

# Recommended Immunization Schedule for Ages 0–6 Years UNITED STATES • 2007

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 <sup>1</sup>	HepB		HepB		see footnote 1	HepB				HepB Series		
Rotavirus <sup>2</sup>				Rota	Rota	Rota						
Diphtheria, Tetanus, Pertussis <sup>3</sup>				DTaP	DTaP	DTaP		DTaP				DTaP
<i>Haemophilus influenzae</i> type b <sup>4</sup>				Hib	Hib	Hib <sup>4</sup>	Hib		Hib			
Pneumococcal <sup>5</sup>				PCV	PCV	PCV	PCV				PCV PPV	
Inactivated Poliovirus				IPV	IPV	IPV					IPV	
Influenza <sup>6</sup>						Influenza (Yearly)						
Measles, Mumps, Rubella <sup>7</sup>						MMR						MMR
Varicella <sup>8</sup>						Varicella						Varicella
Hepatitis A <sup>9</sup>						HepA (2 doses)				HepA Series		
Meningococcal <sup>10</sup>											MPSV4	

- 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 1, 2006, for children through age 6 years. For additional information see [www.cdc.gov/nip/recs/child-schedule.htm](http://www.cdc.gov/nip/recs/child-schedule.htm). Any dose not administered at the recommended age should be administered at any subsequent visit when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components

of the combination are indicated and other components of the vaccine are not contraindicated and if approved by the Food and Drug Administration for that dose of the series. Providers should consult the respective ACIP statement for detailed recommendations. 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 [www.vaers.hhs.gov](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 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 the HBsAg status as soon as possible and if HBsAg-positive, administer HBIG (no later than age 1 week).
- If mother is HBsAg-negative, the birth dose can only be delayed with physician's order and mother's negative HBsAg laboratory report documented in the infant's medical record.

### Following 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. The final dose should be administered at age ≥24 weeks. Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg after completion of 3 or more doses in a licensed HepB series, at age 9–18 months (generally at the next well-child visit).

### 4-month dose of HepB:

- It is permissible to administer 4 doses of HepB when combination vaccines are given after the birth dose. If monovalent HepB is used for doses after the birth dose, a dose at age 4 months is not needed.

## 2. Rotavirus vaccine (Rota). (Minimum age: 6 weeks)

- Administer the first dose between 6 and 12 weeks of age. Do not start the series later than age 12 weeks.
- Administer the final dose in the series by 32 weeks of age. Do not administer a dose later than age 32 weeks.
- There are insufficient data on safety and efficacy outside of these age ranges.

## 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® or ComVax® [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required.
- TriHiBit® (DTaP/Hib) combination products should not be used for primary immunization but can be used as boosters following any Hib vaccine in ≥12 months olds.

## 5. Pneumococcal vaccine. (Minimum age: 6 weeks for Pneumococcal Conjugate Vaccine (PCV); 2 years for Pneumococcal Polysaccharide Vaccine (PPV))

- Administer PCV at ages 24–59 months in certain high-risk groups. Administer PPV to certain high-risk groups aged ≥2 years. See *MMWR* 2000; 49(RR-9):1-35.

## 6. Influenza vaccine. (Minimum age: 6 months for trivalent inactivated influenza vaccine (TIV); 5 years for live, attenuated influenza vaccine (LAIV))

- All children aged 6–59 months and close contacts of all children aged 0–59 months are recommended to receive influenza vaccine.
- Influenza vaccine is recommended annually for children aged ≥59 months with certain risk factors, healthcare workers, and other persons (including household members) in close contact with persons in groups at high risk. See *MMWR* 2006; 55(RR-10):1-41.
- For healthy persons aged 5–49 years, LAIV may be used as an alternative to TIV.
- Children receiving TIV should receive 0.25 mL if aged 6–35 months or 0.5 mL if aged ≥3 years.
- Children aged <9 years who are receiving influenza vaccine for the first time should receive 2 doses (separated by ≥4 weeks for TIV and ≥6 weeks for LAIV).

## 7. 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 prior to age 4–6 years, provided ≥4 weeks have elapsed since the first dose and both doses are administered at age ≥12 months.

