

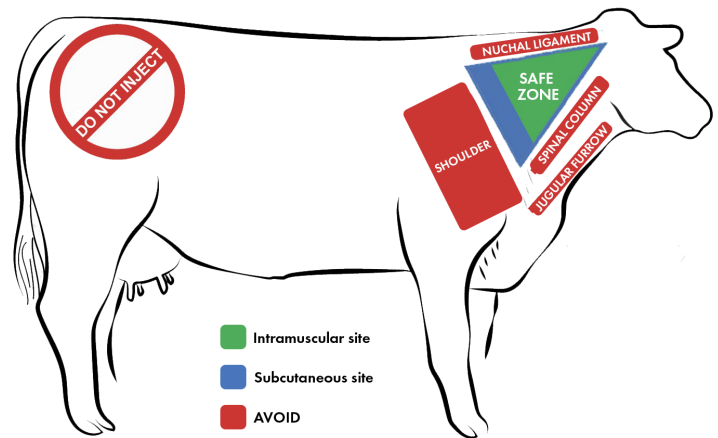
Injection Techniques

Best Practices for Beef Cattle

RESTRAINT

- ✓ Ensure all animals being treated are safely **restrained in a chute** that allows the processor easy access to the neck and prevents unnecessary movement in the animal being treated.

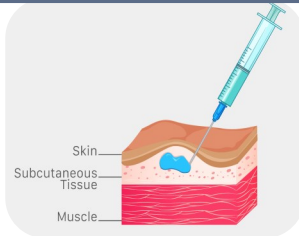
Cattle that are not properly restrained are at a higher risk for tissue trauma, needle breaks, improper injection technique and incorrect location.



ROUTES OF ADMINISTRATION (ROA)

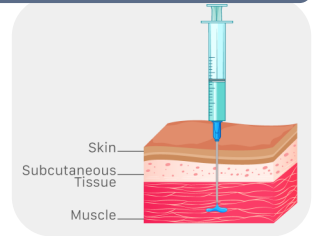
SUBCUTANEOUS (SUB Q)

Subcutaneous injections are placed **just under the skin** in the safe zone. The needle should be inserted at a 45-degree angle to the animal. Subcutaneous injections are generally less irritating and the preferred ROA, however, always follow label directions.



INTRAMUSCULAR (IM)

All intramuscular injections should be given in the neck muscle in the **safe injection zone**. The needle should enter at 90 degrees, or perpendicular to the animal, into the muscle tissue. Always follow label direction for ROA.



NEEDLE SIZE

- ✓ Choose an appropriate needle size to ensure the product can be delivered with minimal tissue disruption. Choose the **smallest gauge needle** that can still effectively deliver the **medication**.

Class of Cattle	Route of Injection	Gauge	Needle Length
Calves < 500 lbs	Intramuscular	20-18	1 inch
	Subcutaneous	20-18	1/2 - 5/8 inch
Cattle >500 lbs	Intramuscular	18-16	1 - 1.5 inch
	Subcutaneous	18-16	1/2 - 3/4 inch

VOLUME

- ✓ Recommended maximum volume per injection site is **10 ml (cc) per site**. Increasing volume of medication injected into one location impedes the ability to absorb and excrete medication.

HYGIENE

- ✓ Keep equipment clean and in good working order to prevent tissue trauma and abscesses. Use **quality disposable needles**, and change every 10-15 injections, when using a multidose vial or when needles are burred, bent or dull.
- ✓ Inject through **clean hide**, being careful not to introduce bacteria and debris into the tissue.

RECORD-KEEPING

Keep these records every time you inject an animal:

- What was treated?
- Reason for treatment?
- What drug and dose?
- What route?
- Withdrawal time?



Scan for a short how-to video available at BeefResearch.ca/injection-techniques.