

Injectable Vaccine Administration for Children: Ages Birth through 18 Years¹

Vaccine	Age/Reminders	Route ²	Contraindications ³
Diphtheria, Tetanus, Pertussis (DTaP)	Ages 6 weeks through 6 years; do NOT give DTaP doses at/after age 7 years	IM	Anaphylactic reaction to prior dose or component; encephalopathy without other cause within 7 days of a pertussis-containing vaccine
Tetanus, diphtheria, pertussis (Tdap)	Routinely given at ages 11-12 years; catch up ages 13 years & older without a previous dose; some children aged 7-10 years may need 1 Tdap dose	IM	Anaphylactic reaction to prior dose or component; encephalopathy without other cause within 7 days of a pertussis-containing vaccine
Tetanus, diphtheria (Td)	For persons aged 7 years & older who have a contraindication to pertussis vaccine or have received a previous dose of Tdap	IM	Anaphylactic reaction to prior dose or component
<i>Haemophilus influenzae</i> type b (Hib) ¹	No routine doses after age 59 months (not routinely given once a child is age 5 years)	IM	Anaphylactic reaction to prior dose or component; age less than 6 weeks
Pneumococcal Conjugate (PCV13) ¹	No routine doses after age 59 months (not routinely given once a child is age 5 years)	IM	Anaphylactic reaction to prior dose or component or any diphtheria toxoid-containing vaccine
Hepatitis B (HepB)	1 st dose within 24 hours of birth ⁴ ; last dose at/after age 6 months	IM*	Anaphylactic reaction to prior dose or component; hypersensitivity to yeast
Inactivated Polio (IPV)	Give last dose at/after age 4 years; 6 month minimum interval between next to last and last dose	SC or IM	Anaphylactic reaction to prior dose or component
Measles, Mumps, Rubella (MMR)	1 st dose at/after age 12 months; 4 week minimum interval between doses (all ages)	SC	Anaphylactic reaction to prior dose or component; pregnancy; immunosuppression ³
Varicella (Var)	1 st dose at/after age 12 months; minimum interval between doses varies: ages 12 months-12 years = 3 months, ages 13 years & older = 4 weeks	SC	Anaphylactic reaction to prior dose or component; pregnancy; immunosuppression ³
Inactivated Influenza (IIV) ⁵	Vaccine brand, dosage, and number of doses needed based on person's age and vaccine history	IM*	Anaphylactic reaction to prior dose or component
IIV4	Ages 6 months & older	IM*	Anaphylactic reaction to prior dose or component
IIV3 & cIIV4	Ages 4 years & older	IM*	Anaphylactic reaction to prior dose or component
Hepatitis A (HepA)	Give 2 doses; 1 st dose at/after 12 months; doses must be at least 6 months apart; catch up all children through 18 years	IM	Anaphylactic reaction to prior dose or component

See footnotes on page 2.

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Vaccine	Age/Reminders	Route ²	Contraindications ³
Meningococcal Conjugate (MenACWY) ^{1,6}	Routinely given at ages 11-12 years; give 2 nd dose at age 16 years	IM	Anaphylactic reaction to prior dose or component
Meningococcal B (Men B)	Ages 10 years & older when indicated; may vaccinate ages 16-23 years (Category B recommendation ⁷)	IM	Anaphylactic reaction to prior dose or component
Human Papillomavirus (9vHPV)	Routinely given at ages 11-12 years; minimum age 9 years; number of doses needed is based on the person's health status and age when the HPV vaccine series is started	IM*	Anaphylactic reaction to prior dose or component; not recommended for use in pregnancy

Route	Site	Needle length/gauge
IM = Intramuscular	Anterolateral thigh or deltoid	1-1.5 inches, 22-25 gauge
SC = Subcutaneous	Anterolateral thigh or lateral upper arm	5/8 inch, 23-25 gauge

*Certain vaccines given by the wrong route should not be counted as valid and should be repeated: hepatitis B, inactivated influenza, and HPV. There is no minimum interval between the invalid (e.g. subcutaneous) dose and the repeat dose.

¹Refer to the “Recommended Childhood Immunization and Catch-up Schedules” including footnotes at [CDC Vaccines & Immunizations](http://www.cdc.gov/vaccines) (URL: www.cdc.gov/vaccines). High-risk children may need additional doses of PCV13, pneumococcal polysaccharide (PPSV23), MenACWY, or Hib. Refer to the footnotes in the “Recommended Immunization Schedules for Children and Adolescents Aged 18 years or Younger.” For vaccine-specific recommendations refer to the [Advisory Committee for Immunization Practices \(ACIP\) Vaccine Recommendations and Guidelines](http://www.cdc.gov/vaccines/hcp/acip-recs/index.html) (URL: www.cdc.gov/vaccines/hcp/acip-recs/index.html).

²Professional judgment is appropriate when selecting site, needle length, and needle gauge for use in children, especially in small infants or larger children. Vaccines should never be administered in the buttocks. Refer to “Giving All the Doses” (by age group) at [Alliance for Immunization in Michigan \(AIM\)](http://www.aimtoolkit.org) (URL: www.aimtoolkit.org).

³See package inserts for complete component listing (by brand). Refer to [ACIP General Best Practice Guidelines for Immunization](http://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html) (URL: www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html) and the [Pink Book](http://www.cdc.gov/vaccines/pubs/pinkbook/index.html) (URL: www.cdc.gov/vaccines/pubs/pinkbook/index.html) for a comprehensive list of vaccine contraindications and precautions. For MMR and varicella, check which immune suppressing conditions are considered as contraindications to vaccination.

⁴For further information about Hepatitis B birth dose, refer to [MDHHS Perinatal Hepatitis B Manual](http://www.michigan.gov/hepatitisb) (URL: www.michigan.gov/hepatitisb).

⁵Age indications for influenza vaccines vary by brand. For more information on flu vaccines, refer to package inserts, [CDC Influenza](http://www.cdc.gov/flu) (URL: www.cdc.gov/flu), or [MDHHS Influenza](http://www.michigan.gov/flu) (URL: www.michigan.gov/flu) (Current Flu Season Vaccination Materials for Health Care Professionals).

⁶MenACWY licensure ages: Menveo® (GSK) ages 2 months-55 years; Menactra® (Sanofi Pasteur) ages 9 months-55 years.

⁷Refer to, “[Understanding the Category B Recommendation for Serogroup B Meningococcal Vaccine](http://pediatrics.aappublications.org/content/early/2017/03/31/peds.2016-3484),” published in *Pediatrics* in April 2017 (URL: <http://pediatrics.aappublications.org/content/early/2017/03/31/peds.2016-3484>).