### 2018 Vaccination Schedule: 0–18 Years of Age (Part 1 of 2)

This schedule includes recommendations in effect as of February 1, 2018. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Considerations should include provider assessment, patient preference, and the potential for adverse events. Consult full product labeling for detailed recommendations.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Range of recommended ages for all children</th>
<th>Range of recommended ages for catch-up immunization</th>
<th>Range of recommended ages for certain high-risk groups</th>
<th>Range of recommended ages for non-high-risk groups that may receive vaccine, subject to clinical decision making</th>
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</thead>
<tbody>
<tr>
<td>Hepatitis B (HepB)</td>
<td>1st dose</td>
<td>Birth</td>
<td>1mo</td>
<td>2mos</td>
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<tr>
<td>Rotavirus (RV)</td>
<td>RV1 (2-dose series); RV5 (3-dose series)</td>
<td>1st dose</td>
<td>Birth</td>
<td>1mo</td>
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<td>2nd dose</td>
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<tr>
<td>Haemophilus influenzae: type b (Hib)</td>
<td>1st dose</td>
<td>Birth</td>
<td>1mo</td>
<td>2mos</td>
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<td>2nd dose</td>
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<td>1st dose</td>
<td>2nd dose</td>
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<tr>
<td>Pneumococcal conjugate (PCV13)</td>
<td>1st dose</td>
<td>Birth</td>
<td>1mo</td>
<td>2mos</td>
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<td>2nd dose</td>
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<td>1st dose</td>
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<tr>
<td>Inactivated poliovirus (IPV: &lt;18yrs)</td>
<td>1st dose</td>
<td>Birth</td>
<td>1mo</td>
<td>2mos</td>
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<tr>
<td>Measles, mumps, rubella (MMR)</td>
<td></td>
<td>Birth</td>
<td>1mo</td>
<td>6mos</td>
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<tr>
<td>Varicella (VAR)</td>
<td></td>
<td>Birth</td>
<td>1mo</td>
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<tr>
<td>Hepatitis A (HepA)</td>
<td></td>
<td>Birth</td>
<td>1mo</td>
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<td>Meningococcal (MenACWY-D ≥ 2mos; MenACWY-CRM ≥ 2mos)</td>
<td></td>
<td>Birth</td>
<td>1mo</td>
<td>2mos</td>
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<td>Tetanus, diphtheria, &amp; acellular pertussis (Tdap: &lt;7yrs)</td>
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<td>Birth</td>
<td>1mo</td>
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<td>Human papillomavirus (HPV)</td>
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<td>Birth</td>
<td>1mo</td>
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<td>Meningococcal B</td>
<td></td>
<td>Birth</td>
<td>1mo</td>
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<td>Pneumococcal polysaccharide (PPSV23)</td>
<td></td>
<td>Birth</td>
<td>1mo</td>
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### 1. Hepatitis B (HepB) vaccine. (Min age: birth)

At birth:
- HBsAg-negative mother: administer 1 dose of monovalent HepB vaccine within 24hrs of birth for infants ≥2,000g. For infants <2000g, give 1 dose at chronological age 1 month or hospital discharge.
- HBsAg-positive mother: administer 1 dose of monovalent HepB vaccine and 0.5mL of hepatitis B immune globulin (HBIG) within 12hrs of birth, regardless of birth weight. Test for HBsAg and antibody to HBsAg (anti-HBs) at age 9–12mos or 1–2mos after final dose if the series was delayed.
- Unknown HBsAg status: administer HepB vaccine within 12hrs of birth, regardless of birth weight (add 0.5mL of HBIG for infants <2000g). Determine mother’s HBsAg status as soon as possible and, if she is HBsAg-positive, also give HBIG for infants weighing ≥2,000g (no later than age 1wk).

Doses after the birth dose:
- The 2nd dose should be administered at age 1 or 2mos. Monovalent HepB vaccine should be used for doses administered before age 6wks.
- Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine on a schedule of 0, 1–2mos, and 6mos starting as soon as feasible.

### 2. Rotavirus (RV) vaccine. (Min age: 6wks for both RV1 [Rotarix] and RV5 [RotaTeq])

- Administer a series of RV vaccine to all infants as follows:
  1. If RV1 is used, administer a 2-dose series at 2 and 4mos of age.
  2. If RV5 is used, administer a 3-dose series at ages 2, 4, and 6mos.
  3. If any dose in series was RV5 or vaccine product is unknown for any dose in the series, a total of 3 doses of RV vaccine should be given.

