

# Pediatric Preventive Health Care Guidelines

## Recommended Immunization Schedule for Persons 0 – 18 Years. Per Centers for Disease Control

Vaccine	Age >	Birth	1 month	2 months	4 months	6 months	9 months	12 months	15 months	18 months	19 – 23 months	2 – 3 years	4 – 6 years	7 – 10 years	11 – 12 years	13 – 18 years
Hepatitis B <sup>1</sup> (3 doses)		HepB	HepB					HepB								HepB Series
Rotavirus <sup>2</sup> (2 or 3 doses)				RV	RV	RV <sup>2</sup>										
Diphtheria, Tetanus, Pertussis <sup>3</sup> (4 doses; DTaP <= 7 yrs)				DTaP	DTaP	DTaP		See footnote <sup>3</sup>		DTaP			DTaP			
Haemophilus influenzae type b <sup>4</sup> (3 doses)				Hib	Hib	Hib <sup>4</sup>			Hib							
Tetanus, Diphtheria, and acellular pertussis (Tdap >= 7 yrs)																Tdap
Pneumococcal <sup>5</sup> (4 doses)				PCV	PCV	PCV			PCV				PPSV			PCV
Inactivated Poliovirus <sup>6</sup> (3 doses)				IPV	IPV			IPV					IPV			IPV Series
Influenza <sup>7</sup> (2 doses for some)									Influenza (up to age 23 months: IIV only; after that, IIV or LAIV)							
Measles, Mumps, Rubella <sup>8</sup> (2 doses)									MMR		See footnote <sup>8</sup>		MMR			MMR
Varicella <sup>9</sup> (2 doses)									Varicella				Varicella			Varicella
Hepatitis A <sup>10</sup> (2 doses)									HepA				HepA			
Meningococcal <sup>11</sup> (2 doses; Hib-MenCY >= 6 weeks; MCV4-D >= 9 months; MCV4-CRM >= 2 yrs.)													MCV4		MCV4	MCV4
Human Papillomavirus <sup>12</sup> (2 doses <= 14 years old; 3 doses if between 15-26 years old)																See footnote <sup>12</sup>

This schedule includes recommendations in effect as of January 1, 2013. 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: <https://www.cdc.gov/vaccines/hcp/acip-recs/index.html>. 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, 1(800) 822-7967. Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

### REQUIRED SCREENING

	0 – 24 Months	3 – 7 Years	8 – 11 Years	12 – 21 Years
Depression Screening				Every Well Visit starting at age 11
Initial Health Assessment (IHA) Initial History / Physical	Complete within 120 days of enrollment in SFHP or documented as done within 12 months prior to enrollment. Should include SHA or approved Individual Health Education Behavioral Assessment (IHEBA)			
Staying Healthy Assessment (SHA) or Individual Health Education Behavioral Assessment (IHEBA)	Administer age appropriate document at each SHA age interval (0-6 months, 7-12 months, 1-2 years). Review and update at each Well Visit.	Administer age appropriate document at each SHA age interval (3-4 years and 5-8 years). Update annually.	Administer age appropriate document at each SHA age interval (9-11 years). Update at each Well Visit.	Administer age appropriate document at the SHA age interval (12-17 years).  Annual re-administration is highly recommended due to frequently changing behavioral risk factors for this age group. Update annually.
Complete History and Physical (unclotted exam)	At birth, and 2-4 days, and at 1, 2, 4, 6, 9, 12, 15, 18, and 24 months	Annually	8 and 10 years of age	Annually
Head Circumference	Every Well Visit		n/a	
Height and Weight	Every Well Visit			
BMI Percentile	BMI percentile is plotted on growth chart for each well-child exam ages 2 – 20 years			
Developmental / Behavioral Assessment and Anticipatory Guidance	Screening at 9, 18, and 30 months, and every Well Visit			
Blood Pressure	n/a			Every Well Visit starting at age 3
Vision Screening	Subjective screening (including history) at every Well Visit			Objective vision test as part of a Well Visit, at ages 3 – 10, 12, 15, and 18 Subjective screening (including history) at all ages
Hearing Screening	Subjective screening (including history) at every Well Visit			Objective hearing test (audiometry) as part of a Well Visit, at ages 4 – 10, 12, 15, and 18 Subjective screening (including history) at all ages
Nutritional Assessment	At every Well Visit, screening includes: 1) Height and weight, 2) Hematocrit or hemoglobin to screen for anemia starting at 9-12 months, and 3) Breastfeeding and infant feeding status, food/nutrient intake and eating habits (including evaluation of problems/conditions/needs of the breastfeeding mother). Based on problems/conditions identified, nutritionally at-risk children under 5 years of age are referred to the Women, Infants and Children (WIC) Supplemental Nutrition Program for medical nutrition therapy or other in-depth nutritional assessment.			
Dental Assessment	Inspection of the mouth, teeth and gums is performed at every Well Visit. Children are referred to a dentist at any age if a dental problem is detected or suspected. Beginning at 3 years of age, all children are referred annually to a dentist regardless of whether a dental problem is detected or suspected.			

