

Intramuscular (IM) Injection (Cattle)



Disclaimer

A series of booklets has been developed by the Clinical Skills Lab team (staff, recent graduates and students) from the School of Veterinary Sciences, University of Bristol, UK. Please note:

- Each booklet illustrates one way to perform a skill and it is acknowledged that there are often other approaches. Before using the booklets students should check with their university or college whether the approach illustrated is acceptable in their context or whether an alternative method should be used.
- The booklets are made available in good faith and may be subject to changes.
- In using these booklets you must adopt safe working procedures and take your own risk assessments, checked by your university, college etc. The University of Bristol will not be liable for any loss or damage resulting from failure to adhere to such practices.

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Year Group: BVSc3 +



Equipment for this station:

- IM injection model
- There are 3 different models which are colour coded:
 - Red (for thick oily liquid)
 - Green (for liquid with suspension)
 - Orange (for watery liquid)
- Fluid for injection - colour-coded for each model (red, green, orange/yellow)
- Syringe
- 1.5 inch 18G needles
- Disposable gloves

Considerations for this station:

- Needles are sharp and can cause injury
- Please refer to the instruction booklet 'CSL_U02 Safe Use of Needles' for instructions on how to use, dispose of or re-cap needles (e.g. if reusing needles with the model)
- For more information please refer to 'General Risk Assessment Form: Needles CSL_R03' (in the CSL)
- Please reuse syringes
- Dispose of used or blunt needles in a sharps bin
- Use the correct fluid for the correct model – i.e. red fluid for the red model, etc.
- Gloves are often worn when injecting cattle i) for cleanliness and ii) for your protection from certain types of drug

Anyone working in the Clinical Skills Lab must read the 'CSL_I01 Induction' and agree to abide by the 'CSL_I00 House Rules' & 'CSL_I02 Lab Area Rules'

Please inform a member of staff if equipment is damaged or about to run out.



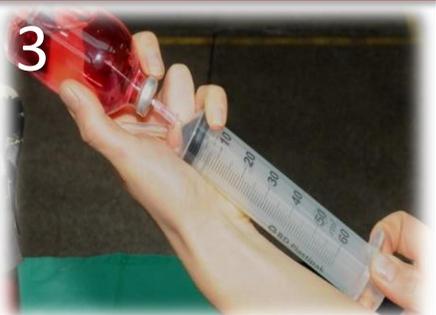
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1
The injectable fluid and models are colour coded. Select the correct colour fluid for the model e.g. red with red (as in the photo above). The different colour liquids have different viscosities; try the task on each of the three models.



2
Put together a syringe and a 1.5 inch 18G (gauge) needle. Make sure the syringe plunger is pushed to 0ml. Hold the syringe and needle in your dominant hand and the injection bottle in your non-dominant hand.



3
Insert the needle through the rubber stopper. Use your non-dominant hand to hold the bottle and support the syringe and your dominant hand to draw back the plunger. Please draw up **10ml ONLY** for use with the model (to prevent the stock of injection bottles running out too quickly).



4
If there are air bubbles in the syringe, tap/flick the barrel of the syringe to move the air to the top and then inject the air back into the bottle.



5
Remove the needle from the syringe.



6
Make a fist, grasping the needle between your thumb and index finger. With the bottom of your fist 'thump' down onto the area of muscle where the injection will be made.



Clinical Skills: IM Injection (Cattle)



7
Repeat the 'thumping' action 2 or 3 times while still grasping the needle between your thumb and finger.



8
On the last 'thump' rotate your hand so that the needle is punched through the skin and into the muscle. The needle should be fully inserted at a 90° angle to the skin surface and in a single action i.e. in one go.



