Alpaca Emergency Care and First Aid

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Rarely is there a more lonely or helpless experience for an alpaca breeder than at the time of an incident, accident or sudden illness of an animal. The notion of helplessness though can be relieved in most instances by the application of first aid prior to the much anticipated return call or arrival of the vet.

Training in first aid is invaluable with many of the principles of first aid as taught by the likes of St John Ambulance and Red Cross being applicable when dealing with trauma or injury of alpaca. The most important initial factor in any of these situations, including sudden illness; is the confidence, composure and preparedness of the care-giver. The ability to convey confidence will assist immeasurably in keeping the alpaca calm, thus avoiding further exacerbation of the problem; and a breeder’s confidence will come with the knowledge of basic first aid principles and the effort of practice and preparation.

Preparation in advance of an emergency situation

Prepare your animals as well as yourself for an emergency situation. The ability to catch, halter, tie and lead an alpaca will be crucial in an emergency, which can often arise when there is no assistance available. Alpaca should be trained to enter a small catch pen for capture and this is easily achieved by taking the time to regularly bring your animals into a catch pen or confined area just for food. Alpaca are cluey critters that all too quickly learn when catch pens are only used for unsavoury events and they will master the art of avoidance or submit themselves to additional stress at the most inopportune time, such as an emergency.

Whilst tying an alpaca to a fence is not recommended there are obvious instances where this will be required. Alpaca should never be left unattended in these circumstances. Learn to tie the quick-release knot for securing a lead rope to a fence or post (see below).

Immunisation should be kept up to date, particularly 5in1 vaccination to provide protection against Tetanus. Basic first aid without vet assistance may be all that is required for a small wound; however, contamination of that wound may leave the alpaca vulnerable to Tetanus if the alpaca is not immunised.

Know your Accepted Averages

Temperature: 37.0°C to 39.0°C.

An exception relates to the ambient temperature where it would be expected that alpaca can be 1°C cooler in the mornings than early evenings.

Respiration: 20 to 30 breaths per minute.

The breathing rate may be observed from a distance by watching the abdomen rise and fall with each breath. On approaching the alpaca, the respiration rate may increase rapidly which could make diagnosis difficult. A second method is looking at the nose for nasal flare. Thirdly, a stethoscope placed on the middle neck area or side of chest will reveal airway sounds.

Heartbeat: 80 to 120 bpm (beats per minute)

Unlike humans, the carotid artery in the neck of an alpaca is not accessible. The only superficial artery available for assessing heartbeat in alpaca is on the inside of the hind leg, level with the stifle. Alternatively, listen for the heartbeat by placing your ear or stethoscope over the lower chest wall just above the elbow.

QUICK RELEASE KNOT
To start: Thread the loose end of lead around post in an anticlockwise direction so the standing end (tied to alpaca) is in your left hand and free end in your right.

1. Create a loop of the lead in your right hand with the end section of the lead placed underneath the crossover point.
2. Place loop underneath the standing end of lead and hold with your left hand.
3. With your right hand, gather another loop from the loose end of lead.
4. Thread the loop in your right hand through the loop in your left hand then pull the standing end of lead to tighten knot. To release the knot, pull firmly on the loose end of the lead.
First Aid Kit

Many commercial first aid kits are not only expensive but can often contain items more appropriate for a field hospital. Notwithstanding the expense; in the hands of an untrained health care professional, this can often be detrimental when rendering first aid.

Recommended items for a first-aid kit:

- Emergency phone numbers (vet, neighbour, nearest & dearest)
- Thermometer
- Small pair of pliers
- Tweezers
- Pocket knife
- Surgical scissors
- Saline – large bag available from Veterinarians and most Pharmacies
- 20ml syringe for flushing wounds
- Vetrap bandage
- Sterile 4x4 inch gauze sponges (for packing wounds after cleansing)
- Combine Absorbent Roll (aka Combine Dressing)
- Betadine or Chlorhexidine Liquid (with dilution directions if applicable)
- Betadine ointment
- Centrigen Spray (aka “purple spray”). Only for wounds not requiring stitching or further attention by the vet.
- Latex gloves
- Small plastic bowl or bucket
- Small torch with spare batteries
- Spare halter and lead

Other items may be included depending upon the training and experience of those using the kit. A plastic bucket with snap top lid or tool box can be used for storage. Labelled clearly with red permanent marker, the kit should be left in a conspicuous place and protected from excessive heat, cold and moisture. A regular check of supplies to ensure the kit has not been looted is advisable.

Emergency Situations

There are many situations that will require first-aid, some of which include; lacerations, contusions, abrasions, fractures, blows to the head or spine, entrapment in fences, ditches and streams, hyperthermia and hypothermia and natural disasters such as bushfire and flood.

It goes without saying that an alpaca that is unconscious, not breathing or bleeding severely is an emergency situation.

Cardinal Rules for administering first aid to animals

1. Establish an airway and make certain the victim is breathing.
2. Control haemorrhage.
3. Stabilise fractures and restrict movement to prevent further damage.
4. Protect exposed tissue (lacerations, abrasions and burns).
5. Position an unconscious alpaca on its right side with the head and neck slightly elevated and the muzzle down.