### LABORATORY / DIAGNOSTIC STUDIES

Newborn Blood Screening	Between 0 – 2 months. Congenital Heart Defect Screening: Newborn			
Urinalysis	At age 5; and annual dipstick UA for leukocytes if sexually active (ages 12-21)			
Hematocrit / Hemoglobin	Once between 4 and 12 months	Risk assessment at 15 - 30 months, and at every Well Visit		n/a
Hereditary and Metabolic Screening	PKU, Thyroid, Galactosemia and Hemoglobinopathies by 1 month			
Lead Testing	Children receiving health services through Medi-Cal Managed Care Plans must have blood lead level (BLL) testing as follows: 1) at 12 months and 24 months of age, 2) between 12 months and 24 months of age if there is no documented evidence of BLL testing at 12 months or thereafter, and 3) between 24 months and 72 months of age if there is no documented evidence of BLL testing at 24 months or thereafter. Elevated BLL of 10 µg/dL or greater requires additional BLL and follow-up in accordance with current DHCS policy or as follows: • 10-14 µg/dL: Confirm with venous sample within 3 months of original test; • 15-19 µg/dL: Confirm with venous sample within 3 months of original test, then retest 30 days following the confirmatory testing; • 20-44 µg/dL: Confirm with venous sample in 1 week to 1 month, depending on severity of BLL; follow up in 1 week to 1 month, depending on severity. • 45-59 µg/dL: Retest with venous sample within 48 hours; • 60-69 µg/dL: Retest with venous sample within 24 hours; • ≥ 70 µg/dL: EMERGENCY. Retest immediately with venous sample. Children with elevated BLLs are referred to the local Childhood Lead Poisoning Prevention Branch at 1(415) 252-3956. All children with confirmed (venous) BLLs of ≥ 20 µg/dL must be referred to CCS.			
Tuberculosis Screening	Annual risk assessment and symptom screen • If any TB risk present: PPD or QuantiFERON TB test (QFT) • If exposed: PPD or QFT immediately and repeated in 8 – 10 weeks • If +PPD or QFT or symptoms present (cough > 3 weeks or 2 other symptoms present, e.g. weight loss, fever, or night sweats): order CXR, evaluate for active TB or refer to the TB clinic For consultation call TB Control: 1(415) 206-8524 or visit: <a href="http://www.sfcdcp.org/tbcontrol.html">http://www.sfcdcp.org/tbcontrol.html</a>			
Cholesterol Screening	Screen once between age 9 - 11 and 17 - 21; more often if risk factors present (family history, high BMI or certain other conditions)			
Screening for Sexually Transmitted Infections/HIV		n/a		<ul style="list-style-type: none"> <li>Adolescents age 16 - 18: Screen for HIV at least once</li> <li>Sexually active females under 25: Screen for Chlamydia annually</li> <li>Men of any age who have sex with men: Screen for STI annually</li> <li>Heterosexual males: Conduct diagnostic testing if symptomatic or if partner is diagnosed with STI.</li> <li>Men and women over 25: Diagnostic testing if symptomatic or in pregnant women</li> </ul>
Cervical Cancer Screening Guidelines per USPSTF		n/a		Begin screening 3 years after onset of sexual activity or at age 21, whichever occurs first. Continue screening every 3 years.
Rubella Antibody Screening		n/a		Rubella serology followed by immediate vaccination for non-immune women of child bearing age. Vaccination following delivery for non-immune pregnant women.

### EDUCATION / ANTICIPATORY GUIDANCE

Assessment and guidance at every visit as appropriate for patient's age. Topics may include violence, injury prevention, safety, tobacco exposure or use, drugs, alcohol use, diet, nutrition, exercise, transition to adult provider.