9
Only the hub of the needle should be visible.



10
Hold the hub of the needle with the thumb and index finger of your non-dominant hand to stabilise the needle.



11
Attach the syringe to the needle.

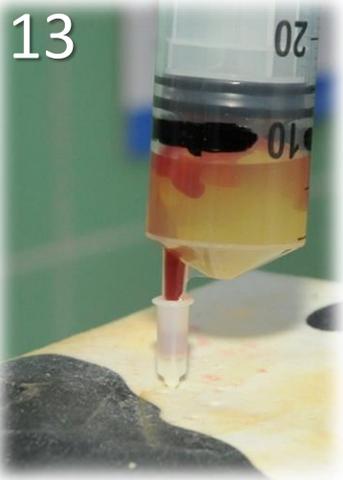


12
Draw back to ensure that the needle has not inadvertently been placed intravenously rather than intramuscularly.



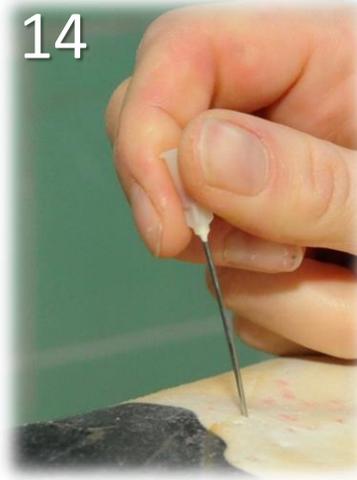
Clinical Skills: IM Injection (Cattle)

13



If blood is drawn back into the syringe then reposition and check again.

14



N.B. The orange model has an area with a 'pocket' of 'blood'. If blood is drawn back on this model, remove the needle and detach the syringe.

15



Replace the needle in a different area and reattach the syringe. Draw back again. When satisfied that the needle is placed correctly continue and perform the injection.

16



Continue to stabilise the needle hub at the point where the syringe joins the needle. This helps prevent the liquid 'exploding' out between the syringe and needle as the drug is injected. Inject by depressing the plunger using the base of your thumb or palm of your hand (e.g. for viscous liquids).

17



Remove the syringe and needle.

18



Rub the area that has been injected with your hand to help disperse the liquid and prevent any oozing from the hole made in the cow's skin.



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Resetting the station: IM Injection (Cattle)

1. To recap the needle use the one handed needle capping technique and refer to the booklet:
- 'CSL_U02 Safe use of Needles'
and then remove from the syringe.
2. Replace the needle, syringe and bottle into the appropriate tray.
3. If the bottle is empty and needs refilling, please report to the lab supervisor or write it on the white board.

