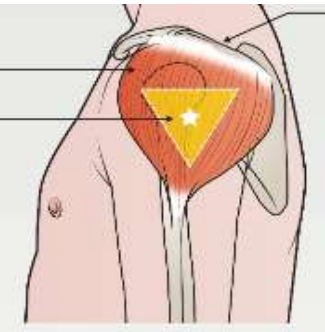
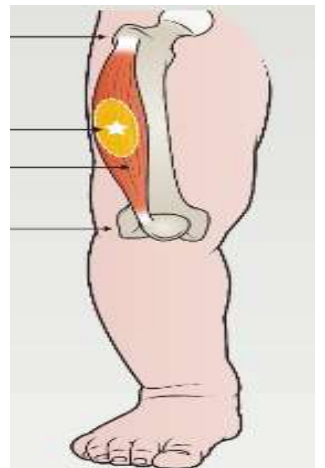

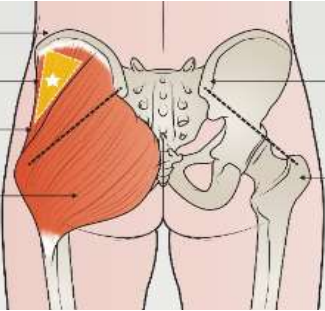


Children's Wisconsin Intramuscular (IM) Injection Guide

Needle Gauge	<ul style="list-style-type: none"> Use 22 - 25 gauge needle for all aqueous IM injections, including vaccines. Exception: For oily or viscous medication (such as Bicillin), use a 21 gauge needle. 						
	AGE	Neonates 0 – 28 days	Infants 28 days – <1 year	Toddlers 1 year – <3 years	School age 3 years – 10 years	Adolescents 11 – 18+ years	
Injection Site							
Deltoid 	Maximum fluid volume per muscle	Do not use this site for these age groups.		ONLY use deltoid in addition to VL for multiple vaccines.	1 mL per muscle	2 mL per muscle	
	Needle length			0.5 – 1 mL per muscle	5/8 inch	<60 kg (boys and girls): 5/8 inch >60 kg (boys and girls): 1 inch >90 kg (girls) and >118 kg (boys): 1½ inch	
Vastus Lateralis (VL) 	Maximum fluid volume per muscle			0.5 mL per muscle	1 mL per muscle	1.5 mL per muscle ¹	VL not recommended for this age group. ONLY use if deltoid and VG are unavailable.
	Needle length	5/8 – 1 inch	1 inch If injecting multiple vaccines, space injections at least 1 inch apart		<60 kg: 1 inch >60 kg: 1½ inch		

¹ For 1 to <3 years, do not administer more than three (3) vaccines (0.5 mL each), spaced 1 inch apart, per VL.

	AGE	0 – 28 days	28 days – <1 year	1 year – <3 years	3 years – 10 years	11 – 18+ years	
Ventrogluteal (VG) 	Maximum fluid volume per muscle	Do not use this site for these age groups.			1.5 mL per muscle	2 mL per muscle	3 mL per muscle
	Needle length				1 inch		1 – 1½ inch
Dorsogluteal (DG) 	DG should NOT be first option for injections due to risk of damaging sciatic nerve. Do NOT use in patients who are not yet walking. Reserve for highly viscous medications ONLY, not general vaccines. Only use if splitting injection and volume ≥ 1 mL per injection ²						
	Maximum fluid volume per muscle	Do not use this site for these age groups.				3 mL per muscle	4 mL per muscle
	Needle length					1 – 1½ inch	
General Injection Reminders	<ul style="list-style-type: none"> ○ Spread the skin tight to isolate the muscle to ensure proper delivery of medication/vaccine. <u>Do NOT bunch subcutaneous tissue.</u> ○ Insert needle at 90° angle to skin for all intramuscular injections. ○ Maximum volumes are approximate and depend on muscle development and size of the patient. ○ Watch for syncopal episodes or allergic reactions for a minimum of 15 minutes after administration. ○ Please refer to the following for additional information: <ul style="list-style-type: none"> ○ Urgent Care Learning Home <ul style="list-style-type: none"> ▪ <i>Total IM Injection Resource</i> ○ CMG Clinical Companions <ul style="list-style-type: none"> ▪ <i>Immunizations</i> ▪ <i>Intramuscular and Subcutaneous Injections</i> ▪ <i>Medication Administration</i> ○ Children’s Hospital and Health System Patient Care Policy and Procedure <ul style="list-style-type: none"> ▪ <i>Medication Management</i> ▪ <i>Vaccines</i> 						
² If the volume of a medication is too large for a single muscle at the preferred site, the medication can be split in two injections and given into each side of the body. The splitting of doses allows for less painful injections and appropriate absorption of the medication.							
Resources https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html https://www.cdc.gov/vaccines/pubs/pinkbook/vac-admin.html Hockenberry, M., Bryant, R., & Brown Hellsten, M. (2024). <i>Wong’s clinical manual of pediatric nursing</i> . 9 th ed. / St Louis, MO, Elsevier, Inc. https://www.immunize.org/wp-content/uploads/catg.d/p3085.pdf https://www.immunize.org/about/pub-archives/choosing-proper-needle-length-for-vaccination-of-children-and-adults-what-should-you-consider Ogston-Tuck, S. (2014). Intramuscular injection technique: an evidence-based approach. <i>Nursing Standard</i> , 29(4), 52-59.							