\* Sources: American Academy of Pediatrics, U.S. Preventive Services Task Force 2007, San Francisco Department of Public Health, American Academy of Family Physicians, Advisory Committee on Immunization Practices, Medical Record Review Guidelines 2013 California Department of Health Care Services

Information about reporting reactions after immunization is available online at <http://www.vaers.hhs.gov> or by telephone via the 24-hour national toll-free information line 1(800) 822-7967. Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for immunization, is available from the National Center for Immunization and Respiratory Diseases at <https://www.cdc.gov/ncidcr> or telephone, 1(800) CDC-INFO 1(800) 232-4636.

#### Recommended Immunization Schedule for Persons 0-18 Years Per Centers for Disease Control

**1. Hepatitis B (HepB) vaccine.** (Minimum age: birth) At birth:  
• Administer monovalent HepB vaccine to all newborns before hospital discharge.  
• For infants born to hepatitis B surface antigen (HBsAg)-positive mothers, administer HepB vaccine and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) 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.  
• If mother's HBsAg status is unknown, within 12 hours of birth administer HepB vaccine for infants weighing >2,000 grams, and HepB vaccine plus HBIG for infants weighing <2,000 grams. Determine mother's HBsAg status as soon as possible and, if she is HBsAg-positive, administer HBIG for infants weighing >2,000 grams (no later than age 1 week).  
• The second dose should be administered at age 1 to 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks.  
• Administration of a total of 4 doses of HepB vaccine is permissible when a combination vaccine containing HepB is administered after the birth dose.  
• Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine starting as soon as feasible (Figure 3).  
The minimum interval between dose 1 and dose 2 is 4 weeks, and between dose 2 and 3 is 8 weeks. The final (third or fourth) dose in the HepB vaccine series should be administered no earlier than age 24 weeks and at least 16 weeks after the first dose.

**2. Rotavirus (RV) vaccine.** (Minimum age: 6 weeks for both RV1 [Rotarix] and RV2 [RotaTeq].)  
• The maximum age for the first dose in the series is 14 weeks, 6 days, and 8 months, 0 days for the final dose in the series. Vaccination should not be initiated for infants aged 15 weeks, 0 days.  
• If RV1 is administered at ages 2 and 4 months, a dose at 6 months is not indicated.

**3. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine.** (Minimum age: 6 weeks)  
• The fourth dose may be administered as early as age 12 months, provided that at least 6 months have elapsed since the third dose.  
• Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine. (Minimum age: 10 years for Boostrix, 11 years for Adacel.)  
• Administer 1 dose of Tdap vaccine to all adolescents aged 11-12 years.  
• Tdap can be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.  
• Administer 1 dose of Tdap vaccine to pregnant adolescents during each pregnancy regardless of number of years from prior Td or Tdap vaccination.  
• Administer 4 Hib vaccine primary series and booster dose to all infants.  
• Hib (PRP-T) should only be used for the booster (final) dose in children ages 12 months to 4 years, who have received at least one dose of Hib.  
• Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.  
• For children who have received an age-appropriate series of 7-valent PCV (PCV7), a single supplemental dose of 13-valent PCV (PCV13) is recommended for:  
— All children aged 14 through 59 months  
— Children aged 24 through 31 months with underlying medical conditions.

**4. Haemophilus influenzae type b (Hib) conjugate vaccine.** (Minimum age: 6 weeks)  
• If PRP-OMP (ProQuad) or Comvax (HepB-Hib) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.  
• Hib should only be used for the booster (final) dose in children aged 12 months through 4 years.

**5. Pneumococcal vaccines.** (Minimum age: 6 weeks for pneumococcal polysaccharide vaccine [PPSV23]; 2 years for pneumococcal conjugate vaccine [PCV])  
• Administer a series of PCV13 vaccine at ages 2, 4, 6 months with a booster at age 12 to 15 months.  
• Administer 1 dose of PCV to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.  
• For children who have received an age-appropriate series of 7-valent PCV (PCV7), a single supplemental dose of 13-valent PCV (PCV13) is recommended for:  
— All children aged 14 through 59 months  
— Children aged 24 through 31 months with underlying medical conditions.

**6. Inactivated poliovirus vaccine (IPV).** (Minimum age: 6 weeks)  
• If 4 or more doses are administered before age 4 years, an additional dose should be administered at age 4 through 6 years.  
• Administer a series of IPV at ages 2, 4, 6-18 months, with booster at age 4-6 years.  
• The final dose in the series should be administered on or after the fourth birthday and at least 6 months after the previous dose.

