

Alpine Equine Hospital Internship/Externship Goals

General knowledge:

- ∞ Basic restraint methods of horse, bovine and small ruminant patients
 - Equine Twitch, Chain shank – when to use
 - Sedation options
- ∞ Trailer loading techniques
- ∞ Basics of lunging/leading etc
- ∞ Identify and read a tattoo, and know corresponding age
- ∞ Cryosurgery
- ∞ Nutrition basics
 - Life stage diets equine
 - Diets for specific health conditions PPID and EMS
 - Common deficiencies and specific requirements
 - Supplements
- ∞ Basic parasitology all equine and ruminant species
 - Life cycles
 - Identification
 - Treatment and control and design of herd health programs
- ∞ Basics principles of acupuncture.
- ∞ Referring a case to CSU or Littleton Large Animal Clinic
- ∞ Emergency response procedures
- ∞ Basics of equine disciplines

Basic Skills:

- ∞ Physical examination all equine and ruminant patients
- ∞ Prepurchase examination and interpretation/recommendations equine
- ∞ Neonatal exam – know normal parameters
 - IGG testing
- ∞ Neuro examination and interpretation
- ∞ Administer medications – be able to do it and teach clients to do it
 - Oral
 - IM – landmarks and risks
 - IV
 - SQ
 - Eye medications
- ∞ Wound repair
 - Suturing
 - Appropriate materials
 - Suture patterns
 - Bandaging
- ∞ IV catheter

- Foal
- Adult
- Set-up of IV fluids
 - Fluid rates for adults and foals, canine and feline patients
 - Maintenance of fluids, CRI and fluid pumps
 - Instructing clients how to manage (change, cap, administer fluids, flush, etc)
- ∞ Euthanize
 - Foal
 - Standing horse
 - Assist client with arranging burial
 - Assist client with arranging removal of carcass by renderer
- ∞ Grief counseling/support
- ∞ Necropsy
 - Submission of samples for analysis
- ∞ Saddle fit software

Preventive medicine:

- ∞ Vaccination protocols
 - Pregnant mare
 - Foal
 - Core and risk based
- ∞ Principles of vaccination and risks vs benefits
- ∞ Deworming protocols
 - Pregnant mare
 - Foal
 - FEC determination

Pharmacology:

- ∞ Dosage and use, indications and contraindications, risks, breed differences etc
 - Antibiotic therapy
 - Anti-inflammatory therapy
 - Sedation
 - Topical medications
 - Anti-ulcer drugs

Diagnostics and imaging:

- ∞ Obtaining diagnostic radiographs, interpreting results, and effectively communicating results/prognosis/treatment options to clients
- ∞ Radiographs
 - Techniques – position of machine, cassette
 - Prepurchase or repository films – what films and when
 - Wounds, masses, growths

- Contrast evaluation of wounds/tracts
- ∞ Ultrasound
 - General machine use
- ∞ Endoscopy
 - Set up and take down of equipment with and without video
 - Technique and interpretation
- ∞ Clinical pathology
 - Collect appropriate samples
 - Interpret results in light of clinical findings

Musculoskeletal:

- ∞ Perform a general musculoskeletal exam equine
 - Limbs
 - Back
 - Spine
- ∞ Lameness
 - Observe and identify lameness in all 4 limbs
 - Radiographs – techniques, interpretation, and reports to clients
 - Equine
 - Foot series
 - Fetlock
 - Cannon/splint
 - Carpus
 - Radius
 - Hock
 - Tibia
 - Stifle
 - Skull
 - Cervical
- Ultrasound Equine
 - Tendons and ligaments
 - Wounds or draining tracts
 - Foreign body
 - Gas or abscess pocket
 - Disruption of bony contour
 - Nerve blocks equine– landmarks, principles, drugs, restraint
 - Joint blocks/injections equine – landmarks, principles, drugs, restraint
 - Procedural wet labs
 - Know doses and drugs for blocks/injections
 - Hylartin
 - Antibiotics
 - Steroids – what, where, and when to use
 - Carbocaine dose
- ∞ Diagnose and treat equine lameness conditions
 - Founder vs laminitis

