

2018 IMMUNIZATION SCHEDULES

The Centers for Disease Control and Prevention (CDC)'s Advisory Committee on Immunization Practices (ACIP) recently released revised immunization schedules for [children and adolescents](#) — including [catch-up schedules](#) for children who have fallen behind — and for [adults](#). This issue of the *CD Summary* highlights what's new for 2018 and provides key links to the schedules in a variety of formats.

KIDS

(N.b.: referenced Figures are from the [comprehensive print version of the Child & Adolescent Schedule](#).) Remember that when more than one vaccine product is suitable for children, ACIP does not express a preference for any particular product.

Hepatitis B (HepB) vaccine.

Regarding the “birth” dose (monovalent HepB vaccine only) for infants born to hepatitis B surface-antigen-negative mothers: infants born at $\geq 2,000$ g should receive 1 dose of monovalent HepB vaccine within 24 hours of birth. Infants born at $< 2,000$ g should receive 1 dose at chronological age 1 month, or at hospital discharge. (See footnote in the schedule.)

Rotavirus vaccine. The maximum ages for the first and last doses in the rotavirus vaccination series were added to the table: maximum age for first dose is 14 weeks, 6 days; and the maximum age for the last dose is 8 months, 0 days.

Meningococcal vaccine. Manufacturing of MenHibrix (Hib-MenCY) vaccine has been discontinued in the United States, and all available doses have expired. Therefore, mention of MenHibrix has been purged from the schedules and from the relevant footnotes.

Pneumococcal conjugate vaccine. In some situations, **an additional dose of vaccine might be recommended** for children with heart disease, chronic lung disease, chronic liver disease, and diabetes; to make this clear, **stippling** was added to those columns in Figure 3 (page 4) of the [comprehensive version](#).

Inactivated poliovirus vaccine (IPV). A fourth dose of IPV is indicated if all previous doses were administered at < 4 years of age or if the third dose was administered after age 4 years but < 6 months after the second dose. A fourth dose is **not** necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose. The IPV row in [Figure 2 \(page 3\)](#) was edited to clarify these recommendations.

For persons who received *oral* poliovirus vaccine (OPV) as part of their vaccination series, the total number of doses needed to complete the series is the same as is recommended for the U.S. IPV schedule; see www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s_cid=mm6601a6_w. Only trivalent OPV counts toward the U.S. vaccination requirements. For guidance to assess doses documented as “OPV,” see www.cdc.gov/mmwr/volumes/66/wr/mm6606a7.htm?s_cid=mm6606a7_w. For other catch-up guidance, see [Figure 2 on page 3](#).

Influenza vaccine. Live, attenuated influenza vaccine (LAIV) has been approved for the 2018–2019 influenza season. The footnote indicates, however, that LAIV should *not* be used during the current (2017–2018) influenza season; a link to the current season's recommendations has been added. See www.cdc.gov/mmwr/volumes/66/rr/pdfs/rr6602.pdf

Measles, mumps, and rubella vaccine (MMR). Persons > 12 months of age who previously received ≤ 2 doses of mumps-containing vaccine and are identified by public health authorities to be at increased risk for mumps during an outbreak should receive a dose of mumps-containing vaccine (i.e., MMR). Total MMR doses received by a given person should not exceed 3.

Miscellany. The footnotes have been formatted for easier reading by replacing text with bullets and enlarging the font. The “en dash” (–) is now used instead of the word “through”; for example, vaccines indicated at 12 through 18 months of age would be shown as “12–18 months.” A new table on [page 1](#) outlines vaccine types, abbreviations, and brand names for vaccines listed in the schedule. [Figure 3 on page 4](#) includes a new reference that provides additional information regarding HIV laboratory parameters and use of live vaccines. For additional information regarding HIV laboratory parameters and use of live vaccines; see the General Best Practice Guidelines for Immunization of persons with altered immunocompetence at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html; and Table 4-1, footnote (d), at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html.

FOR MORE INFORMATION

- CDC. Advisory Committee on Immunization Practices recommended immunization schedule for children and adolescents aged 18 years or younger — United States, 2018. MMWR 2018; 67:156–7. Available at www.cdc.gov/mmwr/volumes/67/wr/mm6705e2.htm.
- CDC. Recommended immunization schedule for children and adolescents aged 18 years or younger, United

States, 2018 (8 pages in color [pdf]). Available at www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf.

- CDC. Immunization schedules for health care professionals. Available at www.cdc.gov/vaccines/schedules/hcp.

ADULTS

(N.b.: referenced Figures are from the [comprehensive print version of the Adult Schedule](#))

Tdap or Td vaccines. “Td/Tdap” has been replaced by “Tdap or Td” on Figures 1 and 2 on pages 2 and 3, and the text in the indication bar has been revised to “1 dose Tdap, then Td booster every 10 years.”

