

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age

| PERSONS AGED 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<br>(and at least 16 weeks after first dose)   |  |                       |
| Rotavirus <sup>2</sup>   | 6 wks                  | 4 weeks   | 4 weeks <sup>2</sup>  |  |                       |
| 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<br>if first dose administered at younger than age 12 months<br>8 weeks (as final dose)<br>if first dose administered at age 12–14 months<br>No further doses needed<br>if first dose administered at age 15 months or older   | 4 weeks <sup>4</sup><br>if current age is younger than 12 months<br>8 weeks (as final dose) <sup>4</sup><br>if current age is 12 months or older and first dose administered at younger than age 12 months and second dose administered at younger than 15 months<br>No further doses needed<br>if previous dose administered at age 15 months or older | 8 weeks (as final dose)<br>This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months  |                       |
| Pneumococcal <sup>5</sup>  | 6 wks                  | 4 weeks<br>if first dose administered at younger than age 12 months<br>8 weeks (as final dose for healthy children)<br>if first dose administered at age 12 months or older or current age 24 through 59 months<br>No further doses needed<br>for healthy children if first dose administered at age 24 months or older | 4 weeks<br>if current age is younger than 12 months<br>8 weeks<br>(as final dose for healthy children)<br>if current age is 12 months or older<br>No further doses needed<br>for healthy children if previous dose administered at age 24 months or older   | 8 weeks (as final dose)<br>This dose only necessary for children aged 12 months through 59 months who received 3 doses before age 12 months or for children at high risk who received 3 doses at any age |                       |
| Inactivated Poliovirus <sup>6</sup>                                  | 6 wks                  | 4 weeks   | 4 weeks   | 6 months <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  |   |  |                       |
| PERSONS AGED 7 THROUGH 18 YEARS                                      |                        |   |   |  |                       |
| Tetanus, Diphtheria/<br>Tetanus, Diphtheria, Pertussis <sup>10</sup> | 7 yrs <sup>10</sup>    | 4 weeks   | 4 weeks<br>if first dose administered at younger than age 12 months<br>6 months<br>if first dose administered at 12 months or older   | 6 months<br>if first dose administered at younger than age 12 months   |                       |
| Human Papillomavirus <sup>11</sup>                                   | 9 yrs                  |   | Routine dosing intervals are recommended (females) <sup>11</sup>  |  |                       |
| Hepatitis A <sup>9</sup>   | 12 mos                 | 6 months  |   |  |                       |
| Hepatitis B <sup>1</sup>   | Birth                  | 4 weeks   | 8 weeks<br>(and at least 16 weeks after first dose)   |  |                       |
| Inactivated Poliovirus <sup>6</sup>                                  | 6 wks                  | 4 weeks   | 4 weeks <sup>6</sup>  | 6 months <sup>6</sup>  |                       |
| Measles, Mumps, Rubella <sup>7</sup>                                 | 12 mos                 | 4 weeks   |   |  |                       |
| Varicella <sup>8</sup>   | 12 mos                 | 3 months<br>if person is younger than age 13 years<br>4 weeks<br>if person is aged 13 years or older  |   |  |                       |

**1. Hepatitis B vaccine (HepB).**

- Administer the 3-dose series to those not previously vaccinated.
- The minimum age for the third dose of HepB is 24 weeks.
- A 2-dose series (separated by at least 4 months) of adult formulation Recombivax HB is licensed for children aged 11 through 15 years.

**2. Rotavirus vaccine (RV).**

- The maximum age for the first dose is 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 was administered for the first and second doses, a third dose is not indicated.

**3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).**

- The fifth dose is not necessary if the fourth dose was administered at age 4 years or older.

**4. *Haemophilus influenzae* type b conjugate vaccine (Hib).**

- 1 dose of Hib vaccine should be considered for unvaccinated persons aged 5 years or older who have sickle cell disease, leukemia, or HIV infection, or who have had a splenectomy.
- If the first 2 doses were PRP-OMP (PedvaxHIB or Comvax), and administered at age 11 months or younger, the third (and final) dose should be administered at age 12 through 15 months and at least 8 weeks after the second dose.
- If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a final dose at age 12 through 15 months.

**5. Pneumococcal vaccine.**

- Administer 1 dose of 13-valent pneumococcal conjugate vaccine (PCV13) to all healthy children aged 24 through 59 months with any incomplete PCV schedule (PCV7 or PCV13).
- For children aged 24 through 71 months with underlying medical conditions, administer 1 dose of PCV13 if 3 doses of PCV were received previously or administer 2 doses of PCV13 at least 8 weeks apart if fewer than 3 doses of PCV were received previously.
- A single dose of PCV13 is recommended for certain children with underlying medical conditions through 18 years of age. See age-specific schedules for details.
- Administer pneumococcal polysaccharide vaccine (PPSV) to children aged 2 years or older with certain underlying medical conditions, including a cochlear implant, at least 8 weeks after the last dose of PCV. A single revaccination should be administered after 5 years to children with functional or anatomic asplenia or an immunocompromising condition. See *MMWR* 2010;59(No. RR-11).

**6. 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.
- A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months following the previous dose.
- In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk for imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).

**7. Measles, mumps, and rubella vaccine (MMR).**

- Administer the second dose routinely at age 4 through 6 years. The minimum interval between the 2 doses of MMR is 4 weeks.

**8. Varicella vaccine.**

- Administer the second dose routinely at age 4 through 6 years.
- If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.

**9. Hepatitis A vaccine (HepA).**

- HepA is recommended for children aged older than age 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.

**10. Tetanus and diphtheria toxoids (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).**

- Doses of DTaP are counted as part of the Td/Tdap series.
- Tdap should be substituted for a single dose of Td in the catch-up series for children aged 7 through 10 years or as a booster for children aged 11 through 18 years; use Td for other doses.

**11. Human papillomavirus vaccine (HPV).**

- Administer the series to females at age 13 through 18 years if not previously vaccinated or have not completed the vaccine series.
- Quadrivalent HPV vaccine (HPV4) may be administered in a 3-dose series to males aged 9 through 18 years to reduce their likelihood of genital warts.
- Use recommended routine dosing intervals for series catch-up (i.e., the second and third doses should be administered at 1 to 2 and 6 months after the first dose). The minimum interval between the first and second doses is 4 weeks. The minimum interval between the second and third doses is 12 weeks, and the third dose should be administered at least 24 weeks after the first dose.

Information about reporting reactions after immunization is available online at <http://www.vaers.hhs.gov> or by telephone, 800-822-7967. Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for immunization, is available from the National Center for Immunization and Respiratory Diseases at <http://www.cdc.gov/vaccines> or telephone, 800-CDC-INFO (800-232-4636).