

**OREGON HEALTH AUTHORITY
IMMUNIZATION PROGRAM
RECOMMENDED SITES FOR SIMULTANEOUS VACCINE ADMINISTRATION**

03-29-2016:

- Addition of travel vaccines to tables
- Update to TST administration

I. OREGON IMMUNIZATION MODEL STANDING ORDER:

Vaccinators should be familiar with the anatomy of the area into which they are injecting vaccine. An individual decision on needle size and site of injection must be made for each person on the basis of age, body mass, volume of vaccine dose and the injection technique of vaccine administrator.

Subcutaneous (SC) injections¹ for immunizations are usually administered with a 23–25 gauge, 5/8 inch needle at a 45 degree angle into the fatty tissue of the thigh of infants aged <12 months and in the upper-outer triceps area of persons aged ≥12 months. SC injections can be administered into the upper-outer triceps area of an infant, if necessary.

Intramuscular (IM) injections¹ for immunizations are administered with a 22–25 gauge, 5/8 to 1½ inch needle at a 90-degree angle into the vastus lateralis muscle of infants ≤36 months. IM injections for children and adults may be administered into the vastus lateralis or deltoid depending on the age and muscle mass of each vaccinee. The needle should be long enough to reach the muscle tissue below the dermis and subcutaneous tissue. See age and weight chart in section III B and C, page 6–7. The dorsal gluteal buttock site should never be used as a vaccination site for active immunization.

Intradermal injection¹ (e.g., IIV [Fluzone^{®2}]) is administered by inserting the needle perpendicular to skin, in the region of the deltoid. **Exception:** Tuberculin Skin Testing is given on the volar surface of the forearm at a 5°–15° angle. See section V. page 10. **Oral route¹ Infant** immunization is administered by slowly

squirting the liquid down one side of the inside of the cheek between cheek and gum toward the back of the infant’s mouth (e.g., Rotavirus [Rotarix^{®3} or Rotateq^{®4}]) **Adult** immunization is administered by capsule (e.g., Typhoid [Vivotif^{®5}]).

Intranasal route¹ immunization (e.g., LAIV [FluMist^{®6}]) is administered with the tip of the nasal sprayer inserted slightly into the naris. After half of the contents (0.1 ml) are sprayed into one nostril; then remove dose-divider clip and repeat procedure in the other nostril.

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This order expires July 31, 2017

II. RECOMMENDED SITES FOR SIMULTANEOUS VACCINE ADMINISTRATION¹

Vaccine	Dose	Route ^o
Diphtheria, Tetanus, Pertussis (DTaP, DT, Tdap, Td)	0.5mL	IM
<i>Haemophilus influenzae type b</i> (Hib)	0.5mL	IM
Hepatitis A (HepA)	≤18 yrs: 0.5mL	IM
	≥19 yrs: 1.0mL	IM
Hepatitis B (HepB)[*] Persons 11–15 years may be given Recombivax HB (Merck) 1.0mL adult formulation on a 2–dose schedule	≤19 yrs: 0.5mL	IM
	≥20 yrs: 1.0mL	
Human Papillomavirus (HPV)	0.5mL	IM
Influenza, live attenuated (LAIV)	0.2mL (0.1mL in each nostril)	Intranasal spray
Influenza, inactivated (IIV); recombinant (RIV), for ages 18 years and older	6–35 mos; 0.25mL	IM
	≥3 yrs: 0.5mL	
Influenza (IIV) Intradermal, for ages 18 through 64 years[§]	0.1mL	ID
Japanese Encephalitis, for 2 mos. and older	2 mos to <3 years; 0.25mL	IM
	≥3 years of age: 0.5mL	IM

II. RECOMMENDED SITES FOR SIMULTANEOUS VACCINE ADMINISTRATION¹

Cont.

Vaccine		Dose	Route
Measles, Mumps, Rubella (MMR and MMRV)		0.5mL	Subcut
Meningococcal conjugate (MCV4 [MenACWY])		0.5mL	IM
Meningococcal serogroup B (MenB)		0.5mL	IM
Meningococcal polysaccharide (MPSV)		0.5mL	Subcut
Pneumococcal conjugate (PCV)		0.5mL	IM
Pneumococcal polysaccharide (PPSV)		0.5mL	IM or Subcut
Polio, inactivated (IPV)		0.5mL	IM or Subcut
Rabies *		0.5mL	IM
Rotavirus	Rotarix [®]	1.0mL	Oral
	Rotateq [®]	2.0mL	
Typhoid	Vivotif [®] , ≥6 years of age	Capsules	Oral
	Typhim VI [®] , ≥2 years of age	0.5mL	IM
Varicella (Var)		0.5mL	Subcut
Yellow Fever		≥9 mos; 0.5mL	Subcut
Zoster (Zos)		0.65mL	Subcut

Combination Vaccines		
DTaP-HepB-IPV (Pediarix)	0.5mL	IM
DTaP-IPV/Hib (Pentacel)		
DTaP-IPV (Kinrix; Quadracel)		
Hib-MenCY (MenHibrix)		
MMRV (ProQuad)	≤12 yrs: 0.5mL	Subcut
HepA-HepB (Twinrix) [*]	≥18 yrs: 1.0mL	IM