- Hoof abscess or bruise
- Navicular disease
- Arthritis – where (common locations), when, treatment, prognosis, etc
- Cellulitis
- Foreign body
- Lymphangitis
- EPSSM
 - Diagnose
 - Diet changes
 - Other management
- Rhabdomyolysis
- Back soreness
- Kissing spines
- ∞ Joint supplements/neutraceuticals
 - Adequan, legend, glucosamine
 - Cosequin, cortaflex, etc
 - NSAID choices and doses equine, ruminant patients
- ∞ Bandaging and cast application/removal Equine
 - Teaching clients to do it
 - Determining after care
 - Lower forelimb
 - Upper/lower forelimb
 - Lower hind limb
 - Hock
 - Foot
- ∞ Hoof care equine
 - Farrier work and instrumentation familiarity
 - Know basics of shoes- what kind and when to use
 - Pull a shoe
 - Pare an abscess/identify a bruise
 - Hoof-wall resection
 - White line disease
 - Solar abscesses
 - Proper use of a hoof knife
 - Proper use of hoof testers

Reproduction:

- ∞ Components of a general breeding soundness examination (BSE)
 - Mare
 - Stallion
 - Feline and canine
- ∞ Drugs – dosage and use all species
 - Lutalyse (prostin)
 - HCG vs Deslorelin
 - Oxytocin
 - Estrumate

- Regumate
- ∞ Rectal palpation equine
- ∞ Ultrasound Mare
- ∞ Pregnancy
 - 14-18d
 - 23-28d
 - 40d
 - twins
- Bladder
- Follicle vs CL vs recent ovulation vs ovarian tumor
- Use of each ultrasound rectal and transabdominal
 - Measuring, typing, printing, etc
- ∞ Identify and pinch twins
 - When and how
- ∞ Vaginal spec exam
 - Stages of cervix
 - Visually identifying cervical tears
- ∞ Vaginal palp exam
 - Cervical palp
 - Appreciate tears
 - Identifying stage of estrus
- ∞ Insemination frozen, cooled fresh
 - Evaluation of semen
 - Protocol for insemination
- ∞ Flush/lavage
 - Pre and post breeding
 - Post RP – large volume
- ∞ Infusing
 - Dosages and use of infusion drugs
- ∞ Uterine culture and cytology equine/Vaginal cytology canine feline
 - Obtain and transport culture/cytology
 - Set up culture and sensi
 - Basic cytology
- ∞ Uterine biopsy
- ∞ Caslick's
 - Local block
 - Technique to put in
 - Technique to remove
- ∞ Monitoring for foaling
 - Options available – cameras, foal alerts, milk tests
 - Signals to look for
- ∞ Assist in dystocia
- ∞ Retained placenta
 - Managing
 - Simple vs complex

- Retained tags
- ∞ Abortion work-up
 - Samples
 - Familiarity with causes
- ∞ Epidural
- ∞ Collection of stallion

Internal Medicine Equine

- ∞ Respiratory
 - Examination
 - At rest
 - Rebreathing
 - Radiographs
 - Lungs
 - Ultrasound
 - Lungs
 - Adults
 - Foals and calves
 - Endoscopy – know normal vs abnormal anatomy
 - Upper airway
 - Larynx
 - Arytenoids – grading of paralysis
 - Pharynx
 - Trachea
 - Guttural pouches
 - gastroscopy
 - TTW, BAL
 - Diagnose and treat
 - Infectious causes
 - Viral
 - Bacterial
 - Allergic disease
 - Acute
 - Recurrent
 - Foal and calf respiratory disease
 - Sinus disease
- ∞ Colic work-up Equine/ Acute Abdomen Canine, feline
 - NGT intubation
 - Pass
 - Reflux
 - What to give?
 - Secure for transport
 - Medical rectal exam Equine/Abdominal palpation
 - Fecal balls in SC

