

# No Restraint Injections for Camelids - YES you Can!

When you put something sharp into a llama or an alpaca... it is a no-brainer: he is going to want to move. That is simply a Law of Camelidynamics! If you think that the animal must be still in order to receive an injection, then you have no choice; you must restrain him. The problem is when you restrain frightened animals they fight and you often get more movement - not less! Fighting gets everybody all worked up before you even get started! Imagine how you would feel if you were physically restrained to get a shot. I know that I absolutely couldn't stand it. With most medical procedures the animal never has a chance to actually experience the procedure and react to it, because the restraint is always applied FIRST before the procedure is even attempted. The wilder and more difficult your camelid is in the chute the more likely he or she will be better without it!

Given a camelid's long neck it is very difficult to eliminate bodily movement by tying the head-even when the animal is inside a chute. No matter how you truss the llama or alpaca when giving an injection, you must be prepared to move with the animal, or he is going to move away from and off the needle. Since you have to learn to move with the animal anyway, simply contain the camelid instead of restraining him and let him move.

My no-restraint method offers many advantages:

- There is less movement.
- Any movement is less violent, less erratic and can be predictable.
- The camelid stays calm.
- The muscles are not tight.
- There is less likelihood of abscess.
- It is faster and easier.
- You can work alone which saves time and labor and also helps the animal feel more safe.

## Get Organized

It is important to be organized when you are doing herd health. Being organized makes you feel competent and it also makes you appear competent to the beings that are on the other end of the needle. You will be able to work more quickly when you are organized. That is important for you and doubly important to the critters waiting their turn. Imagine going to get your flu shot. The nurse tells you to sit, but you have to wait for fifteen minutes, and then he can't find the needle. Finally, after fumbling around for a few minutes, the nurse asks, "Weren't you just in here a minute ago? Didn't I just give you a shot?" How would that make you feel about the nurse's competence?

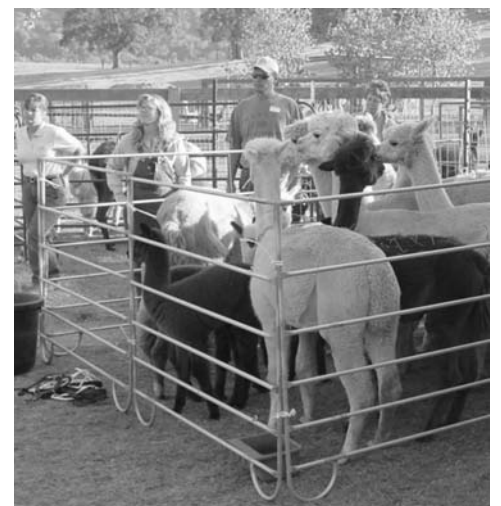
Even if you have a chute, the

easiest way to give injections is in a catch pen. If you are doing herd health put as many animals as will comfortably fit inside the catch pen. The camelids should be on the crowded side (8-10 alpacas in a 10 x 10 pen or 5-6 llamas are not too many). They won't be in there for long. If you have a small number of animals - only two or three - make your pen smaller with bales of hay or use a mini-catch pen.

I like to crowd camelids when giving shots for two reasons:

1) They slow each other down, making it easier to give the injection as the animal moves and

(2 a llama or alpaca feels safer in a group and tends to stay more calm. Hang a bag of hay inside, or, if you are so inclined, hang a bag of hay in each corner of the pen. More animals = more hay bags.



Notice in this photo that the animals are all heading in the same predictable direction. Reaching across the animal to give the injection on the side away from the handler makes it much easier to control the direction.

## Tools

Before your animals are in the pen, draw up all of your injections. Put your syringes and record keeping clipboard in a place where you can reach them whilst standing inside the pen. A small table just outside the pen is perfect.

Use short needles. Many vets use a 1 1/2 inch needle, I think because they are versatile. If you need the extra length, you have it. If you don't need it you, don't put the needle in so far. That's easy if you have given thousands of shots but a bit daunting if you are a rookie. Using long needles causes newbies to put the needle in tentatively, which usually means slowly. Yikes! It is pretty easy to find 3/4" or 1" needles, and they're definitely MUCH EASIER to use!

My preference is to use an 18 gauge needle for every thing. You almost have to use an 18 gauge needle to inject viscous medicines anyway, so I just buy those and use them for everything. I can hear you "tsk tsking" me as I write this. Let me explain. A larger bore needle allows you to inject whatever it is more quickly without the fire hose effect. Injecting a thinner medicine through a 20 gauge needle quickly means that the medicine is coming out in a tiny stream, but very fast like a fire hose. I think that a larger bore needle is actually more comfortable in the grand scheme of things. I don't think the animal is aware of the difference between an 18 gauge needle going through the skin and a 20 gauge needle going through the skin. It is more a matter of our perception than theirs. I think the animals are much more concerned

with our proximity than with the actual needle. If I can get injections done without restraint and more quickly with an 18 gauge needle, I am going to choose that strategy.