**7. Influenza vaccine.** (Minimum age: 6 months for inactivated influenza vaccine [IIV]; 2 years for live, attenuated influenza vaccine [LAIV])  
• For most healthy children aged 2 years and older, either LAIV or IIV may be used. However, LAIV should not be administered to some children, including 1) children with asthma, 2) children 2 through 4 years who had wheezing in the past 12 months, or 3) children who have any other underlying medical conditions that predispose them to influenza complications. For all other contraindications to use of LAIV, see MMWR 2010; 59 (No. RR-8), available at <http://www.cdc.gov/mmwr/pdf/rr/mm5908.pdf>.  
• For the 2012-13 season, administer 2 doses (separated by at least 4 weeks) to those who did not receive at least 1 dose of the 2010-11 vaccine. Those who received at least 1 dose of the 2010-11 vaccine require 1 dose for the 2011-12 season.  
• For the 2013-14 season, following dosing guidelines in the 2013 ACP influenza vaccine recommendations.  
• Administer 1 dose to persons age 9 and older.

**8. Measles, mumps, and rubella (MMR) vaccine.** (Minimum age: 12 months)  
• The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.  
• Administer MMR vaccine to infants aged 6 through 11 months who are traveling internationally. These children should be

re-vaccinated with 2 doses of MMR vaccine, the first at age 12 through 15 months and at least 4 weeks after the previous dose, and the second at least 4 weeks later.

• Ensure at all school-age children and adolescents have had 2 doses of MMR vaccine; minimum interval between 2 doses is 4 weeks. Ensure at all school-age children and adolescents have had 2 doses of MMR vaccine; minimum interval between 2 doses is 4 weeks.

**9. Varicella (VZV) vaccine.** (Minimum age: 12 months)  
• Administer the second (final) dose 6 to 18 months after the first.  
• A 2-dose HepB vaccine series is recommended for anyone aged 24 months and older, previously unvaccinated, for whom immunity against hepatitis A virus infection is desired.

**11. Meningococcal conjugate vaccine, quadrivalent (MCV4).** (Minimum age: 9 months for MCV4-D, 2 years for Menveo [MCV4-CRM])  
• Administer MCV4 vaccine at age 11-12 years, with a booster at age 16 years.  
• For children aged 9 through 23 months (1) who are residents of or travelers to countries with hyperendemic or epidemic disease, or (2) who are present during outbreaks caused by a vaccine serogroup, administer an age-appropriate formulation and series of MCV4 for protection against serogroups A and W-135. Prior receipt of Hib-MenCY is not sufficient for children traveling to the meningitis belt or the Sahel.

**12. Human papillomavirus (HPV) vaccines (HPV4 [Gardasil] and HPV2 [Cervarix]).** (Minimum age: 9 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).  
• The vaccine series can be started beginning at age 9 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).  
• See MMWR 2010; 59: 426-32, available at <http://www.cdc.gov/mmwr/pdf/wr/mm5920.pdf>.  
Source: <http://www.cdc.gov/VAC/DC/ncvs/schedules/downloads/child/06ys/schedule-pr.pdf>  
<http://www.cdc.gov/VAC/DC/ncvs/schedules/downloads/child/11yrs/schedule-pr.pdf>

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.

### CATCH-UP SCHEDULE for persons aged 4 months – 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 (and at least 16 weeks after first dose) – minimum age 24 weeks for final dose		
Rotavirus <sup>A</sup>	6 weeks	4 weeks	4 weeks		
Diphtheria, Tetanus, Pertussis <sup>B</sup>	6 weeks	4 weeks	4 weeks	6 months	6 months
Haemophilus influenzae type b <sup>C</sup>	6 weeks	4 weeks if first dose administered at younger than age 12 months 8 weeks (as final dose) if first dose administered at age 12-14 months No further doses needed if first dose administered at age 15 months or older	4 weeks if current age is younger than 12 months, and first dose administered at <7 months old. 8 weeks and age 12-59 months (as final dose) if current age is 12 - 59 months and first dose administered at younger than age 12 months. No further doses needed if previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months	
Pneumococcal <sup>D</sup>	6 weeks	4 weeks if first dose administered at younger than age 12 months 8 weeks (as final dose for healthy children) if first dose administered at age 12 months or older. No further doses needed for healthy children if previous dose administered at age 24 months or older	4 weeks if current age is younger than 12 months 8 weeks (as final dose for healthy children) if current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age	
Meningococcal <sup>E</sup>	6 weeks	8 weeks	4 weeks		<a href="http://www.cdc.gov/vaccines/schedules/downloads/child/catchup-schedule-pr.pdf">http://www.cdc.gov/vaccines/schedules/downloads/child/catchup-schedule-pr.pdf</a> (page 4, footnote 13)
Inactivated Poliovirus <sup>F</sup>	6 weeks	4 weeks	4 weeks	6 months (minimum age 4 years for final dose)	
Measles, Mumps, Rubella <sup>G</sup>	12 months	4 weeks			
Varicella <sup>H</sup>	12 months	3 months			
Hepatitis A	12 months	6 months			