Whilst animals may be affected by shock it is not a common occurrence as it is in humans. Animals will not faint following an injury but may lose consciousness as a result of a blow to the head or excessive haemorrhage.

For wounds that require stitching it is recommended not to apply antiseptic before veterinary treatment; however, if it is absolutely necessary to do so, only use water based antiseptics.

Severe bleeding

Alpacas have a blood volume of 7-8.6% of their body weight; therefore a 70kg alpaca would have a blood volume of approximately 5-6 litres. Approximately 25% or in this case about 1.5 litres of blood may be lost without risking the life of the alpaca.

Given that not even half a litre of blood sprayed around a stall would be reminiscent of a slasher film, it is perfectly understandable that the actual blood loss may be overestimated and the owner reduced to a state of horror. With that said however, bleeding of any volume must be controlled and evaluated using basic first aid procedures.

Whilst free flowing blood is obvious, bleeding may also be internal and not visible. If bleeding into tissue occurs it may cause generalised swelling of the affected area or be in a pocket i.e. haematoma. Blows to the surface of the body may rupture an organ or a blood vessel causing bleeding into the body cavity or muscle.

Hyperthermia – heat stress

Early recognition and action will result in successful resolution of heat stress. Cooling may be accomplished by spraying cold water on the belly and between the fore and hind legs. Parting the fleece down the backbone and allowing water to flow from the part, down the surface of the body is appropriate for an alpaca in cush position. ➤
Shade and breeze by way of a fan will enhance the cooling effect. If water is in short supply, standing the alpaca in buckets of water can still be effective.

In extreme cases of hyperthermia, rapid cooling may be obtained with a cold water enema. The purpose of the cold water enema is to flow cold water into the rectum allowing that water to be warmed by the body and evacuated, then replaced by more cold water. Extreme care must be taken when inserting the tube, which must not be placed more than 3-4 inches into the rectum. Damage to the lining of the rectum, or worse, puncture of the bowel could ensue if the tube is inserted any deeper. Neither should water be forced into the rectum under pressure or held in the rectum against normal evacuation response. Once this process has begun it will no longer be possible to monitor the body temperature via the rectum; with females however the thermometer may be inserted into the vulva.

**Hypothermia**

In the case of hypothermia an ounce of prevention is far better than the cure. Provision of shelter from wind and rain with abundant lucerne hay can suffice to protect alpaca from hypothermia in severe weather. The importance of lucerne hay in these situations cannot be understated as the digestion process will provide additional body heat. A cria coat and shelter will protect the young.

In bad weather, the most vulnerable time for alpaca is just off shears with Suris particularly prone to hypothermia in severe weather at any time of year. It is wise to always consider Suris as having just been shorn.

With weather being notoriously difficult to predict, there can be occasion where animals may be caught by a freak severe weather event. As most thermometers don’t read temperatures lower than 33°C an animal with this reading is in a critical condition.

Move the animal immediately into a warm environment and incubate with warm blankets. Electrolytes and glucose warmed to 35°C-37°C and administered intravenously are most useful, however if IV is unavailable oral administration is the next best option. Other warmed carbohydrate syrups (e.g. honey, maple syrup) are also beneficial both orally or inserted into the rectum as Camelids can absorb glucose from the rectum provided there is adequate blood flow.

Wrapping a cria in bubble wrap may be all that is required in some instances, however in severe situations they may be placed into a large plastic bag with the head sticking out then immersed into a warm bath of approximately 42°C.

In all cases, care must be taken as warming an alpaca that is critically cold too quickly can cause as much harm as the hypothermia. This is due to the altered blood flow and release of potassium and organic acids that have built up during the period of poor circulation and this may cause the heart to stop.

By and large and with good fortune, the extreme emergencies as outlined above may never visit the majority of alpaca studs. There are however other signs that will alert owners to a problem or potential situation.

Know your animals and what constitutes their normal behaviour. Establishing a routine of daily observation will assist owners in detecting an illness before it becomes an emergency.

**Key indicators requiring immediate action**

1. Body temperature below 36°C or above 39°C.
2. Refusal or inability to eat for more than 24 hours.
3. Rapid, laboured, noisy breathing. Breathing with mouth open (with the exception of immediately after a spitting session).
4. Swollen muzzle. As alpaca normally breathe through the nose, any obstruction of the nasal passages could potentially suffocate the alpaca.
5. Discharge from one or both eyes or reluctance or inability to open the eyelids.
6. Straining at the poo pile without producing a foetus, urine or faeces.
7. Frequent voiding of small amounts of urine or faeces.
8. Failure to void urine or faeces for more than 12 hours.
9. Symptoms of colic; groaning, grinding of teeth, up and down frequently, refusal to rise, kicking at belly, assuming peculiar stance, arching the back, straining, tense abdomen and frenzied behaviour. It should be noted that some of these signs may be transient normal behaviour.
10. Lameness.
11. Incoordination (ataxia).
12. Paralysis.
14. Rectal or vaginal prolapse.
15. Extreme weight loss.
16. Severe bleeding.

With the small amount of time and effort required to learn the basic principles of first aid along with simple preparation, alpaca owners can act with confidence when called upon to handle an emergency situation.

**References and recommended reading**

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