Measles, mumps, and rubella (MMR) vaccine. For routine MMR vaccination, 1 or 2 doses depending on indication (if born in 1957 or later) are recommended; this is now explicit in Figure 1 on page 2. Adults who previously received ≤ 2 doses of mumps-containing vaccine and are identified by public health authorities to be at increased risk for mumps during an outbreak should receive a dose of mumps-containing (i.e., MMR) vaccine, as is now indicated in the footnote on p. 4.

Zoster vaccine. Administer 2 doses of recombinant zoster vaccine (RZV; Shingrix®) 2–6 months apart to adults aged ≥ 50 years, regardless of past episode of herpes zoster. To adults who previously received zoster vaccine live (ZVL; Zostavax®) administer 2 doses of RZV 2–6 months apart to adults who previously received ZVL. Typically, RZV should be given ≥ 5 years after ZVL; but patient age ≥ 70 years, patient request, and clinical judgment may indicate intervals as short as 8 weeks — which is the absolute minimum spacing recommended for RZV after ZVL. Concurrent administration of RZV with Fluarix® is safe and immunogenic. Although it has not been studied with other influenza vaccines including adjuvanted Fluad™, and because RZV is not a live vaccine, it is expected to be safe and effective when given with any other vaccine.

For adults aged ≥ 60 years, vaccination against zoster with RZV is preferred. Because two distinct vaccines are now licensed for the prevention of zoster and its complica-

tions in this age group, a row for RZV was added to Figure 1 (above the row for ZVL), and the two are separated by a dashed line to denote their common purpose.

Human papillomavirus (HPV) vaccine. Two or three doses are recommended for both females and males, depending on age at series initiation; the text in Figure 1 on page 2 has been revised to indicate this. Adolescents who initiated the series at 9–14 years of age and received two doses at least 5 months apart do not need a third dose.

Hepatitis A (HepA) vaccine. After the 2018 adult immunization schedule was adopted by ACIP (in October 2017), the Committee approved changes to its recommendations for postexposure prophylaxis of hepatitis A, to wit: HepA vaccine should be administered for postexposure prophylaxis for *all* persons ≥ 12 months of age (i.e., even to those >40 years of age). *In addition* to HepA vaccine and based on a risk assessment by the provider, immunoglobulin (0.1 mL/kg body weight) may be administered to persons >40 years of age.

Hepatitis B (HepB) vaccine. Since the 2018 adult immunization schedule was approved, FDA licensed a new HepB vaccine (HepB-CpG; Heplisav-B®) for use in adults ≥ 18 years of age. The new vaccine contains a 22-mer oligodeoxynucleotide adjuvant “CpG 1018”; just two doses of this vaccine, given intramuscularly at least 1 month apart, induced seroprotective antibody levels in 95% of subjects.* ACIP voted this February to include it among its recommended options for vaccination of adults against hepatitis B—though ACIP expressed no preference for this vaccine over any of the 3-dose products. The 2019 schedule will indicate that “2 or 3 doses,” depending on the product used, are needed for a complete HepB vaccine series.

Meningococcal conjugate (MenACWY) vaccine: Two doses, administered ≥ 8 weeks apart, are indicated for adults with anatomical or functional asplenia, HIV infection, persistent complement component deficiency or eculizumab use. Only 1 dose is needed for other adults at increased risk of

exposure. Figure 1 on page 2 has therefore been revised to recommend “1 or 2 doses depending on indication, then booster every 5 years if risk remains.” The quadrivalent meningococcal polysaccharide (MPSV4) vaccine is no longer available and has been removed from the schedule.

Miscellany. The footnotes have been formatted for easier reading by replacing text with bullets and enlarging the font. The “en dash” (–) is now used instead of the word “through”; for example, vaccines indicated at 19 through 21 years of age would be shown as “19–21 years.”

FOR MORE INFORMATION

- CDC. Advisory Committee on Immunization Practices recommended immunization schedule for adults aged 19 years or older — United States, 2018. MMWR 2018; 67:158–60. Available at www.cdc.gov/mmwr/volumes/67/wr/mm6705e3.htm?s_cid=mm6705e3_w.
- CDC. Guidance for assessment of poliovirus vaccination status and vaccination of children who have received poliovirus vaccine outside the United States. MMWR 2017; 66:23–5. Available at www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s_cid=mm6601a6_w.
- CDC. Recommended immunization schedule for adults aged 19 years or older, United States, 2018 (6 pages in color [pdf]). Available at www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf.
- CDC. Immunization schedules for health care professionals. Available at www.cdc.gov/vaccines/schedules/hcp.

* [Heplisav-B prescribing information](#)



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