

Vaccine preparation and administration technique for intramuscular injections

Due to recent incidents in the field, drug administration-certified registrants are reminded to review proper injection techniques for influenza vaccines administered via the intramuscular (IM) route in order to ensure patient safety and avoid injury and harm. BCCDC Immunization Manual [Appendix 2 – Administration of Biological Products](#) provides detail guidance on proper product preparation and administration of vaccine.

Here are some important reminders for IM injection route for the influenza vaccine:

Procedure	Important Points
Use correct length and gauge of needle.	<ul style="list-style-type: none"> For children, a 5/8" needle is adequate for the deltoid muscle and only if the skin is stretched flat between thumb and forefinger and the needle inserted at a 90° angle to the skin. For adolescents and adults, a 1"-1½" needle is usually used. Use a 22 to 25 gauge needle depending on the viscosity of the biological product. See section 14.1.1. <i>Recommended Needle Sizes, Sites and Maximum Volumes for Intramuscular Injection</i> in Appendix 2 – Administration of Biological Products.
Clean the site with a cotton pad/swab/ball moistened with 70% isopropyl alcohol.	<ul style="list-style-type: none"> Allow skin to air dry to avoid a burning sensation on insertion of the needle.
If client's muscle mass is small, grasp body of muscle between thumb and fingers before and during the injection.	<ul style="list-style-type: none"> Ensure that the biological product reaches the muscle mass.
Insert needle quickly at a 90° angle into muscle and inject biological product.	<ul style="list-style-type: none"> See BCPhA Landmarking Reminder for Deltoid IM Injections on frequent reported causes of injection injury and avoidance techniques.
Do not aspirate.	<ul style="list-style-type: none"> Aspiration is not recommended as there are no data to document its necessity prior to IM injection of biological products. There are no large blood vessels at the recommended immunization sites. Aspiration may increase the time it takes to immunize and is more painful for the client.
Remove the needle in one swift motion, immediately applying pressure to the injection site with a dry cotton pad/swab/ball.	<ul style="list-style-type: none"> Minimizes discomfort during needle withdrawal. Alcohol on a cotton pad/swab/ball can irritate nonintact skin
Continue to apply pressure for 30 seconds.	<ul style="list-style-type: none"> Minimizes bruising.
Do not massage injection site.	<ul style="list-style-type: none"> Massage can damage underlying tissue.

Adapted from Appendix 2- Administration of Biological Products: Table 14.1 Intramuscular (IM) Injection Route

When drawing up vaccine from multi-dose vials, ensure the date (day/month/year) is recorded on the label of the vial. Partial doses from separate vials should not be combined to obtain a full dose. Immediately return multi-dose vials to the refrigerator. It is not necessary to change needles between drawing up the vaccine into the syringe and immunizing the client. Change the needle only if it is damaged or becomes contaminated. For detailed technique on drawing up vaccine from multi-dose vials, and using syringes pre-filled by the manufacturer, see [Appendix 2 – Administration of Biological Products](#).

Reference: [BCCDC Immunization Manual, Appendix 2 – Administration of Biological Products](#)

Resources:

- For influenza vaccine product dosages and schedule, see [Part 4 – Biological Products](#).
- [Immunizing Children – Suggested Best Practice Tips for BC Community Pharmacists](#)
- BCCDC [Immunization Clinical Resources](#)