

**Recommended and Minimum Ages and Intervals Between Doses  
of Routinely Recommended Vaccines<sup>1,2</sup>**

<b>Vaccine and dose number</b>	<b>Recommended age for this dose</b>	<b>Minimum age for this dose</b>	<b>Recommended interval to next dose</b>	<b>Minimum interval to next dose</b>
Hepatitis B (HepB)-1 <sup>3</sup>	Birth	Birth	1-4 months	4 weeks
HepB-2	1-2 months	4 weeks	2-17 months	8 weeks
HepB-3 <sup>4</sup>	6-18 months	24 weeks	—	—
Diphtheria-tetanus-acellular pertussis (DTaP)-1 <sup>3</sup>	2 months	6 weeks	2 months	4 weeks
DTaP-2	4 months	10 weeks	2 months	4 weeks
DTaP-3	6 months	14 weeks	6-12 months	6 months <sup>5,6</sup>
DTaP-4	15-18 months	12 months	3 years	6 months <sup>5</sup>
DTaP-5	4-6 years	4 years	—	—
<i>Haemophilus influenzae</i> type b (Hib)-1 <sup>3,7</sup>	2 months	6 weeks	2 months	4 weeks
Hib-2	4 months	10 weeks	2 months	4 weeks
Hib-3 <sup>8</sup>	6 months	14 weeks	6-9 months	8 weeks
Hib-4	12-15 months	12 months	—	—
Inactivated poliovirus (IPV)-1 <sup>3</sup>	2 months	6 weeks	2 months	4 weeks
IPV-2	4 months	10 weeks	2-14 months	4 weeks
IPV-3	6-18 months	14 weeks	3-5 years	6 months
IPV-4 <sup>9</sup>	4-6 years	4 years	—	—
Pneumococcal conjugate (PCV)-1 <sup>7</sup>	2 months	6 weeks	8 weeks	4 weeks
PCV-2	4 months	10 weeks	8 weeks	4 weeks
PCV-3	6 months	14 weeks	6 months	8 weeks
PCV-4	12-15 months	12 months	—	—
Measles-mumps-rubella (MMR)-1 <sup>10</sup>	12-15 months	12 months	3-5 years	4 weeks
MMR-2 <sup>10</sup>	4-6 years	13 months	—	—
Varicella (Var)-1 <sup>10</sup>	12-15 months	12 months	3-5 years	12 weeks <sup>11</sup>
Var-2 <sup>10</sup>	4-6 years	15 months	—	—
Hepatitis A (HepA)-1 <sup>3</sup>	12-23 months	12 months	6-18 months <sup>5</sup>	6 months <sup>5</sup>
HepA-2	18-41 months	18 months	—	—
Influenza, inactivated (TIV) <sup>12</sup>	6 months and older	6 months <sup>13</sup>	1 month	4 weeks
Influenza, live attenuated (LAIV) <sup>12</sup>	24 months - 49 years	24 months	1 month	4 weeks
Meningococcal conjugate (MCV)	11-12 years	2 years	—	—
Meningococcal polysaccharide (MPSV)-1 <sup>14</sup>	—	2 years	5 years	5 years
MPSV-2	—	7 years	—	—
Tetanus-diphtheria (Td)	11-12 years	7 years	10 years	5 years
Tetanus-diphtheria-acellular pertussis (Tdap) <sup>15</sup>	≥11 years	10 years	—	—
Pneumococcal polysaccharide (PPSV)-1	—	2 years	5 years	5 years
PPSV-2 <sup>16</sup>	—	7 years	—	—
Human papillomavirus (HPV)-1 <sup>17</sup>	11-12 years	9 years	2 months	4 weeks
HPV-2	11-12 years (+ 2 months)	109 months	4 months	12 weeks
HPV-3 <sup>18</sup>	11-12 years (+ 6 months)	114 months	—	—
Rotavirus (RV)-1 <sup>19</sup>	2 months	6 weeks	2 months	4 weeks
RV-2	4 months	10 weeks	2 months	4 weeks
RV-3 <sup>20</sup>	6 months	14 weeks	—	—
Herpes zoster <sup>21</sup>	60 years	60 years	—	—