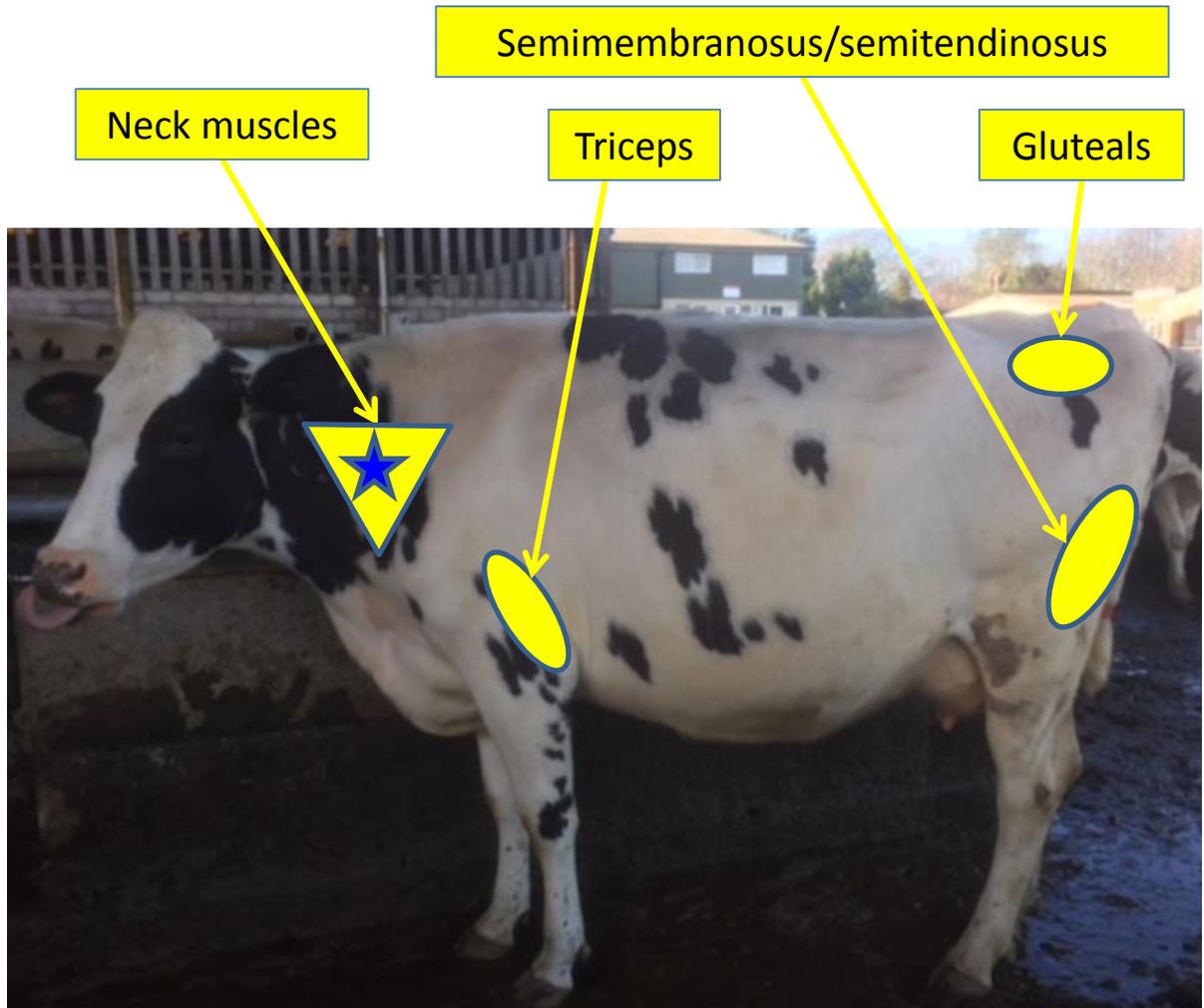
Station ready for the next person:



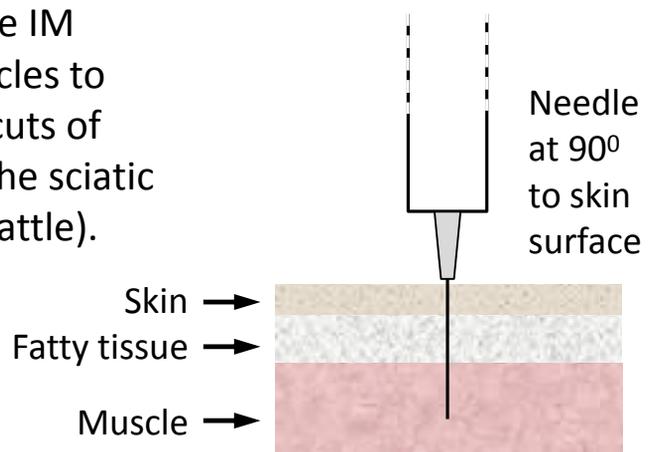
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IM injection sites (cattle)

Arrows point to approximate locations of the injection sites



★ NB: For all cattle, and especially beef cattle, the preferred site to give IM injections is into the neck muscles to avoid damage to higher price cuts of meat or the risk of damaging the sciatic nerve (particularly in thinner cattle).



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I wish I'd known: IM Injection (cattle)

- Make sure you keep your car topped up with a variety of different size needles and syringes. Adopt a system that makes equipment easy to find and check e.g. for stock control.
- Keep a sharps bin in your car for safe disposal of needles, etc.
- Think about where you are standing when placing an IM injection into the hind quarters in cattle to avoid the risk of being kicked e.g. inject into the opposite side to which you are standing (if feasible).
- When ready to inject, ensure the syringe is fully pushed into the needle hub to stop the syringe and injection liquid 'exploding' off the hub as you inject.