

## How To Give IM Injections

### Why Do This?

There are many medications that can be injected into the muscle in horses. Injections have the advantage of more reliable dosing and absorption than with oral medications, without the increased risk and challenge of the intravenous approach.

Drugs most commonly given IM include:

- Anti-inflammatories
- Tranquillizers
- Antibiotics
- Vitamins
- Arthritis treatments, such as Adequan

There are many drugs that are not suitable for IM use due to extensive tissue irritation, so only give an injection under direction of a veterinarian. Be sure to follow storage instructions and thoroughly shake up suspensions that can settle out.

### Materials

You will need the following items:

- Drugs
- Appropriate size of syringe and needle. A 20 gauge 1.5 inch needle is standard for thinner drugs, an 18 gauge needle is needed for thicker drugs such as penicillin. If in doubt, choose the bigger needle
- Helper to restrain horse

### How To

Attach the needle to the syringe and withdraw the proper amount of drug. You may need to inject an equal volume of air to relieve the vacuum formed in glass bottles with thicker drugs.

There are several areas that can be used on a horse. The most common include the triangle of the neck just in front of the shoulder blade (Figure 1), the gluteals (rump; Figure 2), semitendinosus (hamstrings; Figure 3), pectorals (chest; Figure 4), and triceps muscle. You may see some edema between the front legs if the pectorals are used. Beginners should start with the neck, but move around to various sites if a series of injections are required.



Figure 1



Figure 2

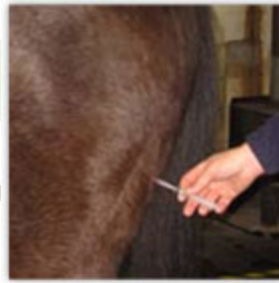


Figure 3



Figure 4

Make sure the area is fairly clean, and optionally you can swab with alcohol. The handler should stand on the same side as the person injecting.



Figure 5

Detach the needle from the syringe and grip the hub in your thumb and first two fingers

On the neck, firmly pinch a skin fold (Figure 5), and with the needle perpendicular to the skin, push it in straight to the hub. Practice on an orange first if you need to, it is more comfortable to the horse if you are quick and decisive when inserting the needle.

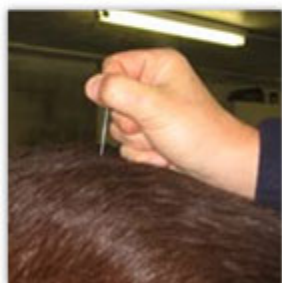


Figure 6

On thick-skinned areas such as the rump, bump the area a few times with your fist, then "punch" the needle through to the hub (Figure 6). Attempting to insert the needle slowly usually results in a bent needle and an angry horse. If injecting the hamstrings, stand by the hip and reach across to inject the opposite side, as most horses will kick out on the needle side. Continue with the regular injection technique.

Attach the syringe and withdraw the plunger slightly. If any red appears in the tip, pull the needle out and reinsert it a few centimeters away. This is very important with penicillin, as horses can have a violent reaction if it gets into a vessel. Most other drugs

will not cause a problem if a few drops get into a small vessel, but you may get a lump at the injection site.

If all clear, inject the drug at a rate of about 5mls(cc) per second. A maximum of 15 mls should be used per site. If giving a larger shot, give 15 mls, pull the needle out until you are almost out of the skin, push it back in at a much different angle, check for blood, then complete the injection. This distributes the injection to multiple sites but your horse only gets one poke.

When finished, pull out the needle and give the area a brisk hand rubbing. Don't worry if drops of blood appear at the site.

Horses undergoing multiple injections can get quite muscle sore. Hot compresses over the injection site can alleviate some discomfort, and talk to your vet about anti-inflammatories if they are very uncomfortable and reluctant to eat due to neck pain.

Call the vet right away if you detect a crunchy "rice crispies" sensation at a previous injection site. This may indicate the onset of a rare condition involving dormant bacterial spores in the muscle that reactivate and cause a type of gas gangrene.

The vast majority of "penicillin reactions" are actually caused by procaine, a carrying and anesthetic agent for the antibiotic. Typically, the horse starts snorting, vocalizing, and running about as if blind. Procaine in a blood vessel causes a severe panic response. Get out of the stall and close the door, and the episode will resolve in 5-10 minutes. It is not an allergic reaction. True anaphylaxis from penicillin is fortunately VERY rare, and generally fatal. Be sure to report the incident to the vet, and do not give any more injections.