

Administration of Immune Globulin (Ig) by Intramuscular (IM) injection - Quick Reference Guide

I. Measles post-exposure MMR and intramuscular Ig (IMIg) recommendations:

<https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-12-measles-vaccine.html#table2>

Table 2. Summary of updated measles PEP recommendations for susceptible contacts

Populations	Time since exposure to measles *	
	≤ 72 hours	73 hours - six days
Susceptible infants 0 to 6 months old ⁸	IMIg (0.5mL/kg) ²	
Susceptible immunocompetent infants 6 to 12 months old	MMR vaccine ¹	IMIg (0.5mL/kg) ^{2 7 8}
Susceptible immunocompetent individuals 12 months and older	MMR vaccine series ^{3 7}	
Susceptible pregnant individuals ⁴	IVIg (400mg/kg) or IMIg (0.5mL/kg), limited protection if 30kg or more ⁵	
Immunocompromised individuals 6 months and older	IVIg (400mg/kg) or IMIg (0.5mL/kg), limited protection if 30kg or more ^{5 6}	
Individuals with confirmed measles immunity	N/A	

- 1 Two additional doses of MMR vaccine provided after 12 months of age are required for long-term protection.
- 2 If injection volume is a major concern, IVIg can be provided at a dose of 400mg/kg.
- 3 Susceptible immunocompetent individuals 12 months of age and older are not a priority to receive Ig following measles exposure due to low risk of disease complications and the practical challenges of administration contact management.
- 4 Provide MMR vaccine series postpartum for future protection.
- 5 For individuals 30kg or more, IMIg will not provide complete protection but may prevent some symptoms.
- 6 In HIV-infected individuals, measles antibody titer is known to decline more rapidly over time as compared to those who are not HIV-infected. A dose of Ig should be considered in HIV-infected individuals with severe immunosuppression after a known exposure to confirmed measles, even with documented previous MMR immunization. Regardless of vaccination status pre-transplant, Ig should be considered for hematopoietic stem cell transplantation (HSCT) recipients, unless vaccinated post-HSCT and known to have an adequate measles antibody titre.
- 7 MMR vaccine will not provide PEP protection after 72 hours of exposure, however, starting and completing a two dose series should not be delayed to provide long term protection.
- 8 Two doses of measles-containing vaccine are still required after the first birthday for long-term protection.

* Ig should only be provided within 6 days of measles exposure; unless it is contraindicated, individuals who receive Ig should receive measles-containing vaccine after a specified interval, once the measles antibodies administered passively have degraded. For more information, refer to [Blood Products, Human Immunoglobulin and Timing of Immunization](#) in Part 1.

- II.** Order Ig (GamaSTAN® S/D) via PHIMS (2 ml vial- 1/box) - place as an **URGENT** order or CD Coordinator to assist with a telephone order to the Vaccine Warehouse
- Under ‘Required delivery’ add **URGENT** and under ‘Requested Delivery/Pick up date’, enter date required.
 - Under the ‘Ship-to-instructions’, can add specific info eg. “Please deliver by 4pm today”
 - Call the Provincial Vaccine Warehouse at 204-948-1333 with PHIMs requisition number to confirm order is received and provide name of MOH for release of Ig.
 - For afterhours the contact number for the vaccine warehouse is 204-805-4096. After hours MOH consult is 204-788-8666.

III. Vaccine administration- *Know your 7 “rights” Refer to [Vaccine Administration Practices](#) (CPG)

IV. Administration of Ig

- Review GamaSTAN® S/D Product Monograph – posted on Insite under Measles Resources https://pdf.hres.ca/dpd_pm/00043801.PDF
- **Maximum dosage is 15 ml for all persons**
- Refer to Table below re: Ig administration (BC Immunization Manual)
- Provide Ig Information sheet to client – posted on Insite under Measles Resources [Immune Globulin Information Sheet for Prevention of Measles](#)

Immune Globulin Preparations (HBIG, Ig, TIg, VarIg, RabIg)

Client Age	Needle Length	Size (Gauge)	Site	Route	Maximum Volume Per Site
Infants under 12 months	7/8" - 1"	25	Ventrogluteal ^{A, B}	IM	1 mL
			Vastus lateralis	IM	1 mL
Children 12 months to 4 years (inclusive)	1"	22-25	Ventrogluteal ^{B, C}	IM	1 mL
			Vastus lateralis	IM	2 mL
			Deltoid	IM	1 mL
Children 5 years to 18 years	1" – 1½"	20-25	Ventrogluteal ^{B, C}	IM	3 mL
	1"	22-25	Deltoid ^D	IM	1 mL
	1" – 1½"	20-25	Vastus lateralis	IM	3 mL
	1" – 1½"	20-25	Dorsogluteal ^E	IM	3 mL
Adults 19 years and older	1" – 1½"	20-22	Ventrogluteal ^{B, C}	IM	4 mL
		20-22	Deltoid ^D	IM	2 mL
		20-22	Vastus lateralis	IM	5 mL
		20-22	Dorsogluteal ^E	IM	5 mL

^A The ventrogluteal site can be used in children 7 months of age and older.

