



Maryland Department of Health and Mental Hygiene

2008 Recommended Childhood and Adolescent Immunization Schedule

Vaccine ▼	Age ►	Birth	2 mos	4 mos	6 mos	12 mos	15 mos	18 mos	2 yrs	4-6 yrs	11-12 yrs	13-18 yrs	
Hepatitis B		Hep B¹	Hep B		Hep B						Tdap³		
Diphtheria ² , Tetanus, Pertussis		DTaP	DTaP	DTaP			DTaP			DTaP			If previously unvaccinated, vaccinate ⁴
Haemophilus Influenza type b		Hib	Hib	Hib⁵			Hib	If previously unvaccinated, vaccinate					
Inactivated Polio		IPV	IPV	IPV						IPV⁶			
Measles, Mumps, Rubella						MMR⁷				MMR⁷			
Varicella						Var⁸				Var⁸			
Pneumococcal ⁹		PCV7	PCV7	PCV7	PCV7				If previously unvaccinated, vaccinate ⁹				
Influenza ¹⁰												All children 6 months — 18 years of age	
Meningococcal ¹¹												MCV4	If previously unvaccinated, vaccinate
Hepatitis A ¹²						Hep A		Hep A	Certain Risk Groups				
Rotavirus ¹³		Rota	Rota	Rota									
Human Papillomavirus ¹⁴											HPV (3 doses)	If previously unvaccinated, vaccinate	

Catch-up Vaccination

Preadolescent Assessment

Certain High-Risk Groups

Maryland 2008 Recommended Childhood and Adolescent Immunization Schedule Footnotes*