### 3. Diphtheria, tetanus, and acellular pertussis (DTaP) vaccine.

#### (Min age: 6wks. Exception: DTaP-IPV [Kinrix, Quadracel]: 4yrs)

- Administer a 5-dose series of DTaP vaccine at ages 2, 4, 6, 15–18mos, and 4–6yrs. The 4th dose may be administered as early as age 12mos, provided that at least 6mos have elapsed since the 3rd dose. The 4th dose of DTaP need not be repeated if given at least 4mos after the 3rd dose of DTaP and the child was ≥12mos of age.
- The 5th dose of DTaP vaccine is not needed if 4th dose was given ≥4yrs of age.
4. Haemophilus influenzae type b (Hib) conjugate vaccine.
   (Minimum age: 6wks for PRP-T [ACTHIB, DTaP-IPV/Hib (Pentacel),
   Hibrix] and PRP-OHP [PefdvaxHIB])
   • Administer a 4-dose Hib vaccine series at 2, 4, 6, and 12–15mos for
     ActHIB, Hibrix, or Pentacel. For PevdauxHIB, administer a 3-dose
     series at 2, 4, and 12–15mos.
   • For catch-up vaccination recommendations, refer to the 2018 Catch-
     Up Vaccination Schedule: 4 Months–18 years chart.
   • Persons with high-risk conditions: refer to the ACIP 2018
     Immunization Schedule footnotes.

5. Pneumococcal vaccines. (Min age: 6wks for PCV13, 2yrs for PPSV23)
   Routine vaccination with PCV13:
   • Administer a 4-dose series of PCV13 vaccine at ages 2, 4, 6mos and
     at age 12–15mos.
   • Persons with high-risk conditions: refer to the ACIP 2018
     Immunization Schedule footnotes.

6. Inactivated poliovirus vaccine (IPV). (Min age: 6wks)
   • Administer a 4-dose series of IPV at ages 2, 4, 6–18mos and 4–6yrs.
     The final dose in the series should be administered on or after the
     4th birthday and at least 6mos after the previous dose.
   • If both OPV (trivalent) and IPV were given as part of a series, a total
     of 4 doses should be given to complete the series. Doses should be
     at least 4wks apart, with the final dose given on or after the 4th
     birthday and at least 6mos after the previous dose. If only OPV were
     given, and all doses given before 4yrs of age, 1 dose of IPV should
     be given at age ≥4yrs, at least 6mos after last OPV dose.

7. Influenza vaccines. (Min age: 6mos for inactivated influenza vaccine:
   [IIV]; 18yrs for recombinant influenza vaccine [RIV])
   • Administer an age-appropriate formulation and dose of influenza
     vaccine annually to all children beginning at age 6mos. For the
     2017–2018 season, use of live attenuated influenza vaccine (LAI)
     is not recommended.
   • For children aged 6mos–8yrs:
     • For the 2017–2018 season, administer 2 doses at least 4wks apart to
       children who have not previously received ≥2 doses before July 1, 2017.
   • For children aged ≥9yrs: Administer 1 dose.

8. Measles, mumps, and rubella (MMR) vaccine. (Min age: 12mos)
   • Administer a 2-dose series of MMR vaccine at ages 12–15mos and
     4–6yrs. The 2nd dose may be given as early as 4wks after the 1st dose.
   • Administer 1 dose of MMR to infants aged 6–11mos before depar-
     ture from the U.S. for international travel. These children should be
     revaccinated with 2 doses, the 1st at age 12–15mos (12mos for
     children in high-risk areas), and the 2nd dose at least 4wks later.
     Unvaccinated children ≥12mos should receive 2 doses at least 4 wks
     apart before departure.
   • Administer 1 dose of MMR to children ≥12mos who previously received
     ≥2 doses of mumps-containing vaccine and are identified by a public
     health authority to be at high risk during a mumps outbreak.

9. Varicella (VAR) vaccine. (Min age: 12mos)
   • Administer a 2-dose series of VAR vaccine at ages 12–15mos and
     4–6yrs. The 2nd dose may be administered as early as 3mos after
     the 1st dose. If the 2nd dose was given at least 4wks after the 1st
     dose, it can be accepted as valid.

10. Hepatitis A (HepA) vaccine. (Min age: 12mos)
    • Initiate the 2-dose HepA vaccine series, separated by 6–18mos,
      for children aged 12–23mos. If the series begun before age 2yrs,
      2 doses should be completed even if the child turns 2 before the
      2nd dose is given.
    • Unvaccinated children ≥2yrs may receive the HepA vaccine series if
      desired. Separate doses by at least 6mos.
    • High-risk groups that should be vaccinated: refer to the ACIP 2018
      Immunization Schedule footnotes.

