

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) ⁴	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 Td/Tdap	IM	Anaphylactic reaction to prior dose or component
<i>Haemophilus influenzae</i> type b (Hib) ¹	No routine doses after age 59 months (i.e., 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 (i.e., not routinely given once a child is age 5 years)	IM	Anaphylactic reaction to prior dose or component (including yeast) or any diphtheria toxoid-containing vaccine
Hepatitis B (HepB)	1 st dose within 24 hours of birth ⁵ ; last dose at/after age 6 months; Heplisav-B [®] is approved only for persons aged 18 years and older as a 2-dose series separated by 1 month	IM*	Anaphylactic reaction to prior dose or component; hypersensitivity to yeast
Inactivated Polio (IPV)	Give last dose at/after age 4 years; minimum interval 6 months 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; minimum interval 4 weeks between doses (all ages)	SC	Anaphylactic reaction to prior dose or component; pregnancy; immunosuppression; family history of altered immunocompetence ⁶
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; family history of altered immunocompetence ⁶
Inactivated Influenza (IIV) ⁷	Vaccine brand, dose volume, and number of doses needed based on person's age and flu vaccine history	IM*	Anaphylactic reaction to prior dose or component
IIV4	Ages 6 months & older	IM*	Anaphylactic reaction to prior dose or component
ccIIV4	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

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Meningococcal Conjugate (MenACWY) ^{1,8}	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 (MenB) ¹	Ages 10 years & older when indicated; based on shared clinical decision making, may administer to ages 16-23 years (preferred 16-18 years)	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 based on person’s health status and age when HPV vaccine series is started	IM*	Anaphylactic reaction to prior dose or component (including yeast); not recommended for use in pregnancy

Route ²	Site	Needle length/gauge
IM = Intramuscular	Anterolateral thigh or deltoid	1-1.5 inches, 22-25 gauge
SC = Subcutaneous	Fatty tissue over anterolateral thigh or fatty tissue over triceps	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 child and adolescent immunization schedule 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, MenB, or Hib. For vaccine-specific recommendations refer to the [Advisory Committee on 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. 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.

⁴Tdap licensure ages: Boostrix® (GSK) ages 10 years and older; Adacel® (Sanofi) for ages 10-64 years. Either brand may be used for children aged 7-9 years. Children who receive Tdap at 7-9 years should receive the routine adolescent Tdap dose at 11-12 years.

⁵For more information about Hepatitis B birth dose, refer to [MDHHS Perinatal Hepatitis B Manual](http://www.michigan.gov/hepatitisb) (URL: www.michigan.gov/hepatitisb).

⁶Family history of congenital or hereditary immunodeficiency in first-degree relatives (e.g., parents and siblings), unless the immune competence of the potential vaccine recipient has been substantiated clinically or verified by a laboratory, is a contraindication to receipt of MMR and varicella vaccines.

⁷Age indications and dose volume 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).

⁸MenACWY licensure ages: Menveo® (GSK) ages 2 months-55 years; Menactra® (Sanofi Pasteur) ages 9 months-55 years.