- 1 **All newborns should receive the first dose of hepatitis B vaccine at birth, before hospital discharge.** Four doses of vaccine may be administered (i.e. when combination vaccines are given after the birth dose). The last dose in the series (3rd or 4th) should be administered \geq 24 weeks. All hospitals should ensure that newborns of mothers whose hepatitis B surface antigen (HBsAg) status is unknown receive their 1st dose of hepatitis B vaccine within 12 hours of birth. Maternal blood should be drawn at the time of delivery to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive HBIG as soon as possible (no later than one week). Infants born to HBsAg-positive mothers should receive hepatitis B vaccine and 0.5 ml hepatitis B immune globulin (HBIG) within 12 hours of birth. Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody for HBsAg after completion of the Hep B vaccine series, at age 9—18 months (generally at the next well-child visit after completion of the vaccine series).
- 2 Use diphtheria tetanus toxoids (DT) pediatric vaccine when pertussis vaccine is contraindicated. The 4th dose of DTaP may be administered as early as 12 months of age provided 6 months have elapsed since the 3rd dose and the child is unlikely to return at age 15 months age. If the 4th DTaP is administered after the 4th birthday, a 5th DTaP is not necessary.
- 3 Tdap is recommended for 11-12 year olds at the preadolescent assessment visit for those who have completed the recommended childhood DTP/DTaP vaccination series and have not received a Td booster dose.
- 4 Adolescents 13 - 18 years of age who missed the 11 - 12 year Td/Tdap booster dose should also receive a single dose of Tdap, 5 years after the last Td/DTaP dose, if they have completed the recommended childhood DTP/DTaP vaccination series. Subsequent Td vaccination recommended every 10 years.
- 5 Three conjugate Hib vaccines are licensed for infant use. **If PRP-OMP (PedvaxHib® or ComVax® [Merck]) is administered at ages 2 and 4 months, a dose at 6 months is not required.** DTaP/Hib combination products should not be used for primary immunization in infants at ages 2, 4, or 6 months, but can be used as boosters following any Hib vaccine. The final dose in the series should be administered at age \geq 12 months. Any **unvaccinated child** 15-59 months of age should receive a single dose of vaccine and may be given any one of the three conjugate vaccines licensed for this age group.
- 6 The fourth dose of IPV is not needed if the third dose is given on or after the fourth birthday.
- 7 **MMR vaccine must be administered on or after the first birthday.** The second dose of MMR is routinely recommended at 4-6 years of age (school entry), however, it may be administered at any visit after 12 months of age, provided at least 4 weeks have elapsed since receipt of the 1st dose.
- 8 The first dose of **varicella (chickenpox) vaccine must be administered on or after the first birthday.** The second dose of varicella vaccine is routinely recommended at 4-6 years of age (school entry), provided that \geq 3 months have elapsed since the first and both doses are administered at age \geq 12 months. Do not repeat the second dose, if administered \geq 28 days following the first dose. For persons \geq 13 years of age without evidence of immunity or history of disease, administer 2 doses of varicella vaccine at least 4 weeks apart.
- 9 **The heptavalent pneumococcal conjugate vaccine (PCV7) is recommended for all children age 2-23 months and for children aged 24 - 59 months of age with certain medical conditions. Administer 1 dose of PCV7 to all healthy children age 24-59 months having any incomplete schedule.** The final dose in the series should be given at age \geq 12 months. Pneumococcal polysaccharide vaccine (PPV) is recommended in addition to PCV7 for certain high risk groups 2 years of age or older. See MMWR 2000;49(RR-9):1-38.
- 10 During the annual influenza season (October through March), **all children 6 months to 18 years of age are recommended to receive influenza vaccine.** For healthy persons (i.e. those without underlying medical conditions) age 2-49 years, either LAIV or TIV may be used. Administer 2 doses (separated by \geq 4 weeks) to children 6 months—8 years who received influenza vaccine for the first time or who were vaccinated for the first time last season but only received 1 dose of LAIV or TIV.
- 11 Meningococcal conjugate vaccine (MCV4) is recommended for 11-12 year olds at the preadolescent assessment visit. Previously unvaccinated persons 13 - 18 years of age should be vaccinated. **Proof of vaccination is required for individuals living in on-campus student housing at Maryland institutions of higher learning (COMAR 10.06.05).** MCV4 is recommended for persons 2 – 10 years of age and older where medically indicated. See MMWR 2007;56(48);1265-1266.
- 12 Hepatitis A vaccine is recommended for all children 12 - 23 months of age. Two (2) doses should be administered with the second dose given at least 6 months after the first dose. Previously unvaccinated children 2—18 years of age with certain risk factors should be vaccinated (i.e., Residents of Baltimore City, travelers, and persons with chronic liver diseases). See MMWR 2006;55(RR-7):1-23.
- 13 Children should receive the first dose of the rotavirus vaccine between 6 - 12 weeks of age and two additional doses given at 4 to 10 weeks intervals. **Do not start the series for children older than 12 weeks of age.** All doses of rotavirus vaccine should be completed by 32 weeks of age. Do not administer any dose after age 32 weeks.
- 14 **HPV vaccine is routinely recommended for females aged 11 - 12 years at the preadolescent visit.** Three doses should be administered with the second dose given at least 2 months after the first and the third dose given at least 6 months after the first dose. The vaccination series can be started as early as nine years of age at the discretion of the physician or health care provider. Previously unvaccinated females aged 13-26 years old are recommended for vaccination. The vaccine should be administered before onset of sexual activity (i.e., before women are exposed to the viruses), but females less than 26 years of age who are sexually active can still be vaccinated. HPV vaccine is not intended to be used for the treatment of active genital warts; cervical cancer; CIN; VIN; or VaIN. HPV vaccine is not recommended for use in pregnant women.

2008 Recommended Adult Immunization Schedule

Vaccine ▼	Age Group ►	19-49 Years	50-64 Years	65 Years and Older
Tetanus, Diphtheria, acellular Pertussis (Tdap)		If last dose of Td ≥ 10 years or with certain risk factors ¹		
Tetanus, Diphtheria (Td)				1 dose booster every 10 years ¹
Influenza		1 annual dose for certain persons ²	1 annual dose ² ←-----→	
Pneumococcal Polysaccharide		1 dose for persons with medical or other indications ^{3,4}		1 dose for unvaccinated ³ persons 1 dose for revaccination ⁴
Hepatitis B		3 doses for persons with medical, behavioral, occupational, or other indications ⁵		
Hepatitis A		2 doses for persons with medical, behavioral, occupational, or other indications ⁶		
Measles, Mumps, Rubella (MMR)		1 dose if history unreliable 2 doses for persons with certain indications ⁷		
Varicella		2 doses ⁸		
Meningococcal		1 dose for persons with medical or other indications ⁹		
Human Papillomavirus (HPV)		3 doses for females age 19-26 ¹⁰		
Herpes Zoster			1 dose for persons 60 years of age and older ¹¹	