### CATCH-UP SCHEDULE for persons aged 7-18 years

Tetanus, Diphtheria/ Tetanus, Diphtheria, Pertussis <sup>I</sup>	7 years	4 weeks	4 weeks if first dose administered at younger than age 12 months 6 months if first dose administered at 12 months or older	6 months if first dose administered at younger than age 12 months
Human Papillomavirus <sup>J</sup>	Minimum age for dose one = 9 years. Routine dosing intervals are recommended <sup>I</sup>			
Hepatitis A	12 months	6 months		
Hepatitis B	Birth	4 weeks	8 weeks (and at least 16 weeks after first dose)	
Inactivated Poliovirus <sup>F</sup>	6 weeks	4 weeks	4 weeks	6 months
Measles, Mumps, Rubella <sup>G</sup>	12 months	4 weeks		
Varicella <sup>H</sup>	12 months	3 months if person is younger than age 13 years 4 weeks if person is age 13 years or older		

**Catch-up Immunization Schedule for Persons Aged 4 Months – 18 Years Who Start Late or Who Are More Than 1 Month Behind**

**A. Rotavirus (RV) vaccines (RV1 [Rotarix] and RV2 [RotaTeq]).**  
• The maximum age for the first dose in the series is 14 weeks, 6 days, and 8 months, 0 days for the final dose in the series. Vaccination should not be initiated for infants aged 15 weeks, 0 days or older.  
• If RV1 was administered for the first and second doses, a third dose is not indicated.

**B. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine.**  
• The fifth dose is not necessary if the fourth dose was administered at age 4 years or older.

**C. Haemophilus influenzae type b (Hib) conjugate vaccine.**  
• One dose of Hib vaccine should only be considered for unvaccinated persons aged 5 years or older who have sickle cell disease, leukemia, human immunodeficiency virus (HIV) infection, or anatomical/functional asplenia.  
• If the first 2 doses were PRP-OMP (ProQuad) or Comvax and were administered at age 11 months or younger, the third (and final) dose should be administered at age 12 through 15 months and at least 8 weeks after the second dose.  
• If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a final dose at age 12 through 15 months.

**D. For unvaccinated children aged 15 months or older, administer only 1 dose.**  
• For other catch-up issues, consult CDC website.

**E. Inactivated poliovirus vaccine (IPV).**  
• A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose.  
• In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk for imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).  
• IPV is not routinely recommended for U.S. residents aged 18 years or older.

**F. Measles, mumps, and rubella (MMR) vaccine.**  
• Administer the second dose routinely at age 4 through 6 years.

**G. Varicella (VZV) vaccine.**  
• Administer the second dose routinely at age 4 through 6 years. If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.

**H. Tetanus and diphtheria toxoids (Td) and tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccines.**  
• For children aged 7 through 10 years who are not fully immunized with the childhood Tdap vaccine series, Tdap vaccine should be substituted for a single dose of Td vaccine in the catch-up series; if additional doses are needed, use Td vaccine. For these children, an adolescent Tdap vaccine dose should not be given.  
• An inadvertent dose of DTaP vaccine administered to children aged 7 through 10 years can count as part of the catch-up series. This dose can count as the adolescent Tdap dose, or the child can later receive a Tdap booster dose at age 11-12 years.  
• Persons aged 11 to 18 years who have not received Tdap vaccine should receive a dose followed by Td booster doses every ten years thereafter.

**I. Human papillomavirus (HPV) vaccines (HPV4 [Gardasil] and HPV2 [Cervarix]).**  
• Administer the vaccine series to females (either HPV2 or HPV4) and males (HPV4) at age 13 through 18 years if patient is not previously vaccinated.  
• Use recommended routine dosing intervals for vaccine series catch-up.  
Source: <http://www.cdc.gov/vaccines/hcps/schedules/downloads/child/catchup-schedule-pr.pdf>