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## **INJECTION INSTRUCTIONS**

### **1. HANDLING THE SYRINGE AND NEEDLE**

Twist the needle onto the tip of the syringe. To remove the needle jacket, pull it straight off; don't twist off. Avoid touching or contaminating the needle at all times.

### **2. FILLING THE SYRINGE**

(Note: If using penicillin, make sure to shake bottle very well.). Inject the same volume of air into the bottle as the volume of medication needed. For example, to withdraw 20 mL (1 mL = 1 cc) of medication, inject 20 mL of air by pulling back the plunger to the 20 mL mark and injecting the air into the bottle. Then aspirate the desired volume without removing the needle from the bottle.

### **3. INTRAMUSCULAR INJECTIONS**

It is important to properly restrain the horse while injecting. One person should be holding the head of the horse while a second person gives the injection, with both people standing on the same side of the horse. Locate the desired site for the injection. Remove the needle jacket and detach the needle from the syringe by twisting it off, touching only the hub of the needle (the end that attaches to the syringe). Insert the needle straight into the horse, not at an angle. Attach the syringe by twisting it into the needle hub. Before injecting the medication into the horse, pull back on the syringe plunger to test for blood. If blood comes back into the hub or syringe, the needle is in a blood vessel, and the needle must be withdrawn and reinserted into a different location. You may use the same needle. If no blood is visualized, then inject one-half of the medication (for doses of 20 mL or more) in one location, and using the same needle, inject the other half in another location. Try to inject less than 15 mL in one location.

**Rotate areas and check for any lumps.** If lumps appear, avoid injections in these sites and apply hot compresses once or twice daily until they disappear. Contact the office if there are any questions or problems.

## **INJECTION SITES**

- 1. NECK:** Inject in the triangular area below the crest, in front of the shoulder and above the vertebrae of the neck.
- 2. THIGH:** Twitch the horse if necessary. Stand close to a hind leg and to the side, not behind the horse in order to avoid serious injury from a kick. Insert the needle into the back of the thigh muscle of the leg that is opposite the one you are standing near.
- 3. UPPER RUMP/CROUP:** Stand close to the horse and to the side, not behind the horse in order to avoid serious injury from a kick. Insert the needle into the upper rump muscle area shown in the diagram on the same side of the horse you are standing.

**PLEASE NOTE:** With procaine penicillin G administration, procaine reactions may occur if the drug enters the blood stream. The signs of a reaction will usually occur within one minute of injection and may include trembling, excitability, and staggering. Because of this possibility, it is recommended that you give the injections to the horse in a stall and leave the stall afterward in order to avoid personal injury. If a reaction does occur, leave the horse alone, turn out the lights, and call a veterinarian.

It is important to know that there is a difference between a procaine reaction and a penicillin allergy. Procaine reactions are fairly common but rarely fatal. Penicillin reactions are far rarer and may vary from minor skin reactions to fatal anaphylaxis.