Wear an apron with a pocket for your syringe(s). A carpenter's apron is perfect. Always keep the cap over the needle until it is time to use it.

## Strategies

Keep all the animals in the pen even after you have given them the injection, unless you have a rabble-rouser. Give troublemakers their injections first and shoo them out.

Write down the name/number of the animal and what you gave immediately after you give the injection. It also is a good idea to write a brief comment about how the animal behaved. In this way you can track your progress and the animal's progress.

If you are giving multiple injections to the same animal, I recommend you give both injections one

after another to the same llama or alpaca rather than giving a round of med #1 to everyone followed by a round of med #2. I think the animals have a sense of being done and relax more completely using the first strategy.

If you have a larger herd, you can put the whole group into the holding pen and move groups of 8-10 into the catch pen letting them out to the field when the group is finished. Using this system ensures no animal is ever alone, but you don't have to keep the entire herd confined the whole time.

## The Technique:

The trick to giving injections without restraining the animal is to be adept at influencing which way the animal moves. In this way you can move with the animal as you continue giving the injection. Stand at the center of the pen and approach your "injectee" from behind the eye. Walk directly to the animal, reach across the body to the opposite side (see following de-



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scription of preferred injection sites) and get yourself a pretty good sized handful of wool. I grasp the wool between my fingers and my thumb. Remember to move with the animal. You are not using the wool to try to slow down or stop movement. Use the wool to pull the skin away from the body. Using more wool makes this much more comfortable. The wool acts to pull the skin away from the body and creates a skin tent. Insert the needle just behind the pad of your thumb and aim the needle at the body of the animal and you will inject the medication into the skin tent.

Prevent your animal's attempts to turn to the outside and change direction by using your hip to bump the rear end of the animal to the outside. This action pivots the camelid around his center of mass and keeps him moving in the same direction. With your animal moving around the outside edge of the pen and you in the center it is easy to keep up with the animal's movement as you inject the medicine.

## Injection Sites

Before giving an injection you need to know where to inject. You have some options. Injection sites are located all over the body. Some work for no-restraint injections and others don't.

The needle for a subcutaneous injection is placed under the skin half an inch - maybe less; an intramuscular injection an inch maybe a bit more. I don't care how strong you are or how good your chute is; you cannot restrain a llama or even an alpaca in a manner such that he is incapable of moving an inch.

Stick something sharp in a camelid's rear end and you can be sure he will do one of two things: move forward and/or maybe kick. Unless you stop the animal from moving forward, it is very difficult to keep him from walking right off the needle. Stop the llama or alpaca in the front; stick something sharp in his butt and he rears up or bucks - also not good. I realize the muscle mass of the hind leg is bigger, but I still prefer the front half of the body for injections unless it is not possible. Most veterinarians these days agree that injections in the front half of the animal work and are preferred to injections in the butt.

Some veterinarians like to use the armpit. I don't like this site because it is difficult to use without restraint. Sometimes there is no perfect choice. Provided the site is safe I am going to opt for the one that is easiest for the animal.

## Subcutaneous Injections (sub-Q or under the skin)

This is the easiest medical procedure there is. Most medications, even antibiotics, can be given this way. Give sub-Q injections as low on the body as possible on the front half of the body. As much as possible, keep injections below a line drawn between the point of the shoulder and the point of the hip. I like the area just where the neck and shoulder come together. The skin is relatively loose in this area and there are no bones or major vessels to worry about. This site makes it very easy to go with the llama or alpaca when he moves. The crease of the neck is also an easy place to check later for a

reaction and is an easy place to treat in the unlikely event there is a reaction to the medicine.



The handler is pointing to the line where the shoulder meets the neck. This groove has loose skin and is an easy place to give a subcutaneous injection.

