

Administering Vaccines: Dose, Route, Site, and Needle Size

Vaccine	Dose	Route
COVID-19 For product and dosage information for COVID-19 vaccine primary series and booster doses for both immunocompetent and immunocompromised adults, see CDC's "COVID-19 Vaccine Interim COVID-19 Immunization Schedule for Persons 6 Months of Age and Older." [*]		IM
Dengue (DENV4CYD)	0.5 mL	Subcut
Diphtheria, Tetanus, Pertussis (DTaP, DT, Tdap, Td)	0.5 mL	IM
<i>Haemophilus influenzae</i> type b (Hib)	0.5 mL	IM
Hepatitis A (HepA)	≤18 yrs: 0.5 mL ≥19 yrs: 1.0 mL	IM
Hepatitis B (HepB) People 11–15 yrs may be given Recombivax HB (Merck) 1.0 mL adult formulation on a 2-dose schedule.	Engerix-B; Recombivax HB ≤19 yrs: 0.5 mL ≥20 yrs: 1.0 mL Hepilisav-B ≥18 yrs: 0.5 mL PreHevbrio ≥18 yrs: 1.0 mL	IM
Human papillomavirus (HPV)	0.5 mL	IM
Influenza, live attenuated (LAIV4)	0.2 mL (0.1 mL in each nostril)	Intranasal spray
Influenza, inactivated (IIV4); 6 thru 35 mos • Egg-based IIV4: Afluria, Fluzone, Fluarix, FluLaval • Cell-culture based (ccIIV4): Flucelvax	Afluria: 0.25 mL Fluzone: 0.25 or 0.5 mL Fluarix, Flucelvax, FluLaval: 0.5 mL	IM
Influenza, inactivated (IIV4) and • Cell-culture based (ccIIV4), 3+ yrs; • Recombinant (RIV4, Flublok), 18+ yrs; • Adjuvanted (aIIV4, Fluad) 65+ yrs	0.5 mL	IM
Influenza, high-dose (IIV4-HD) 65+ yrs	0.7 mL	
Measles, Mumps, Rubella (MMR)	0.5 mL	IM or Subcut MMR II (Merck) Priorix (GSK)
Meningococcal serogroups A, C, W, Y (MenACWY)	0.5 mL	IM
Meningococcal serogroup B (MenB)	0.5 mL	IM
Mpox (Jynneos)	0.5 mL	Subcut [†]
Pneumococcal conjugate (PCV)	0.5 mL	IM
Pneumococcal polysaccharide (PPSV23)	0.5 mL	IM or Subcut
Polio, inactivated (IPV)	0.5 mL	IM or Subcut
Respiratory Syncytial Virus (RSV) vaccine	0.5 mL	IM
RSV preventive antibody (RSV-mAb)	0.5 mL, 1 mL, or 2 mL based on weight and/or age	IM
Rotavirus (RV)	Rotarix: 1.0 mL Rotateq: 2.0 mL	Oral
Varicella (VAR)	0.5 mL	IM or Subcut
Zoster (Zos)	Shingrix: 0.5 [‡] mL	IM
Combination Vaccines		
DTaP-HepB-IPV (Pediarix) DTaP-IPV/Hib (Pentacel) DTaP-IPV (Kinrix; Quadracel) DTaP-IPV-Hib-HepB (Vaxelis)	0.5 mL	IM
MMRV (ProQuad)	0.5 mL	IM or Subcut
HepA-HepB (Twinrix)	1.0 mL	IM

^{*} www.cdc.gov/vaccines/covid-19/downloads/COVID-19-immunization-schedule-ages-6months-older.pdf

[†] Administer mpox vaccine (Jynneos) 0.5 mL Subcut or, in adults, 0.1 mL intradermally. Subcut is the route indicated on the package insert. Intradermal administration to adults is permitted under FDA emergency use authorization (see www.fda.gov/media/160774/download).

[‡] The Shingrix (RZV) vial may contain more than 0.5 mL. Do not administer more than 0.5 mL.

Injection Site and Needle Size		
Subcutaneous (Subcut) injection Use a 23–25 gauge needle. Choose the injection site that is appropriate to the person's age and body mass.		
AGE	NEEDLE LENGTH	INJECTION SITE
Infants (1–12 mos)	5/8"	Fatty tissue over anterolateral thigh muscle
Children 12 mos or older, adolescents, and adults	3/4"	Fatty tissue over anterolateral thigh muscle or fatty tissue over triceps
Intramuscular (IM) injection Use a 22–25 gauge needle. Choose the injection site and needle length that is appropriate to the person's age and body mass.		
AGE	NEEDLE LENGTH	INJECTION SITE
Newborns (1st 28 days)	5/8"	Anterolateral thigh muscle
Infants (1–12 mos)	1"	Anterolateral thigh muscle
Toddlers (1–2 yrs)	1–1 1/4"	Anterolateral thigh muscle ³
	5/8"–1"	Deltoid muscle of arm
Children (3–10 yrs)	5/8"–1"	Deltoid muscle of arm ³
	1–1 1/4"	Anterolateral thigh muscle
Adolescents and teens (11–18 yrs)	5/8"–1"	Deltoid muscle of arm ³
	1–1 1/2"	Anterolateral thigh muscle
Biological sex and weight of patient 19 yrs or older		
Female or male <130 lbs	5/8"–1"	Deltoid muscle of arm
Female or male 130–152 lbs	1"	Deltoid muscle of arm
Female 153–200 lbs Male 153–260 lbs	1–1 1/2"	Deltoid muscle of arm
Female more than 200 lbs Male more than 260 lbs	1 1/2"	Deltoid muscle of arm
Female or male, any weight	1 ² –1 1/2"	Anterolateral thigh muscle

- 1 If skin is stretched tightly and subcutaneous tissues are not bunched.
- 2 Alternate needle lengths may be used if the skin is stretched tightly and subcutaneous tissues are not bunched, as follows: a) a 5/8" needle in toddlers, children, and patients weighing less than 130 lbs (less than 60 kg) for IM injection in the deltoid muscle only, or b) a 1" needle for administration in the thigh muscle for adults of any weight.
- 3 Preferred site

NOTE: Always refer to the package insert included with each biologic for complete vaccine administration information. CDC's Advisory Committee on Immunization Practices (ACIP) recommendations for the particular vaccine should be reviewed as well. Access the ACIP recommendations at www.immunize.org/acip.

Intramuscular (IM) injection