^B The ventrogluteal muscle is the preferred site for administration of all immune globulin preparations to children and adults.

^C Alternate sites for the administration of immune globulin preparations are the deltoid and vastus lateralis; in exceptional circumstances, the dorsogluteal site may be used.

^D The deltoid is not to be used for the administration of RabIg. Its use should be reserved for the administration of rabies vaccine.

^E Use of the dorsogluteal site is only recommended when the ventrogluteal and vastus lateralis sites have had maximum volumes of an immune globulin preparation injected and an additional volume still needs to be administered. This is due to the possibility of sciatic nerve injuries when the injection is done in the dorsogluteal site.

V. IM Injections -Reference: BC Immunization Manual

Ventrogluteal Site <https://canvax.ca/intramuscular-injection-ventrogluteal-site>

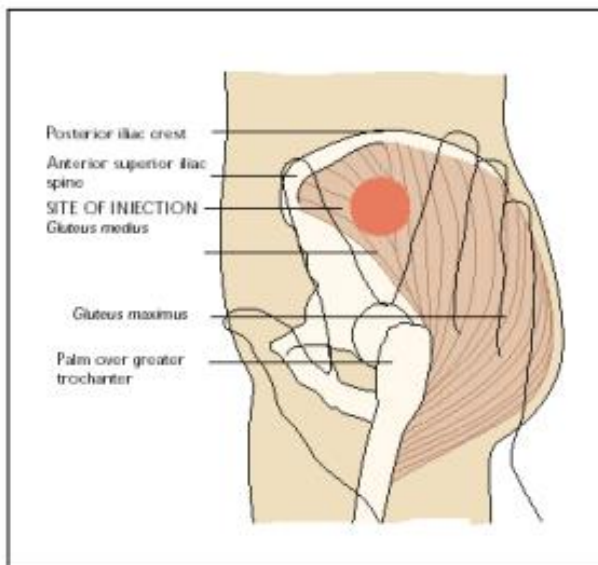
The ventrogluteal site is the preferred site for the IM injection of large volumes of immune globulin preparations

This site can be used in those 7 months of age and older.

This muscle is accessible in the supine, prone, and side lying position.

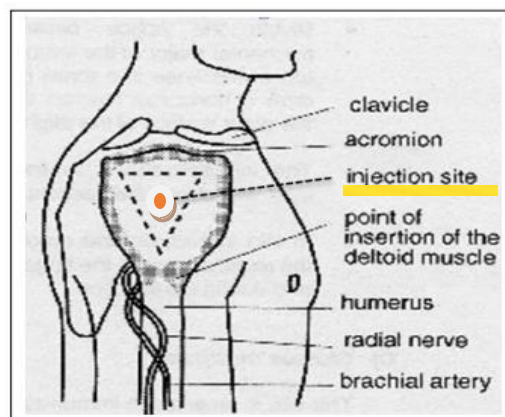
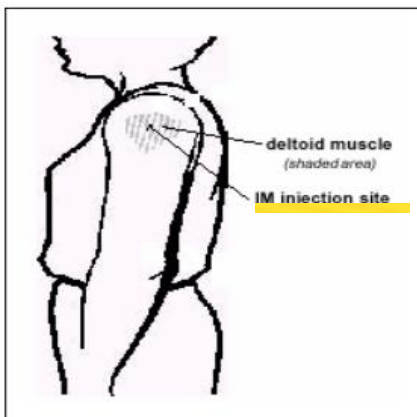
The right hand is used for locating the site on the left hip; the left hand is used for locating the site on the right hip.

Place heel of the hand over the greater trochanter of the client's hip with wrist almost perpendicular to the femur. Point the thumb toward the client's groin and the fingers toward the client's head. Point index finger to the anterior superior iliac spine, and extend the middle finger back along the iliac crest toward the buttock. The index finger, the middle finger, and the iliac crest form a V-shaped triangle. The injection site is the center of the triangle.