- 1 Combination vaccines are available. Use of licensed combination vaccines is generally preferred over separate injections of their equivalent component vaccines. When administering combination vaccines, the minimum age for administration is the oldest age for any of the individual components; the minimum interval between doses is equal to the greatest interval of any of the individual components.
- 2 For travel vaccines including typhoid, Japanese encephalitis, yellow fever, see [www.cdc.gov/travel/](http://www.cdc.gov/travel/). Other vaccines that are licensed in the US but not distributed include anthrax, rhesus rotavirus and smallpox, see [www.bt.cdc.gov/](http://www.bt.cdc.gov/).
- 3 Combination vaccines containing the Hepatitis B component are available (HepB-Hib, DTaP-HepB-IPV, and HepA-HepB). These vaccines should not be administered to infants younger than 6 weeks because of the other components (i.e., Hib, DTaP, HepA, and IPV).
- 4 Hepatitis B-3 should be administered at least 8 weeks after Hepatitis B-2 and at least 16 weeks after Hepatitis B-1, and should not be administered before age 24 weeks.
- 5 Calendar months.
- 6 The minimum recommended interval between DTaP-3 and DTaP-4 is 6 months. However, DTaP-4 need not be repeated if administered at least 4 months after DTaP-3.
- 7 For Hib and PCV, children receiving the first dose of vaccine at age 7 months or older require fewer doses to complete the series.
- 8 If PRP-OMP (Pedvax-Hib, Merck Vaccine Division) was administered at age 2 and 4 months, a dose at age 6 months is not required.
- 9 If the 3<sup>rd</sup> dose is given after the fourth birthday, a fourth dose is not needed.
- 10 Combination measles-mumps-rubella-varicella (MMRV) vaccine can be used for children aged 12 months through 12 years.
- 11 The minimum interval from VAR-1 to VAR-2 for persons beginning the series at age 13 years and older is 4 weeks.
- 12 One dose of influenza vaccine per season is recommended for most people. Children younger than 9 years of age who are receiving influenza for the first time, or received only 1 dose the previous season (if it was their first vaccination season) should receive 2 doses this season.
- 13 The minimum age for inactivated influenza vaccine varies by vaccine manufacturer. Fluzone (manufactured by sanofi Pasteur) and Afluria (manufactured by Commonwealth Serum Laboratories) are approved for children 6-35 months of age. The minimum age for Fluarix (manufactured by GlaxoSmithKline) is 3 years. The minimum age for Fluvirin (manufactured by Novartis) is 4 years. For FluLaval (manufactured by GlaxoSmithKline) and Agriflu (manufactured by Novartis), the minimum age is 18 years. For Fluzone High Dose (manufactured by sanofi Pasteur) the minimum age is 65 years.
- 14 Revaccination with meningococcal vaccine is recommended for people previously vaccinated who remain at high risk of meningococcal disease. (ref CDC. Updated Recommendations from the Advisory Committee on Immunization Practices (ACIP) for revaccination of persons at Prolonged Increased Risk for Meningococcal Disease. *MMWR* 2009;58:[1042-1043].)
- 15 Only one dose of Tdap is recommended. Subsequent doses should be given as Td. If vaccination to prevent tetanus and/or diphtheria disease is required for children aged 7 through 9 years, Td should be administered (minimum age for Td is 7 years). For one brand of Tdap, the minimum age is 11 years. The preferred interval between Tdap and a previous dose of Td is 5 years. In persons who have received a primary series of tetanus-toxoid containing vaccine, for management of a tetanus-prone wound, the minimum interval after a previous dose of any tetanus-containing vaccine is 5 years.
- 16 A second dose of PPSV is recommended 5 years after the first dose for persons at highest risk for serious pneumococcal infection and those who are likely to have a rapid decline in pneumococcal antibody concentration. (See CDC. Prevention of pneumococcal disease: recommendations of the Advisory Committee on Immunization Practices [ACIP]. *MMWR* 1997;46[No. RR-8]:1-24.)
- 17 HPV2 (Cervarix, manufactured by GlaxoSmithKline) is approved for females aged 9 through 26 years. HPV4 (Gardasil, manufactured by Merck) is approved for males and females 9 through 26 years.
- 18 The minimum age for HPV-3 is based on the baseline minimum age for dose 1 (i.e. 108 months) and the minimum interval of 24 weeks between the first and third dose.
- 19 The first dose of RV must be administered at age 6 weeks through 14 weeks 6 days. The vaccine series should not be started at age 15 weeks 0 days or older. RV should not be administered to children older than 8 calendar months regardless of the number of doses received between 6 weeks and 8 months 0 days of age.
- 20 If two doses of Rotarix are administered as age appropriate, a third dose is not necessary.
- 21 Herpes zoster vaccine is recommended as a single dose for persons 60 years and older.