA. 1999/2000-01-06.
 15. For children at risk of lead exposure, consult the AAP statement "Lead Exposure in Children: Prevention, Detection, and Management" (2005) [URL: <http://www.aappublications.org/pubs/newbornscreening/050705a>]. Screening should be done in accordance with state law where applicable.

15. Perform risk assessment or screen as appropriate, based on universal screening requirements for patients with diabetes or high cholesterol rates.
 17. Interpretation of screening per recommendations of the Committee on Infantile Diseases, published in the special section of Red Book: Report of the Committee on Infectious Diseases. They should be done on recognition of high-risk factors.
 18. "Ethnic Project of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) Final Report" (2002) [URL: <http://www.aappublications.org/pubs/newbornscreening/020702a>] and "The Expert Committee Recommendations on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity: International Survey of Bmi-Related Definitions and Prevalence Worldwide: International Survey of Bmi-Related Definitions and Prevalence Worldwide" (2000) [URL: <http://www.aappublications.org/pubs/newbornscreening/000700a>].
 19. All sexually active girls should have screening for cervical dysplasia as part of a pelvic examination beginning within 3 years of onset of sexual activity or age 21, whichever comes first.
 21. Follow-up in dental home, if available. Otherwise, alternate and health risk assessment. If the primary care source is not able to handle, consider and feasible outpatient referral.
 22. At the visit for 3 years and 6 years of age, it should be determined whether the patient has a dental home. If the patient does not have a dental home, a referral should be made to one. If the primary care source is unable to handle, consider and feasible outpatient referral.
 23. Refer to the website guidelines by age or listed in Bright Futures Guidelines (Pages J1 thru J5, Current PM, etc.) Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents, 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2004.

KEY
 • = to be performed ←•→ = risk assessment to be performed, with appropriate action to follow, if positive ←•→ = range stating which a service may be provided, with the symbol indicating the preferred age

Recommended Immunization Schedule for Persons Aged 0 Through 6 Years—United States • 2010

For those who fall behind or start late, see the catch-up schedule

Vaccine ▼	Age ►	Birth	1 month	2 months	4 months	6 months	12 months	15 months	18 months	19–23 months	2–3 years	4–6 years
Hepatitis B ¹		HepB	HepB			HepB						
Rotavirus ²				RV	RV	RV ²						
Diphtheria, Tetanus, Pertussis ³				DTaP	DTaP	DTaP	^{see footnote 7}	DTaP				DTaP
Haemophilus influenzae type b ⁴				Hib	Hib	Hib ⁴		Hib				
Pneumococcal ⁵				PCV	PCV	PCV		PCV			PPSV	
Inactivated Poliovirus ⁶				IPV	IPV		IPV					IPV
Influenza ⁷							Influenza (Yearly)					
Measles, Mumps, Rubella ⁸							MMR		^{see footnote 9}			MMR
Varicella ⁹							Varicella		^{see footnote 9}			Varicella
Hepatitis A ¹⁰							HepA (2 doses)				HepA Series	
Meningococcal ¹¹												MCV

Range of recommended ages for all children except certain high-risk groups

Range of recommended ages for certain high-risk groups

This schedule includes recommendations in effect as of December 15, 2009. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory

Committee on Immunization Practices statement for detailed recommendations: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967.

1. Hepatitis B vaccine (HepB). (Minimum age: birth)

At birth:

- Administer monovalent HepB to all newborns before hospital discharge.
- If mother is hepatitis B surface antigen (HBsAg)-positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth.
- If mother's HBsAg status is unknown, administer HepB within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if HBsAg-positive, administer HBIG (no later than age 1 week).

After the birth dose:

- The HepB series should be completed with either monovalent HepB or a combination vaccine containing HepB. The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks. The final dose should be administered no earlier than age 24 weeks.
- Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg 1 to 2 months after completion of at least 3 doses of the HepB series, at age 9 through 18 months (generally at the next well-child visit).
- Administration of 4 doses of HepB to infants is permissible when a combination vaccine containing HepB is administered after the birth dose. The fourth dose should be administered no earlier than age 24 weeks.

2. Rotavirus vaccine (RV). (Minimum age: 6 weeks)
- Administer the first dose at age 6 through 14 weeks (maximum age: 14 weeks 6 days). Vaccination should not be initiated for infants aged 15 weeks 0 days or older.
 - The maximum age for the final dose in the series is 8 months 0 days
 - If Rotarix is administered at ages 2 and 4 months, a dose at 6 months is not indicated.