11. Meningococcal vaccines. (Min age: 9mos for MenACWY-D
    [Menactra], 2mos for MenACWY-CRM [Menveo], 10yrs for serogroup
    B meningococcal [MenB] vaccines: MenB-4C [Bexsero] and
    MenB-Hibp [Trumenba])
    • MenACWY vaccination (Menactra, Menveo):
      — Administer a 2-dose series at 11–12yrs and 16yrs.
      — If Menactra is used, give either before or at the same time as DTaP.
    • MenB vaccination (Bexsero, Trumenba):
      — Persons 16–23yrs (16–18yrs preferred) not at increased risk may
        receive, at clinical discretion, 2 doses of Bexsero at least 1 month
        apart or 2 doses of Trumenba at least 6mos apart (if 2 Trumenba
        dose given too soon, administer a 3rd dose at least 4mos after
        the 2nd dose).
      — The two MenB vaccines are not interchangeable.
    • Persons with high-risk conditions or those traveling to or living in
      countries where meningococcal disease is hyperendemic or epidemic:
      refer to the ACIP 2018 Immunization Schedule footnotes.

12. Tetanus, diphtheria, and acellular pertussis (Tdap) vaccine.
    (Min age: 1yr for routine vaccination, 7yrs for catch-up)
    • Give 1 dose of Tdap vaccine to all adolescents aged 11–12yrs.
    • Tdap can be administered regardless of the interval since the last
      tetanus and diphtheria toxoid-containing vaccine.
    • Administer 1 dose of Tdap vaccine to pregnant adolescents during
      each pregnancy (preferably during the early part of gestational
      weeks 27–36).
    • For catch-up vaccination recommendations, refer to the 2018 Catch-
      Up Vaccination Schedule: 4 Months–18 years chart.

13. Human papillomavirus (HPV) vaccines. (Minimum age: 9yrs for
    4vHPV [Gardasil] and 9vHPV [Gardasil 9])
    • Adolescents aged 11–12yrs (can start at age 9yrs) and through 18yrs
      (if not previously adequately vaccinated) should receive HPV vaccine
      series. Number of doses is dependent on age at initial vaccination:
      — Initiated at age 9–14yrs: administer a 2-dose series at least 5mos
        apart at 0 and 6–12 mos. If 2nd dose given too soon, administer a
        3rd dose at least 12wks after the 2nd dose and at least 5mos after
        the 1st dose.
      — Initiated at age ≥15yrs: administer a 3-dose series at 0, 1–2, and
        6mos. The 1st and 2nd dose should be at least 4wks apart, the
        2nd and 3rd dose at least 12wks apart, and the 1st and 3rd dose
        at least 5mos apart. If given too soon, repeat doses at or after the
        minimum interval since the most recent dose.
    • No additional doses are needed for persons who have completed a
      valid series with any HPV vaccine.
    • Administer HPV vaccine beginning at age 9yrs to children with any
      history of sexual abuse or assault.
    • Immunocompromised children should receive a 3-dose series at 0,
      1–2, and 6mos, regardless of age at vaccine initiation.
    • HPV vaccination is not recommended for pregnancy. However, preg-
      nancy testing is not needed before vaccination. If found to be preg-
      nant after initiating the vaccination series, no intervention is needed;
      the remainder of the series should be delayed until completion of pregnancy.

NOTE: Refer to the ACIP 2018 Recommended Immunization Schedule
for Children and Adolescents Aged 18 Years or Younger footnotes for
vaccinations of persons with high risk conditions.

CHANGES IN THE SCHEDULE SINCE LAST RELEASE

• Hib-MenCy (Men Hibrix) vaccine has been discontinued and removed
  from the schedule.
• The HepB vaccine footnote was updated to include information regarding
  vaccination of infants <2000g born to HBsAg-negative mothers.
• The influenza vaccine footnote was updated to recommend against the
  use of LAIV during the 2017–2018 influenza season.
• The MMR footnote was revised to include recommendation on the use of
  a 3rd dose of mumps-containing vaccine during an outbreak.
• The poliovirus vaccine footnote was changed to include an update for
  persons who received oral polio vaccine as part of their vaccination series.

REFERENCES

For information on individual vaccines, please see product monographs at www.eMPR.com, contact company for full labeling, or call the National Immunization Hotline at (800) 232-4636. Source: Advisory Committee on Immunization Practices (ACIP). Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger — United States, 2018. https://www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html

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