

Assembled by Susan Borders

The Essentials of Camelid Medicine

aka How Not to Look Stupid in Front of Llama/Alpaca Owners

- know the difference between llamas and alpacas

<u>Llamas</u>	vs.	<u>Alpacas</u>
larger		smaller
avg. wt=250-500lbs.		avg. wt=120-200lbs.
head longer, more dished		head is shorter, squared nose
ears oblong		ears straighter, more erect
fiber more coarse, larger diameter		fiber more fine, smaller diameter
guard hairs present with undercoat		us. lack guard hairs
- know proper terminology

intact male animal	male, macho, stud
castrated male	gelding
female	female
unweaned male or female	cria
weaned male or female	juvenile
the act of giving birth	criation or birthing
haircoat	fiber, hair or fleece not wool
llama/alpaca cross	huarizo
alpaca species subtypes (2)	huacaya (majority of N. American animals)
Animal lying sternal with front legs tucked	suri (lack crimp to fiber, fiber hangs in ringlets)
	Cush (often occurs during breeding)
- Understand anatomical differences of camelids
 - Head/neck differences
 - split upper lip facilitates browsing
 - lack of upper incisors (dental pad present)
 - fighting teeth present in males and females
 - represent upper third (vestigial) incisor and upper/lower canines
 - owners often request these be removed/trimmed
 - use OB wire to trim flush with gingiva, do not use hoof trimmers, wire cutters etc.
 - incisors of alpacas (not llamas) grow continuously lifelong
 - may require trimming (see above recommendations)
 - eye color generally brown; blue eyes less desirable because may be linked with deafness
 - choanae (opening between nasal cavity and nasopharynx) common site of congenital atresia
 - Hint: newborn with respiratory distress think poss. choanal atresia
 - rostral 1/2 of nasal planum is cartilage making them obligate nasal breathers
 - Important when handling so as not to cause resp. distress
 - Also important to educate owners regarding proper halter selection
 - nasopharyngeal diverticulum present on dorsal nasopharynx
 - causes potential difficulty during endotracheal intubation
 - lack a true external jugular vein; internal jugular present in same location R>L
- Thorax/respiratory differences
- twelve pairs of ribs
- complete mediastinum
- thoracocentesis performed between the sixth or seventh intercostal space, 2-4 cm dorsal to costochondral junction

Gastrointestinal differences

- modified ruminants with three stomach compartments
 - compartment one (C1)= largest, rumen-like, more secretory (bicarbonate, mucus)
 - compartment two (C2) and three (C3)=combined functions of reticulum, omasum and abomasum; only C3 acid secreting
 - “ruminations” more rapid occurring 3-4/minute, in opposite direction than cattle
- no gall bladder present
- liver located completely on the right side of the abdomen and is normally fibrated
- liver biopsy landmarks-right side between ribs 11 and 12 (Use Ultrasound Guidance!!!!)
- spleen is attached to the left dorsal aspect of the first stomach compartment
- kidneys are normally smooth (like sheep) vs. lobulated (like cattle)

Reproductive tract differences

- uterus is bicornuate, minimal body
- epitheliochorial placenta (like Equine)
- most pregnancies occur in the left horn (95%)
- congenital abnormalities of the female reproductive tract are quite common
 - ie. segmental aplasia, double cervices etc.
 - important to remember during breeding soundness exams
- male's prepuce is triangular in shape and angles slightly caudal
- caudal prepuce muscle responsible for directing penis forward when erect
- scrotum located caudal to legs, epididymis barely palpable in normal animal
- prostate and bulbourethral glands present
- urethral recess is present at the level of the bulbourethral glands making catheterization difficult
 - also a site for urinary obstruction

Musculoskeletal differences

- metatarsal glands located on inside of hind legs
 - suggested glandular function debated
- interdigital glands on all four feet of unknown function
- weight bearing occurs on the thick pads of P2/P3 (not the toenails) giving them a “dropped pastern” appearance
 - toe nails trims are an important service to provide owners
 - nails should be trimmed flush with the level of P2 and P3

• Understand the reproductive cycle of camelids and courtship rituals

- induced ovulators
- copulation stimulates the release of LH and subsequent ovulation us. occurs within 2 days
- a mature follicle (8-12mm) must be present for ovulation to occur
- non-seasonal breeders
- many submissive females will accept a male in the absence of a mature follicle or even if pregnant
- receptive females will lay down in a cush position when approached by a male (see above)
- non-receptive females should spit the male off
- pregnancy diagnosis made based upon progesterone levels $>2\text{ng/ml}$ 15-20 days post mating or rectal ultrasound at 25 days
- gestation length: 335-365 days
- 95% pregnancies occur in the left horn
- CL dependent throughout gestation
- BE AWARE: THE USE OF LUTALYSE IN CAMELIDS HAS RESULTED IN ACUTE DEATHS

- Formulate a preventive health care plan that meets the needs of your area

Suggested vaccination schedule:

- Pre-Weaning (2-3 days old) Clost. C,D & T (repeat in 3-4 weeks)
- Weaning (4-6 mos old) Clost 7 or 8 way
- Yearlings (12 mos) Clost 7 or 8 way
- Pre-Breeding (19-24 mos) Clost 7 or 8 way
- Adults Clost 7 or 8 way
- Pregnant females Clost C,D & T (60 days before birthing)

Optional vaccines

- Rabies (use IMRAB 3 product-2 ml) initial 2 doses four wks apart then annually
- Leptospirosis (breeding females only) booster 3-4 times per year
- Equine rhinovirus and influenza if co-mingled or exposed to horses
- E. coli vacc. if diarrhea is a problem in young animals

- Suggest a deworming protocol that fits your area and prevalence of the meningeal worm

OSU recommendations:

- deworm with Ivermectin (1 cc/100lbs SQ) once every 4 weeks from May -Nov.
- deworm with Fenbendazole (5mg/lb PO) once every 4 weeks from Dec-April

Perform fecal egg counts in May and November to evaluate the efficacy of your program

- Be aware of the major diseases/syndromes affecting camelids

- Meningeal worm infection (*Parelaphostrongylus tenuis*)
- Heat stress syndrome
- Neonatal syndromes (Failure of Passive Transfer, Failure to Thrive, Juvenile Llama Immunodeficiency Syndrome)
- Beserk Male Syndrome