

AN EPIDEMIOLOGY PUBLICATION OF THE OREGON DEPARTMENT OF HUMAN SERVICES

RECOMMENDED CHILDHOOD IMMUNIZATION SCHEDULE — UNITED STATES, 2002

EACH YEAR, CDC's Advisory Committee on Immunization Practices (ACIP) reviews and, if needed, revises the recommended childhood immunization schedule. The 2002 schedule below has a redesigned format that highlights catch-up vaccination, three vaccines for selected at-risk groups, the pre-adolescent well-child visit, and reversion to at-birth administration of the first dose of the hepatitis B vaccination series. Although the "official" 2002 schedule is substantively unchanged from that of 2001, it has been temporarily modified to allow for vaccine shortages.¹⁻⁵ These

temporary modifications are designated with an (M) and tortuously explained in the footnotes. Modifications will be in effect until changes are posted in these pages and on the website at www.oshd.org/imm/provider/welcome.htm, which will also have information on vaccine supply.

VACCINES FOR SELECTED POPULATIONS

The area below the dashed line in the figure shows vaccines recommended for selected populations. Both pneumococcal conjugate vaccine (PCV) and pneumococ-

cal polysaccharide vaccine (PPV) are recommended for children aged 24–59 months who have received solid organ transplants and children with certain high-risk diseases or conditions listed in footnote 7, *verso*; the recommended schedule should not be modified for high-risk children. The hepatitis A vaccine series is recommended for Oregon children because of our higher-than-average disease rates. The recommendation to administer annual influenza vaccine to high-risk children (see footnote 9, *verso*) also appears on the schedule for the first time.⁶

Recommended Childhood Immunization Schedule for 2002

Approved by the Advisory Committee on Immunization Practices (ACIP), American Academy of Pediatrics (AAP), American Academy of Family Physicians (AAFP), not to mention Oregon Health Services.

age ▼ vaccine	Range of recommended ages		Catch-up vaccination		(M) Vaccine-shortage modification		Preadolescent assessment					
	birth	1 month	2 months	4 months	6 months	12 months	15 months	18 months	24 months	4–6 years	11–12 years	13–18 years
hepatitis B ¹	Hep B #1		Hep B #2		Hep B #3				Hep B series			
diphtheria tetanus pertussis ²			DTaP	DTaP	DTaP		DTaP (M)		DTaP (M)		Td (M)	
H. influenzae type b ³			Hib	Hib	Hib		Hib					
inactivated polio ⁴			IPV	IPV	IPV				IPV			
measles mumps rubella ⁵						MMR #1			MMR #2 (M)			
varicella ⁶						Varicella (M)			Varicella			
pneumococcal ⁷			PCV (M)	PCV (M)	PCV (M)		PCV (M)		PCV			
Vaccines below this line are for selected populations										PPV		
hepatitis A ⁸									Hep A series			
influenza ⁹									Influenza (yearly)			

- This schedule indicates the recommended age for routine administration of currently licensed childhood vaccines. Some combination vaccines are also available and may be used whenever administration of all components of the vaccine is indicated. Injectors should consult the manufacturers' package inserts for detailed recommendations.
- The grey bars indicate preferred age ranges for certain vaccine doses. Any dose not given at the recommended age should be given at any subsequent visit when indicated and feasible. Catch-up immunizations indicate age groups that warrant special effort to administer those vaccines not given previously.
- The footnotes are critical to a full understanding of the beauty of the Grand Immunization Plan.



If you need this material in an alternate format, call us at 503/731-4024.

If you would prefer to have your CD Summary delivered by e-mail, zap your request to cd.summary@state.or.us. Please include your full name and address (not just your e-mail address), so that we can effectively purge you from our print mailing list, thus helping to save trees, taxpayer dollars, postal worker injuries, etc.

VACCINE INFORMATION STATEMENTS

The National Childhood Vaccine Injury Act requires that all health-care providers give parents or patients copies of Vaccine Information Statements before administering each dose of the vaccines listed in the schedule. The Vaccine Information Statements and instructions for their use can be downloaded from <http://www.cdc.gov/nip/publications/VIS>. Detailed recommendations for using vaccines are available in the manufacturers' package inserts, ACIP

statements on specific vaccines, and the 2000 Red Book.⁷ ACIP statements for each recommended childhood vaccine can be accessed at <http://www.cdc.gov/nip/publications/ACIP-list.htm>.

REFERENCES

1. CDC. Recommended childhood immunization schedule—United States, 2002. *MMWR* 2002;51:31–3.
2. CDC. Deferral of routine booster doses of tetanus and diphtheria toxoids for adolescents and adults. *MMWR* 2001;50:4182–7.
3. CDC. Update: supply of diphtheria and tetanus toxoids and acellular pertussis vaccine. *MMWR* 2002;50:1159.

4. CDC. Updated recommendations on the use of pneumococcal conjugate vaccine in a setting of vaccine shortage—Advisory Committee on Immunization Practices. *MMWR* 2001;50:1140–2.
5. CDC. Notice to Readers: Shortage of varicella and measles, mumps and rubella vaccines and interim recommendations from the Advisory Committee on Immunization Practices. *MMWR* 2002;51:190–7.
6. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2001;50(RR-4).
7. American Academy of Pediatrics. Active and passive immunization. In: Pickering LK, ed. 2000 Red Book: Report of the Committee on Infectious Diseases. 25th ed. Elk Grove Village, Illinois: American Academy of Pediatrics, 2000:6–53.

