



Maryland Department of Health and Mental Hygiene

2011 Recommended Childhood Immunization Schedule

Vaccine ▼	Age ►	Birth	2 months	4 months	6 months	12 months	15 months	18 months	2-3 years	4-6 years
Hepatitis B ¹		Hep B	Hep B		Hep B					
Rotavirus ²			RV	RV	RV					
Diphtheria, Tetanus, Pertussis ³			DTaP	DTaP	DTaP		DTaP			DTaP
Haemophilus Influenzae type b ⁴			Hib	Hib	Hib		Hib			
Pneumococcal ⁵			PCV13	PCV13	PCV13	PCV13			PPSV	
Polio ⁶			IPV	IPV	IPV					IPV
Influenza ⁷						INFLUENZA (YEARLY)				
Measles, Mumps, Rubella ⁸						MMR				MMR
Varicella ⁹						Var				Var
Hepatitis A ¹⁰						HepA		HepA	Hep A	
Meningococcal ¹¹									MCV4	

Certain High-Risk Groups

Maryland 2011 Recommended Childhood Immunization Schedule Footnotes*

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

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).

Doses following the birth dose:

- Infants born to HBsAg-positive mothers should be tested for HBsAg and anti-body 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.
- Infants who did not receive a birth dose should receive 3 doses of HepB on a schedule of 0, 1, and 6 months.
- The final (3rd or 4th) dose in the HepB series 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 and the child is unlikely to return at 15 months of age.

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

- If PRP-OMP (PedvaxHIB or Comvax [HepB-Hib]) is administered at ages 2 and 4 months, a dose at age 6 months is not indicated.
- Hiberix 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.
- A PCV series begun with 7-valent PCV (PCV7) should be completed with 13-valent PCV (PCV13).
- A single supplemental dose of PCV13 is recommended for all children aged 14 through 59 months who have received an age-appropriate series of PCV7.
- A single supplemental dose of PCV13 is recommended for all children aged 60 through 71 months with underlying medical conditions who have received an age-

appropriate series of PCV7.

- The supplemental dose of PCV13 should be administered at least 8 weeks after the previous dose of PCV7. See *MMWR* 2010:59 (No. RR-11).
- Administer PPSV at least 8 weeks after last dose of PCV to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant.

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

- If 4 or more doses are administered prior to age 4 years an additional dose should be administered at age 4 through 6 years.
- The final dose in the series should be administered on or after the fourth birthday and at least 6 months following the previous dose.

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

- For healthy children aged 2 years and older (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.
- Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.

8. Measles, mumps, and rubella vaccine (MMR). (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.

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

- The second dose may be administered before age 4 years, provided at least 3 months have elapsed since the first dose.
- For children aged 12 months through 12 years the recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.

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

- 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.

11. Meningococcal conjugate vaccine, quadrivalent (MCV4). (Minimum age: 2 years)

- Administer 2 doses of MCV4 at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.
- Persons with human immunodeficiency virus (HIV) infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.
- Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.
- Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine after 3 years if the first dose was administered at age 2 through 6 years.

Maryland 2011 Recommended Adolescent Immunization Schedule Footnotes*

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

1. Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap). (Minimum age: 10 years for Boostrix and 11 years for Adacel))

- Persons aged 11 through 18 years who have not received Tdap should receive a dose followed by Td booster doses every 10 years thereafter.
- Persons aged 7 through 10 years who are not fully immunized against pertussis (including those never vaccinated or with unknown pertussis vaccination status) should receive a single dose of Tdap. Refer to the catch-up schedule if additional doses of tetanus and diphtheria toxoid-containing vaccine are needed.
- Tdap can be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.

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

- Quadrivalent HPV vaccine (HPV4) or bivalent HPV vaccine (HPV2) is recommended for the prevention of cervical precancers and cancers in females.
- HPV4 is recommended for prevention of cervical precancers, cancers, and genital warts in females.
- HPV4 may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.
- 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).

3. Meningococcal conjugate vaccine, quadrivalent (MCV4). (Minimum age: 2 years)

Proof of vaccination is required for individuals living in on-campus student housing at Maryland institutions of higher learning (COMAR 10.06.05)

- Administer MCV4 at age 11 through 12 years with a booster dose at age 16 years.
- Administer 1 dose at age 13 through 18 years if not previously vaccinated.
- Persons who received their first dose at age 13 through 15 years should receive a booster dose at age 16 through 18 years.
- Administer 1 dose to previously unvaccinated college freshmen living in a dormitory.
- Administer 2 doses at least 8 weeks apart to children aged 2 through 10 years with persistent complement component deficiency and anatomic or functional asplenia, and 1 dose every 5 years thereafter.
- Persons with HIV infection who are vaccinated with MCV4 should receive 2 doses at least 8 weeks apart.
- Administer 1 dose of MCV4 to children aged 2 through 10 years who travel to countries with highly endemic or epidemic disease and during outbreaks caused by a vaccine serogroup.
- Administer MCV4 to children at continued risk for meningococcal disease who were previously vaccinated with MCV4 or meningococcal polysaccharide vaccine 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).

4. Influenza vaccine (seasonal).

- 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 LAIV or TIV may be used.

- Administer 2 doses (separated by at least 4 weeks) to children aged 6 months through 8 years who are receiving seasonal influenza vaccine for the first time or who were vaccinated for the first time during the previous influenza season but only received 1 dose.

5. Pneumococcal vaccines.

- A single dose of 13-valent pneumococcal conjugate vaccine (PCV13) may be administered to children aged 6 through 18 years who have functional or anatomic asplenia, HIV infection or other immunocompromising condition, cochlear implant or CSF leak. See *MMWR* 2010;59(No. RR-11).
- The dose of PCV13 should be administered at least 8 weeks after the previous dose of PCV7.
- Administer pneumococcal polysaccharide vaccine at least 8 weeks after the last dose of PCV to children aged 2 years or older 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.

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, or 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. For those with incomplete vaccination, follow the catch-up schedule.
- 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).

- The minimum interval between the 2 doses of MMR is 4 weeks.

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 recommended minimum interval between doses is 3 months. However, if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.
- For persons aged 13 years and older, the minimum interval between doses is 4 weeks.



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2011 Recommended Adolescent Immunization Schedule

Age ► Vaccine ▼	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 (3 Doses)
Meningococcal ³	MCV4	MCV4	MCV4
Influenza ⁴	Influenza (Yearly)		
Pneumococcal ⁵	Pneumococcal		
Hepatitis A ⁶	Hep A Series		
Hepatitis B ⁷	Hep B Series		
Inactivated Polio ⁸	Inactivated Polio		
Measles, Mumps, Rubella ⁹	MMR Series		
Varicella ¹⁰	Varicella Series		

Recommended ages for all Adolescents

Catch-Up Vaccination

Certain High-Risk Groups

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