Recommended for all persons who meet age indications for the vaccine and lack evidence of immunity

2008 Maryland Adult Immunization Schedule Footnotes*

Recommended for persons in certain risk groups

1. Adults 19—64 who received their last dose of Td vaccine greater than or equal to 10 years should be vaccinated with a single dose of Tdap. Intervals shorter than 10 years since the last Td vaccination may be used; a 2 year interval between Td and Tdap is suggested to reduce the risk of reaction to vaccination. Tdap is also recommended for any adult (i.e., parents, household contacts, child care providers, healthcare providers, etc) who has or anticipates close contact with an infant less than 12 months of age. See *MMWR* 2006; 55(RR17).
2. Influenza vaccine is recommended yearly for all persons 50 years of age or older, people who have chronic medical conditions, women who will be pregnant during flu season, health care workers with direct patient care, residents of long term care, and household members or caregivers of high-risk persons. Depending on the flu season a tiered vaccination system may be issued. Non-pregnant healthy persons aged 2-49 years without high risk conditions who are not contacts of severely immuno-compromised persons in special care units, may received Live Attenuated Influenza Vaccine (LIAV) in lieu of inactivated vaccine.
3. Pneumococcal Polysaccharide is recommended for persons with certain chronic medical conditions and residents of nursing homes. Unvaccinated persons should receive one dose at age 65.
4. One time revaccination of persons who were vaccinated 5 or more years previously and with certain chronic medical conditions. For persons 65 and older, one-time revaccination if they were vaccinated 5 or more years previously and were aged less than 65 years at the time of primary vaccination. Reference *MMWR* 1997; 46 (RR-8):1-24.
5. Recommended for all unvaccinated adults at risk for hepatitis B virus infection and all adults seeking protection from HBV infection. Recommended for adults in settings where a high proportion of adults are likely to have risk factors (these settings include STD/HIV treatment facilities, drug abuse treatment facilities, correctional facilities, health care settings serving men who have sex with men, chronic hemodialysis facilities and end-stage renal disease programs, and institutions and nonresidential daycare facilities for developmentally disabled persons.)
6. Hepatitis A - Reference *MMWR* 2006; 55 (RR-16):1-25.
7. Adults born in or after 1957 should receive at least one dose of MMR. Two (2) doses are recommended for adults who have certain risk factors. For women of child-bearing age, routinely determine rubella immunity and counsel women regarding congenital rubella syndrome. Not recommended for women who are pregnant or might become pregnant within 4 weeks of receiving the vaccine. Reference *MMWR* 1999; 47 (RR-8):1-57.
8. Recommended for all adults without evidence of immunity to varicella. Not recommended for women who are pregnant or might become pregnant within 4 weeks of receiving the vaccine.
9. Consider vaccination for persons with medical indications and all students enrolled in institutions of higher learning. **Proof of vaccination is required for individuals living in on-campus student housing at Maryland institutions of higher learning (COMAR 10.06.05).** Two meningococcal vaccines are licensed for use. Meningococcal conjugate (MCV4) recommended for routine use in persons 11-55 years of age.
10. Three doses should be administered with the second doses given at least 2 months after the first dose and the third dose given at least six months after the first dose. The vaccine should be administered before onset of sexual activity (i.e., before women are exposed to the viruses), but females less than 26 years of age who are sexually active can still be vaccinated. HPV vaccine is not intended to be used for the treatment of active genital warts; cervical cancer; CIN; VIN; or VaIN. HPV vaccine is not recommended for use in pregnant women.
11. A single dose of Herpes Zoster (also called Shingles) vaccine is recommended for all persons 60 years of age and older.