FOOTNOTES

1. Every infant should receive their first dose of the hepatitis B vaccine after delivery and prior to hospital discharge. Infants delivered to known *HBsAg-negative* women can receive the 1st dose of vaccine as late as 2 months of age. Only the single-antigen or monovalent HB vaccines are licensed for the birth dose (infants less than 6 weeks of age). The minimum spacing of this vaccine requires that the 2nd dose of vaccine be administered at least 4 weeks following the 1st dose of vaccine. The 3rd dose of HB vaccine must meet the following requirements: an 8-week interval following the 2nd dose of vaccine, a 16-week interval after the 1st dose, and a minimum age of 6 months. Infants born to *HBsAg-positive* women should receive both their first dose of HB vaccine and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of delivery, regardless of whether they are pre-mature or underweight. Infants born to *HBsAg-unknown* mothers should receive their first dose of HB vaccine within 12 hours of delivery and every effort should be made to test the mother for *HBsAg* prior to discharge in order to administer the necessary HBIG. If necessary, HBIG can be administered as late as 7 days following delivery should the mother remain *HBsAg-unknown* or is determined to be *HBsAg-positive*. It is acceptable to administer extra doses of HB vaccine if a combination vaccines containing hepatitis B vaccine is used; combination vaccines are not licensed for use in infants younger than 6 weeks, nor can they be used in infants born to women who are *HBsAg-positive* or *HBsAg-unknown*.
 2. The 4th dose of DTaP can usually be administered as early as 12 months of age, provided that 6 months have elapsed since the 3rd dose and the child is unlikely to return at age 15–18 months. For the duration of the vaccine shortage, providers with insufficient quantities of DTaP should defer the 4th DTaP vaccination of children aged 15–18 months. If deferring the 4th dose doesn't leave enough vaccine to immunize infants, then defer the 5th dose for 4–6 year olds. Tetanus-diphtheria toxoid ("adult" Td) is usually recommended if at least 5 years have elapsed since the last dose of vaccine containing tetanus and diphtheria toxoids, with boosters every 10 years. For the duration of the vaccine shortage, Td administration to everyone >7 years old should be prioritized as follows: (1) persons traveling to a county where the risk of diphtheria is high; (2) persons requiring tetanus vaccination for prophylaxis in wound management; (3) persons who have received fewer than three doses of any vaccine containing tetanus and diphtheria toxoids; and (4) pregnant women and persons at occupational risk for tetanus-prone injuries who have not been vaccinated with Td within the preceding 10 years.
 3. Three Hib conjugate vaccines are licensed for infant use. If PRP-OMP (Pedvax HIB® or ComVax® [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required. DTaP/Hib combination products should not be used for primary immunization in infants <12 months of age but can be used as boosters following any Hib vaccine primary series, regardless of which brand was used initially.
- * Copies of the schedule can be obtained at <http://www.cdc.gov/nip/recs/child-schedule.htm>.

4. An all-IPV schedule is recommended for routine childhood poliovirus vaccination in the U.S. All children should receive 4 doses of IPV, at ages 2, 4, and 6–18 months, and 4–6 years.
5. The 2nd dose of MMR is usually recommended at age 4–6 years but may be administered during any visit, provided that at least 4 weeks have elapsed since the first dose, and that both doses are administered at or after age 12 months. Those who have not received the 2nd dose should usually complete the schedule by the visit at age 11–12 years. For the duration of the vaccine shortage, all vaccine providers in the United States should defer the 2nd dose of MMR.
6. For the duration of the vaccine shortage, all vaccine providers in the United States should delay vaccinating children aged 12–18 months until the 18 month or two-year-old well child visit. Varicella vaccine is usually recommended at any visit, at or after age 12 months for susceptible children (i.e., those who lack a reliable history of chickenpox). Susceptible persons aged >13 years should receive two doses given at least four weeks apart; susceptibility testing is recommended prior to vaccination.
7. The heptavalent pneumococcal conjugate vaccine (PCV) is usually recommended for all children aged 2–23 months. PCV and pneumococcal polysaccharide vaccine (PPV) are usually recommended for children aged 24–59 months who have received solid organ transplants and children with these certain high-risk diseases or conditions: sickle-cell disease and other hemoglobinopathies; anatomic asplenia; chronic diseases, including chronic cardiac or pulmonary disease and diabetes mellitus; cerebrospinal fluid leak; HIV infection; immunocompromising conditions; and immunosuppressive chemotherapy or long-term systemic corticosteroid use. For the duration of the vaccine shortage, PCV should be administered to high-risk children (as above) aged <5 years. Healthy infants and children aged <24 months should receive fewer-than-normally-recommended PCV doses on the basis of the age at which they received their first dose and the estimated amount of vaccine available to the health-care provider's practice—a table to sort this out was published in the January 15, 2002 CD Summary. Infants born during these trying times of vaccine shortage should receive 2 or 3 doses (depending on the severity of the provider-specific shortage) at 2-month intervals starting at 2 months of age.
8. Hepatitis A vaccine is recommended for use in selected regions and states (including Oregon), and for certain high-risk groups. Consult the Oregon Immunization Program and *MMWR* 1999;48(RR-12):1–37.
9. Influenza vaccine is recommended annually for children aged >6 months with certain risk factors (including but not limited to asthma, cardiac disease, sickle-cell disease, HIV and diabetes (see *MMWR* 2001;50(RR-4):1–44) and can be administered to all others wishing to obtain immunity. Children aged <12 years should receive vaccine in dosages appropriate for their age (0.25 mL if 6–35 months or 0.5 mL if >3 years). Children aged <8 years who are receiving influenza vaccine for the first time should receive 2 doses separated by at least 4 weeks.