* In general, the injection of vaccine should occur at a site that would allow for administration with little likelihood of local neural, vascular or other tissue injury. The buttock should **not** be used as a vaccination site for active immunization. Injection into the buttock of the **Hepatitis B** and **Rabies** vaccines are not valid and must be repeated. An individual decision must be made for each patient for IM administration based on the volume of the material to be administered and, the size of the muscle into which it is to be injected.⁷

◇ In patients with bleeding disorders, the risk of bleeding after an IM injection can be minimized by vaccine administration immediately after receipt of replacement factor, use of a 23 gauge (or smaller) needle, and immediate application of direct pressure to the immunization site for at least 2 minutes by the clock.⁸

§ Intradermal injection. Hand and Finger placement on microinjector are crucial. If the pressure on the plunger forces the dose into the subcutaneous tissue the dose is invalid and needs to be repeated.^{1, 2}

III. A. INJECTION SITE AND NEEDLE SIZE¹

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 months	5/8”	Fatty tissue over anterolateral thigh muscle
Children 12 mos or older, adolescents, and adults	5/8”	Fatty tissue over anterolateral thigh muscle or fatty tissue over triceps

III. B. INJECTION SITE AND NEEDLE SIZE¹ Cont.

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: Birth through 18 years	Needle Length	Injection Site
Newborns (1 st 28 days)	5/8”	Anterolateral thigh muscle
Infants (1–12 months)	1”	Anterolateral thigh muscle
Toddlers (1–2 years)	1–1¼” 5/8–1”	Anterolateral thigh muscle or Deltoid muscle of arm
Children and Teens (3–18 years)	5/8–1” 1–1¼”	Deltoid muscle of arm or Anterolateral thigh muscle

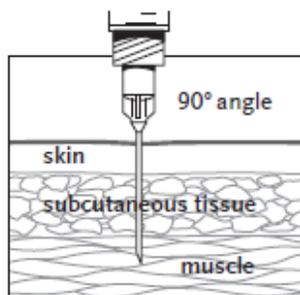
III. C. INJECTION SITE AND NEEDLE SIZE¹ Cont.

Age: Adults 19 years or older	Needle Length	Injection Site
Female or Male <130 lbs	$\frac{5}{8}$ –1”*	Deltoid muscle of arm
Female or Male 130–152 lbs	1”	
Female 153–200 lbs Male 130–260 lbs	1–1½”	
Female 200+ lbs Male 260+ lbs	1½”	

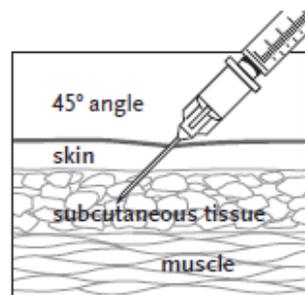
* A $\frac{5}{8}$ ” needle may be used for patients weighing less than 130 lbs (<60kg) for IM injection in the deltoid muscle **only** if the skin is stretched tight, the subcutaneous tissue is not bunched, and the injection is made at a 90-degree angle

IV. ADMINISTRATION TECHNIQUES FOR IM, SUBCUT, ID AND INTRANASAL

Intramuscular (IM) injection



Subcutaneous (Subcut) injection



Intradermal (ID) administration of Fluzone ID vaccine



Intranasal (NAS) administration of Flumist (LAIV) vaccine



Not for PPD/TST
Use Left Forearm for
PPD/TST⁹

Adapted from the Immunization Action Coalition, St. Paul, Minnesota.¹

Available at: <http://www.immunize.org/catg.d/p3085.pdf>

V. INTRADERMAL INJECTION FOR TUBERCULIN SKIN TEST (TST)^{*◇}

Age	Dose	Needle Gauge	Needle Length	Bevel Length	Site
All	0.1mL	27	½ inch	Short	Volar surface of the Left forearm (if available) ⁹ at least 2 inches from the elbow

* All vaccines, including MMR, can be given on the same day as a TST, but if MMR has been given and one or more days have elapsed, in most situations a wait of 4 weeks is recommended before giving a routine TST.⁸

◇ The PPD Mantoux screening test for TB should be given within 20 minutes of drawing it up. If more than 20 minutes have elapsed, discard the syringe in the appropriate container and draw up a new dose. More than a brief exposure to room temperature or light can make the skin test antigens less effective.⁹

VI. ADVERSE EVENTS REPORTING

Public providers are to complete the Vaccine Adverse Events Reporting System (VAERS) report online at <https://vaers.hhs.gov/esub/step1>. Save a copy of the report number for your records, and send copies of the report and VAERS ID number to the Oregon Immunization Program Vaccine Safety Coordinator via confidential email at ORVAERS.Reports@state.or.us or fax (971-673-0278). Private providers are to report events directly to VAERS and can read about options on how to do so at <http://vaers.hhs.gov/index>.

To request this material in an alternative format (e.g., Braille) or to clarify any part of the above order, contact the Oregon Health Authority Immunization Program at 971.673.0300 and 711 for TTY. For other questions, consult with the vaccine recipient's primary health care provider or a consulting physician.

Electronic copy of this standing order is available at:
<http://1.usa.gov/OregonStandingOrders>

REFERENCES

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