

# Recommended Immunization Schedule for Persons Age 0-6 Years – UNITED STATES, 2010



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VACCINE	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 <sup>1</sup>	HepB	HepB			HepB						
Rotavirus <sup>2</sup>			RV	RV	RV <sup>2</sup>						
Diphtheria, Tetanus, Pertussis <sup>3</sup>			DTaP	DTaP	DTaP	see footnote 3	DTaP				DTaP
Haemophilus influenzae type b <sup>4</sup>			Hib	Hib	Hib <sup>4</sup>	Hib					
Pneumococcal <sup>5</sup>			PCV	PCV	PCV	PCV				PPSV	
Inactivated Poliovirus <sup>6</sup>			IPV	IPV	IPV					IPV	
Influenza <sup>7</sup>					Influenza (Yearly)						
Measles, Mumps, Rubella <sup>8</sup>					MMR		see footnote 8			MMR	
Varicella <sup>9</sup>					Varicella		see footnote 9			Varicella	
Hepatitis A <sup>10</sup>					HepA (2 doses)				HepA Series		
Meningococcal <sup>11</sup>										MCV	

Range of recommended ages
Certain high-risk groups
Range of recommended ages

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 15, 2009, for children age 0–6 years. Additional information is available at <http://www.cdc.gov/vaccines/recs/schedules>. Any dose not administered at the recommended age should be administered at any subsequent visit, when indicated and feasible. The use of 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 including for high-risk conditions: <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). Guidance about how to obtain and complete a VAERS form is available 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 prior to 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 1–2 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 9–18 months (generally at the next well-child visit).

### 4-MONTH DOSE:

- Administration of 4 doses of HepB to infants is permissible when combination vaccines containing HepB are 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 age 15 weeks or older (i.e., 15 weeks 0 days or older).
- Administer the final dose in the series by age 8 months 0 days.
- If Rotarix<sup>®</sup> 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 of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose.
- Administer the final dose in the series at age 4–6 years.

## 4. Haemophilus influenzae type b conjugate vaccine (Hib). (Minimum age: 6 weeks)

- If PRP-OMP (PedvaxHIB<sup>®</sup> or ComVax<sup>®</sup> [HepB-Hib]) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.
- TriHibit<sup>®</sup> (DTaP/Hib) should not be used for doses at age 2, 4, or 6 months but, can be used as the final dose after any Hib vaccine in children age 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 younger than 5 years old. Administer 1 dose of PCV to all healthy children age 24 through 59 months who are not completely vaccinated for their age.
- Administer PPSV 2 or more months after the last dose of PCV to children age 2 years and older with underlying medical conditions, including cochlear implants.

## 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 age 6 months–18 years.
- For healthy children aged 2 through 6 years (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 age 6–35 months or 0.5 mL if age 3 years or older.
- Administer two doses (separated by 4 weeks or longer) to children younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time last season, but only received one 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 of MMR at age 4–6 years. MMR may be administered before age 4 years, provided at least 28 days have elapsed since the first dose.

## 9. Varicella vaccine. (Minimum age: 12 months)

- Administer the second dose at age 4–6 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 age 1 year (i.e., ages 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 is recommended for certain other groups of children, including in areas where vaccination programs target older children.

## 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.

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

# Recommended Immunization Schedule for Persons Age 7-18 Years – UNITED STATES, 2010



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VACCINE	7-10 YEARS	11-12 YEARS	13-18 YEARS
Tetanus, Diphtheria, Pertussis <sup>1</sup>	see footnote 1	Tdap	Tdap
Human Papillomavirus <sup>2</sup>	see footnote 2	HPV (3 doses)	HPV Series
Meningococcal <sup>3</sup>	MCV	MCV	MCV
Influenza <sup>4</sup>	Influenza (Yearly)		
Pneumococcal <sup>5</sup>	PPSV		
Hepatitis A <sup>6</sup>	HepA Series		
Hepatitis B <sup>7</sup>	HepB Series		
Inactivated Poliovirus <sup>8</sup>	IPV Series		
Measles, Mumps, Rubella <sup>9</sup>	MMR Series		
Varicella <sup>10</sup>	Varicella Series		

Range of recommended ages
  Catch-up immunization
  Certain high-risk groups

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 15, 2009, for children age 7–18 years. Additional information is available at <http://www.cdc.gov/vaccines/recs/schedules>. Any dose not administered at the recommended age should be administered at any subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Consideration should include provider assessment, patient preference, and the potential for adverse events. Providers should consult the respective Advisory Committee on Immunization Practices statement for detailed recommendations, including for high-risk conditions: <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). Guidance about how to obtain and complete a VAERS form is available 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 11–12 years for those who have completed the recommended childhood DTP/DTaP vaccination series and have not received a tetanus and diphtheria toxoids (Td) booster dose.
- Persons age 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 vaccine (MCV).

- Administer MCV at age 11–12 years and at age 13–18 if not previously vaccinated. Administer MCV to previously unvaccinated college freshmen living in dormitories.
- MCV is recommended for children 2–10 years with persistent complement deficiencies or anatomic or functional asplenia and certain other high-risk groups.
- 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 all children age 6 months–18 years.
- For healthy non pregnant persons aged 7 through 18 years (those who do not have

underlying medical conditions that predispose them to influenza complications) either LAIV or TIV may be used.

- Administer two doses (separated by 4 weeks or longer) to children younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time last season but only received one 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-8).

## 6. Hepatitis A vaccine (HepA).

- Administer the 2 doses in the series 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 who were not previously vaccinated.
- A 2-dose series separated by 4 months of Recombivax HB® is licensed for children age 11–15 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 one dose, with at least 28 days between doses.

## 10. Varicella vaccine.

- For persons aged 7 through 18 years without evidence of immunity, administer 2 doses if not previously vaccinated or the second dose if they have received only one dose.
- For persons 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 age 13 years or older, the minimum interval between doses is 28 days.

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