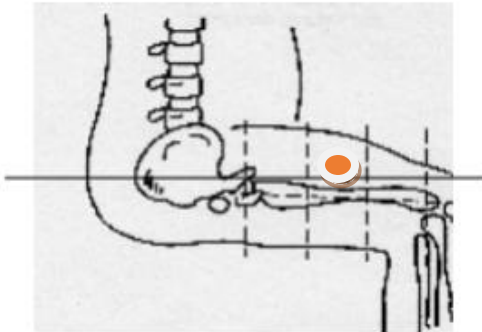


Deltoid Site <https://www.canvax.ca/intramuscular-and-subcutaneous-injections-guide-pharmacists>

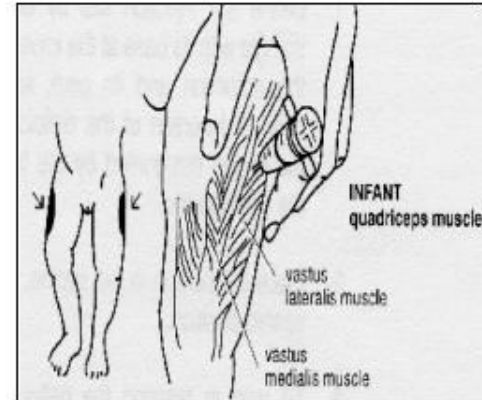
The target zone for injection is 4 cm below the acromion for adults. In children 3-18 years of age, injections should be given 3-5 cm below the acromion (29).



Vastus Lateralis (Anterolateral Thigh) Site [Intramuscular Injection: Vastus Lateralis Site | CANVax](#)



- Define the site by dividing the space between the trochanter major of the femur and the top of the knee into three parts; draw a horizontal median line along the outer surface of the thigh.
- The injection site is in the middle third, just above the horizontal line.



Dorsogluteal Site [Intramuscular Injection: Dorsogluteal Site | CANVax](#)

The dorsogluteal site is only to be used for the IM injection of large volumes of immune globulin preparations when the ventrogluteal and vastus lateralis sites have had maximum volumes of an immune globulin preparation injected and an additional volume still needs to be administered. This is due to the possibility of sciatic nerve injuries when the injection is done in the dorsogluteal site.

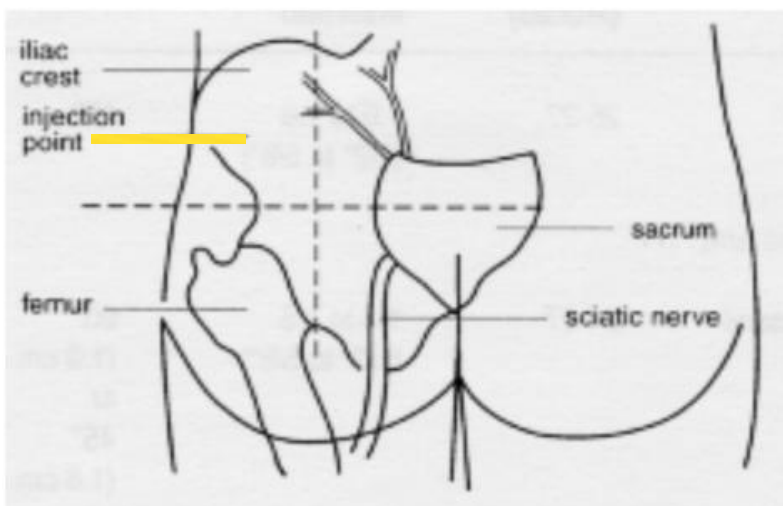
This site should only be used in individuals over 5 years of age.

Place client in a prone, side lying, or standing position.

Encourage a posture that will provide muscular relaxation and reduce discomfort (i.e., turning toes inward when prone, flexing the upper leg at hip and knee when lying on the side, flexing knees and leaning upper body against a support when standing).

Define the site by dividing the buttock into 4 quadrants. The injection site is the centre of the upper outer quadrant.

Direct the needle anteriorly (i.e., if the client is lying prone, direct the needle perpendicular to the table's surface, not perpendicular to the skin plane).



VI. Document immunization provided in PHIMS.

Charting multiple sites ([Provider-Recorded-QRC \(phimsmb.ca\)](https://phimsmb.ca))

- When recording an immunization that was administered in multiple sites (i.e. Ig preparation), enter the immunization as one immunization and type in the total dose/volume in “dosage” (to assure proper auto decrement of stock), select the site as “Other” and in the comments section, record the sites that were used and the specific dosage or volume administered at each site.