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

- Administer the second dose of varicella vaccine at age 4–6 years. Varicella vaccine may be administered prior to age 4–6 years, provided that ≥3 months have elapsed since the first dose and both doses are administered at age ≥12 months. If second dose was administered ≥28 days following the first dose, the second dose does not need to be repeated.

## 9. Hepatitis A vaccine (HepA). (Minimum age: 12 months)

- HepA is recommended for all children at 1 year of age (i.e., 12–23 months). The 2 doses in the series should be administered 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. See *MMWR* 2006; 55(RR-7):1-23.

## 10. Meningococcal polysaccharide vaccine (MPSV4). (Minimum age: 2 years)

- Administer MPSV4 to children aged 2–10 years with terminal complement deficiencies or anatomic or functional asplenia and certain other high risk groups. See *MMWR* 2005;54 (RR-7):1-21.

# Recommended Immunization Schedule for Ages 7–18 Years UNITED STATES • 2007

Vaccine ▼	Age ►	7-10 years	11-12 YEARS	13-14 years	15 years	16-18 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>	MPSV4		MCV4		MCV4 <sup>3</sup>	MCV4
Pneumococcal <sup>4</sup>			PPV			
Influenza <sup>5</sup>			Influenza (Yearly)			
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 1, 2006, for children aged 7–18 years. For additional information see [www.cdc.gov/nip/recs/child-schedule.htm](http://www.cdc.gov/nip/recs/child-schedule.htm). Any dose not administered at the recommended earlier age should be administered at any subsequent visit when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of

the combination are indicated and other components of the vaccine are not contraindicated and if approved by the Food and Drug Administration for that dose of the series. Providers should consult the respective ACIP statement for detailed recommendations. 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 [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or by telephone, 800-822-7967.

## FOOTNOTES

### 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/DaP vaccination series and have not received a Td booster dose.
- Adolescents 13–18 years who missed the 11–12 year Td/Tdap booster dose should also receive a single dose of Tdap if they have completed the recommended childhood DTP/DaP vaccination series.

### 2. Human papillomavirus vaccine (HPV). (Minimum age: 9 years)

- Administer the first dose of the HPV vaccine series to females at age 11–12 years.
- Administer the second dose 2 months after the first dose and the third dose 6 months after the first dose.
- Administer the HPV vaccine series to females at age 13–18 years if not previously vaccinated.

### 3. Meningococcal vaccine. (Minimum age: 11 years for meningococcal conjugate vaccine (MCV4); 2 years for meningococcal polysaccharide vaccine (MPSV4))

- Administer MCV4 at age 11–12 years and to previously unvaccinated adolescents at high school entry (~15 years of age).
- Administer MCV4 to previously unvaccinated college freshmen living in dormitories; MPSV4 is an acceptable alternative.
- Vaccination against invasive meningococcal disease is recommended for children and adolescents aged ≥2 years with terminal complement deficiencies or anatomic or functional asplenia and certain other high risk groups. See *MMWR* 2005;54 (RR-7):1-21. Use MPSV4 for children aged 2–10 years and MCV4 or MPSV4 for older children.

### 4. Pneumococcal polysaccharide vaccine (PPV).

(Minimum age: 2 years)

- Administer for certain high-risk groups. See *MMWR* 1997; 46(RR-08): 1–24 and *MMWR* 2000; 49(RR-9):1-35.

### 5. Influenza vaccine. (Minimum age: 6 months for trivalent inactivated influenza vaccine (TIV); 5 years for live, attenuated influenza vaccine (LAIV))

- Influenza vaccine is recommended annually for persons with certain risk factors, healthcare workers, and other persons (including household members) in close contact with persons in groups at high risk. See *MMWR* 2006; 55(RR-10):1-41.

- For healthy persons aged 5–49 years, LAIV may be used as an alternative to TIV.
- Children aged <9 years who are receiving influenza vaccine for the first time should receive 2 doses (separated by ≥4 weeks for TIV and ≥6 weeks for LAIV).