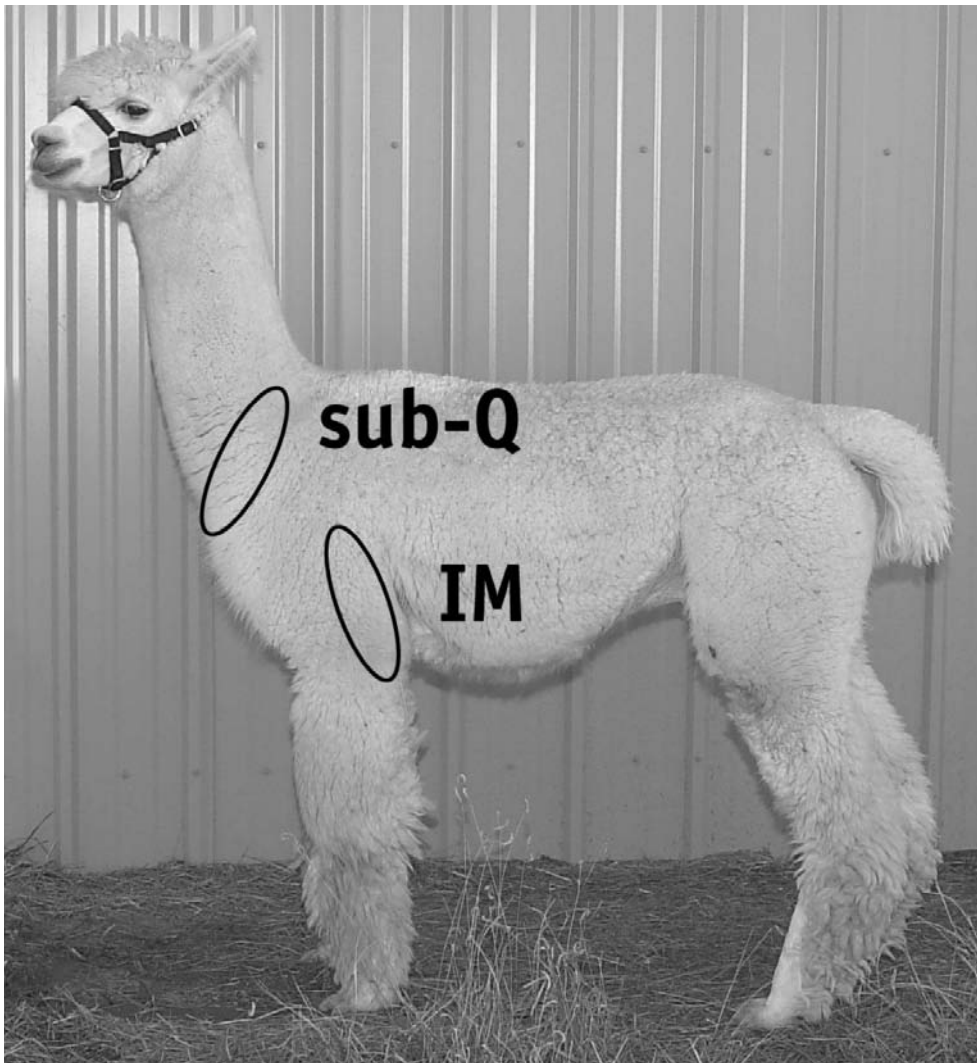
## An Intra-muscular Injection (IM)

The site for an IM injection is a bit different although still in the front half of the body. I prefer the back of the forearm (triceps muscle). Dr. David Anderson prefers sites in the front for two reasons:

1. They are easier to give without restraint, and
2. He thinks the medicine or tranquilizer acts more quickly when given in the front half of the body. He feels that this muscle mass will accommodate up to 5 cc's of medication for alpacas and slightly more for llamas.

## Working with two people

If you are part of a team, it may be easier especially in the beginning to work with a partner. The most important thing to remember is that your helper's job is to STEER - not to hold, restrain or even try to



slow the animal down. I prefer that my helper use a technique that I call the bracelet to steer the animal. The bracelet involves using the webbing of your fingers. It is not about holding and in fact you make very light contact with the animal. One hand is placed lightly just behind the ears and the other in the groove just behind the bottom lip. The bracelet is a technique that is an article all by itself. You can read more about the bracelet in our guild forum or in the Camelid Companion.

Note: You should of course consult with your veterinarian about health care. When animals are very sick and you must give large doses of medicine repeatedly,

you may need to use injection sites all over the body including the rear half. A sick llama or alpaca is not



In this photo the handler is using the bracelet to steer this alpaca as the other handler gives an injection. This photo also illustrates the location for an intramuscular injection.

likely to protest very much no matter what site you choose. When the animal begins to feel well enough to fight, switch to the front half and rotate from one side to the other.

You can read more about this technique and other non-traumatic approaches to training, handling and herd management in Marty's book, "The Camelid Companion." For more about the book, Marty's clinics and equipment, log onto [camelidynamics.com](http://camelidynamics.com).

This article was reviewed for technical accuracy by Dr. LaRue Johnson of Colorado State University and Dr. David Anderson (formerly of The Ohio State University), now at Kansas State University.

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