3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP). (Minimum age: 6 weeks)
- The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.
 - Administer the final dose in the series at age 4 through 6 years.

4. Haemophilus influenzae type b conjugate vaccine (Hib). (Minimum age: 6 weeks)
- If PRP-OMP (Pedvax-Hib) or Comvax (HepB-Hib) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.
 - THIBT (DTaP/Hib) and Hiberix (PRP-T) should not be used for doses at ages 2, 4, or 6 months for the primary series but can be used as the final dose in children aged 12 months through 4 years.

5. Pneumococcal vaccine. (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPSV])
- PCV is recommended for all children aged younger than 5 years. Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.
 - Administer PPSV 2 or more months after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant. See *MMWR* 1997;46(No. RR-8).

6. Inactivated poliovirus vaccine (IPV). (Minimum age: 6 weeks)

- The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
- If 4 doses are administered prior to age 4 years a fifth dose should be administered at age 4 through 6 years. See *MMWR* 2009;58(30):829–30.

7. Influenza vaccine (seasonal). (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])

- Administer annually to children aged 6 months through 18 years.
- For healthy children aged 2 through 6 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAIV or TIV may be used, except LAIV should not be given to children aged 2 through 4 years who have had wheezing in the past 12 months.
- Children receiving TIV should receive 0.25 mL if aged 6 through 35 months or 0.5 mL if aged 3 years or older.
- Administer 2 doses (separated by at least 4 weeks) to children aged younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.
- For recommendations for use of influenza A (H1N1) 2009 monovalent vaccine see *MMWR* 2009;58(No. RR-10).

8. Measles, mumps, and rubella vaccine (MMR). (Minimum age: 12 months)
- Administer the second dose routinely at age 4 through 6 years. However, the second dose may be administered before age 4, provided at least 28 days have elapsed since the first dose.

9. Varicella vaccine. (Minimum age: 12 months)
- Administer the second dose routinely at age 4 through 6 years. However, the second dose may be administered before age 4, provided at least 3 months have elapsed since the first dose.
 - For children aged 12 months through 12 years the minimum interval between doses is 3 months. However, if the second dose was administered at least 28 days after the first dose, it can be accepted as valid.

10. Hepatitis A vaccine (HepA). (Minimum age: 12 months)
- Administer to all children aged 1 year (i.e., aged 12 through 23 months). Administer 2 doses at least 6 months apart.
 - Children not fully vaccinated by age 2 years can be vaccinated at subsequent visits
 - HepA also is recommended for older children who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A is desired.

11. Meningococcal vaccine. (Minimum age: 2 years for meningococcal conjugate vaccine [MCV4] and for meningococcal polysaccharide vaccine [MPSV4])
- Administer MCV4 to children aged 2 through 10 years with persistent complement component deficiency, anatomic or functional asplenia, and certain other conditions placing them at high risk.
 - Administer MCV4 to children previously vaccinated with MCV4 or MPSV4 after 3 years if first dose administered at age 2 through 6 years. See *MMWR* 2009;58:1042–3.

CDC/NCHD

The Recommended Immunization Schedules for Persons Aged 0 through 18 Years are approved by the Advisory Committee on Immunization Practices (<http://www.cdc.gov/vaccines/imz/advis/>), the American Academy of Pediatrics (<http://www.aap.org/>), and the American Academy of Family Physicians (<http://www.aafp.org/>).

Department of Health and Human Services • Centers for Disease Control and Prevention

Recommended Immunization Schedule for Persons Aged 7 Through 18 Years—United States • 2010

For those who fall behind or start late, see the schedule below and the catch-up schedule

Vaccine ▼	Age ►	7–10 years	11–12 years	13–18 years
Tetanus, Diphtheria, Pertussis ¹			Tdap	Tdap
Human Papillomavirus ²		see footnote 2	HPV (3 doses)	HPV series
Meningococcal ³		MCV	MCV	MCV
Influenza ⁴		Influenza (Yearly)	Influenza (Yearly)	Influenza (Yearly)
Pneumococcal ⁵		PPSV	PPSV	PPSV
Hepatitis A ⁶		HepA Series	HepA Series	HepA Series
Hepatitis B ⁷		Hep B Series	Hep B Series	Hep B Series
Inactivated Poliovirus ⁸		IPV Series	IPV Series	IPV Series
Measles, Mumps, Rubella ⁹		MMR Series	MMR Series	MMR Series
Varicella ¹⁰		Varicella Series	Varicella Series	Varicella Series

Range of recommended ages for all children except certain high-risk groups

Range of recommended ages for catch-up immunization

Range of recommended ages for certain high-risk groups

This schedule includes recommendations in effect as of December 15, 2009. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the relevant Advisory

Committee on Immunization Practices statement for detailed recommendations: <http://www.cdc.gov/vaccines/pubs/acip-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS) at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967.

1. Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap). (Minimum age: 10 years for Boostrix and 11 years for Adacel)
 - Administer at age 11 or 12 years for those who have completed the recommended childhood DTP/DTaP vaccination series and have not received a tetanus and diphtheria toxoid (Td) booster dose.
 - Persons aged 13 through 18 years who have not received Tdap should receive a dose.
 - A 5-year interval from the last Td dose is encouraged when Tdap is used as a booster dose; however, a shorter interval may be used if pertussis immunity is needed.
2. Human papillomavirus vaccine (HPV). (Minimum age: 9 years)
 - Two HPV vaccines are licensed: a quadrivalent vaccine (HPV4) for the prevention of cervical, vaginal and vulvar cancers (in females) and genital warts (in females and males), and a bivalent vaccine (HPV2) for the prevention of cervical cancers in females.
 - HPV vaccines are most effective for both males and females when given before exposure to HPV through sexual contact.
 - HPV4 or HPV2 is recommended for the prevention of cervical precancers and cancers in females.
 - HPV4 is recommended for the prevention of cervical, vaginal and vulvar precancers and cancers and genital warts in females.
 - Administer the first dose to females at age 11 or 12 years.
 - Administer the second dose 1 to 2 months after the first dose and the third dose 6 months after the first dose (at least 24 weeks after the first dose).
 - Administer the series to females at age 13 through 18 years if not previously vaccinated.
 - HPV4 may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of acquiring genital warts.
3. Meningococcal conjugate vaccine (MCV4).
 - Administer at age 11 or 12 years, or at age 13 through 18 years if not previously vaccinated.
 - Administer to previously unvaccinated college freshmen living in a dormitory.
 - Administer MCV4 to children aged 2 through 10 years with persistent complement component deficiency, anatomic or functional asplenia, or certain other conditions placing them at high risk.
 - Administer to children previously vaccinated with MCV4 or MPSV4 who remain at increased risk after 3 years (if first dose administered at age 2 through 6 years) or after 5 years (if first dose administered at age 7 years or older). Persons whose only risk factor is living in on-campus housing are not recommended to receive an additional dose. See *MMWR* 2009;58:1042–3.
4. Influenza vaccine (seasonal).
 - Administer annually to children aged 6 months through 18 years.
 - For healthy nonpregnant persons aged 7 through 18 years (i.e., those who do not have underlying medical conditions that predispose them to influenza complications), either LAN or TIV may be used.
 - Administer 2 doses (separated by at least 4 weeks) to children aged younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.
 - For recommendations for use of Influenza A (H1N1) 2009 monovalent vaccine. See *MMWR* 2009;58(No. RR-10).
5. Pneumococcal polysaccharide vaccine (PPSV).
 - Administer to children with certain underlying medical conditions, including a cochlear implant. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition. See *MMWR* 1997;46(No. RR-6).
6. Hepatitis A vaccine (HepA).
 - Administer 2 doses at least 6 months apart.
 - HepA is recommended for children aged older than 23 months who live in areas where vaccination programs target older children, who are at increased risk for infection, or for whom immunity against hepatitis A is desired.
7. Hepatitis B vaccine (HepB).
 - Administer the 3-dose series to those not previously vaccinated.
 - A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.
8. Inactivated poliovirus vaccine (IPV).
 - The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.
 - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
9. Measles, mumps, and rubella vaccine (MMR).
 - If not previously vaccinated, administer 2 doses or the second dose for those who have received only 1 dose, with at least 28 days between doses.
10. Varicella vaccine.
 - For persons aged 7 through 18 years without evidence of immunity (see *MMWR* 2007;56(No. RR-4)), administer 2 doses if not previously vaccinated or the second dose if only 1 dose has been administered.
 - For persons aged 7 through 12 years, the minimum interval between doses is 3 months. However, if the second dose was administered at least 28 days after the first dose, it can be accepted as valid.
 - For persons aged 13 years and older, the minimum interval between doses is 28 days.

CDC/DEBVA