### 6. Hepatitis A vaccine (HepA). (Minimum age: 12 months)

- The 2 doses in the series should be administered at least 6 months apart.
- HepA is recommended for certain other groups of children including in areas where vaccination programs target older children. See *MMWR* 2006; 55(RR-7):1-23.

### 7. Hepatitis B vaccine (HepB). (Minimum age: birth)

- Administer the 3-dose series to those who were not previously vaccinated.
- A 2-dose series of Recombivax HB® is licensed for 11–15 year olds.

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

- For children who received an all-IPV or all-oral poliovirus (OPV) series, a fourth dose is not necessary if third dose was administered at age ≥4 years.
- If both OPV and IPV were administered as part of a series, a total of 4 doses should be given, regardless of the child's current age.

### 9. Measles, mumps, and rubella vaccine (MMR).

(Minimum age: 12 months)

- If not previously vaccinated, administer 2 doses of MMR during any visit with ≥4 weeks between the doses.

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

- Administer 2 doses of varicella vaccine to persons without evidence of immunity.
- Administer 2 doses of varicella vaccine to persons aged ≤13 years at least 3 months apart. Do not repeat the second dose, if administered ≥28 days following the first dose.
- Administer 2 doses of varicella vaccine to persons aged ≥13 years at least 4 weeks apart.

# Recommended Immunization Schedule for Children and Adolescents Who Start Late or Who Are More Than 1 Month Behind

The tables below give catch-up schedules and minimum intervals between doses for children who have delayed immunizations. There is no need to restart a vaccine series regardless of the time that has elapsed between doses. Use the table appropriate for the child's age.

CATCH-UP SCHEDULE FOR AGES 4 MONTHS THROUGH 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 <sup>1</sup>	Birth	4 weeks	8 weeks (and 16 weeks after first dose)		
Rotavirus <sup>2</sup>	6 wks	4 weeks	4 weeks		
Diphtheria, Tetanus, Pertussis <sup>3</sup>	6 wks	4 weeks	4 weeks	6 months	6 months <sup>3</sup>
<i>Haemophilus influenzae</i> type b <sup>4</sup>	6 wks	4 weeks if first dose given at age <12 months 8 weeks (as final dose) if first dose given at age 12-14 months No further doses needed if first dose given at age ≥15 months	4 weeks <sup>4</sup> if current age <12 months 8 weeks (as final dose) <sup>4</sup> if current age ≥12 months and second dose given at age <15 months No further doses needed if previous dose given at age ≥15 months	8 weeks (as final dose) This dose only necessary for children aged 12 months–5 years who received 3 doses before age 12 months	
Pneumococcal <sup>5</sup>	6 wks	4 weeks if first dose given at age <12 months and current age <24 months 8 weeks (as final dose) if first dose given at age ≥12 months or current age 24–59 months No further doses needed for healthy children if first dose given at age ≥24 months	4 weeks if current age <12 months 8 weeks (as final dose) if current age ≥12 months No further doses needed for healthy children if previous dose given at age ≥24 months	8 weeks (as final dose) This dose only necessary for children aged 12 months–5 years who received 3 doses before age 12 months	
Inactivated Poliovirus <sup>6</sup>	6 wks	4 weeks	4 weeks	4 weeks <sup>6</sup>	
Measles, Mumps, Rubella <sup>7</sup>	12 mos	4 weeks			
Varicella <sup>8</sup>	12 mos	3 months			
Hepatitis A <sup>9</sup>	12 mos	6 months			

CATCH-UP SCHEDULE FOR AGES 7–18 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
Tetanus, Diphtheria/ Tetanus, Diphtheria, Pertussis <sup>10</sup>	7 yrs <sup>10</sup>	4 weeks	8 weeks if first dose given at age <12 months 6 months if first dose given at age ≥12 months	6 months if first dose given at age <12 months	
Human Papillomavirus <sup>11</sup>	9 yrs	4 weeks	12 weeks		
Hepatitis A <sup>9</sup>	12 mos	6 months			
Hepatitis B <sup>1</sup>	Birth	4 weeks	8 weeks (and 16 weeks after first dose)		
Inactivated Poliovirus <sup>6</sup>	6 wks	4 weeks	4 weeks	4 weeks <sup>6</sup>	
Measles, Mumps, Rubella <sup>7</sup>	12 mos	4 weeks			
Varicella <sup>8</sup>	12 mos	4 weeks if first dose given at age ≥13 years 3 months if first dose given at age <13 years			

- Hepatitis B vaccine (HepB).** (Minimum age: birth)
  - Administer the 3-dose series to those who were not previously vaccinated.
  - A 2-dose series of Recombivax HB<sup>®</sup> is licensed for 11–15 year olds.
- Rotavirus vaccine (Rota).** (Minimum age: 6 weeks)
  - Do not start the series later than age 12 weeks.
  - Administer the final dose in the series by 32 weeks of age. Do not administer a dose later than age 32 weeks.
  - There are insufficient data on safety and efficacy outside of these age ranges.
- Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).** (Minimum age: 6 weeks)
  - The fifth dose is not necessary if the fourth dose was administered at age ≥4 years.
  - DTaP is not indicated for persons aged ≥7 years.
- Haemophilus influenzae* type b conjugate vaccine (Hib).** (Minimum age: 6 weeks)
  - Vaccine is not generally recommended for children aged ≥5 years.
  - If current age <12 months and the first 2 doses were PRP-OMP (PedvaxHIB<sup>®</sup> or ComVax<sup>®</sup> [Merck]), the third (and final) dose should be administered at age 12–15 months and at least 8 weeks after the second dose.
  - If first dose given at age 7–11 months, give 2 doses separated by 4 weeks plus a booster at age 12–15 months.
- Pneumococcal conjugate vaccine (PCV).** (Minimum age: 6 weeks)
  - Vaccine is not generally recommended for children aged ≥5 years.
- Inactivated poliovirus vaccine (IPV).** (Minimum age: 6 weeks)
  - For children who received an all-IPV or all-oral poliovirus (OPV) series, a fourth dose is not necessary if third dose was administered at age ≥4 years.
  - If both OPV and IPV were administered as part of a series, a total of 4 doses should be given, regardless of the child's current age.
- Measles, mumps, and rubella vaccine (MMR).** (Minimum age: 12 months)
  - The second dose of MMR is recommended routinely at age 4–6 years but may be administered earlier if desired.
  - If not previously vaccinated, administer 2 doses of MMR during any visit with ≥4 weeks between the doses.
- Varicella vaccine.** (Minimum age: 12 months)
  - The second dose of varicella vaccine is recommended routinely at age 4–6 years but may be administered earlier if desired.
  - Do not repeat the second dose in persons aged <13 years, if administered ≥28 days following the first dose.
- Hepatitis A vaccine (HepA).** (Minimum age: 12 months)
  - HepA is recommended for certain groups of children including in areas where vaccination programs target older children. See MMWR 2006; SS (RR-7) 1-23.
- Tetanus and diphtheria toxoids vaccine (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).** (Minimum ages: 7 years for Td, 10 years for BOOSTRIX<sup>™</sup>, and 11 years for ADACEL<sup>™</sup>)
  - Tdap should be substituted for a single dose of Td in the primary catch-up series or as a booster if age-appropriate; use Td for other doses.
  - A five-year interval from the last Td dose is encouraged when Tdap is used as a booster dose. A booster (4th) dose is needed if any of the previous doses were administered at age <12 months. Refer to ACIP recommendations for further information. See MMWR 2006; SS (RR-3) L34.
- Human papillomavirus vaccine (HPV).** (Minimum age: 9 years)
  - Administer the HPV vaccine series to females at age 13–18 years if not previously vaccinated.

For information on reporting reactions following immunization, visit [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or call the 24-hour national toll-free information line 800-822-7967. Report suspected cases of vaccine-preventable diseases to your state or local health

department. For additional information including precautions and contraindications for immunization, visit the National Center for Immunization and Respiratory Diseases at [www.cdc.gov/ncid](http://www.cdc.gov/ncid) or contact 800-CDC-INFO (800-232-4636).