- Gas distention of colon
- Torsion vs displacement
- Ultrasound
 - Identify structures – SI, large colon, kidney, bladder,
 - Know normal vs abnormal
- Abdominocentesis (belly tap)
 - Perform and interpret
- Diagnose and treat
 - Pelvic flexure impaction
 - Nephrosplenic entrapment
 - Spasmodic colic
 - Small intestine distention
 - Know when to refer
- ∞ Other Gastrointestinal
 - Diagnose and treat Equine
 - Grain overload
 - Diarrhea
 - Adult, foal
 - Sample submission and interpretation
 - Know transmission risks
- ∞ Neonatal examination
 - Diagnose and treat
 - Meconium impaction
 - Enema
 - Ruptured bladder
 - Septic foal
 - Weak neonate
 - Neonatal maladjustment
 - FPT
- ∞ Choke/Foreign Body
- ∞ Cardiovascular
 - Normal
 - Murmurs – identify and characterize
 - Systolic vs diastolic
 - Grading
- ∞ Neurologic disease localization
 - Epidural
 - CSF tap – lumbosacral
 - Know basics of diagnosis, treatment, prognosis, etc of common neuro diseases
- ∞ Metabolic diseases
 - Cushing's disease
 - Insulin Dysregulation
 - Other endocrinopathies

- ∞ Urinary
 - Rectal palpation
 - Ultrasound
 - Urinary catheter
 - Identify and treat
- ∞ Other
 - Ultrasound
 - Liver
 - Abscesses
 - Masses/foreign bodies/wounds

Surgery/Anesthesia Equine:

- ∞ Castration
 - Standing
 - Down
 - Cryptorchid
 - Adult
- ∞ Check ligament desmotomy
- ∞ Hernia surgery
- ∞ Neurectomy principles and guidelines
- ∞ Periosteal strip
- ∞ Splint bone removal
- ∞ Enucleation
- ∞ Trauma surgery/HBC – field principles, safety, restraint
- ∞ Anesthesia
 - Sedation use and doses
 - Field anesthesia - standing
 - Hospital anesthesia – general IV and Isoflurane
 - Know components of triple drip and small animal cocktails
 - Know induction drugs and doses
 - Induce a horse for surgery
 - Monitor and record vitals and maintain a plane of anesthesia for surgery
 - Recovery from anesthesia

Ophthalmology:

- ∞ Examination and use of ophthalmoscope
 - Identify basic structures
- ∞ Perform and interpret fluorescein stain and rose bengal stain
- ∞ Topical anesthesia
- ∞ Ocular nerve blocks
- ∞ Administer ocular medications
- ∞ Implant and use an SPL system
- ∞ Know basic medications and when to use
- ∞ Corneal scraping/debridement

- Cytology
- Culture
- ∞ Corneal biopsy
- ∞ Grid keratectomy
- ∞ Tonometry
- ∞ Foal entropion correction
- ∞ Eyelid repair – blocks, sutures and patterns, prognosis, etc
 - Upper eyelid
 - Lower eyelid
- ∞ Excision of 3rd eyelid
- ∞ Diagnosis and treatment
 - Glaucoma
 - Corneal ulcers
 - Staging of ulcers
 - Tumors/masses
 - Conjunctivitis
 - Uveitis

Dentistry equine:

- ∞ Oral examination with speculum
- ∞ Identify teeth by number and name
- ∞ Age a horse by teeth
- ∞ Sedate appropriately
- ∞ Apply speculum equine
 - Full mouth
 - Spool
 - Gum bars
- ∞ Pull wolf teeth
- ∞ Float
 - Routine
 - Motorized dentistry techniques
 - Hand floats
 - Dremel
 - Identify and correct waves, hooks, points, ramps, steps, etc
- ∞ Identify and remove caps
- ∞ molar hooks
- ∞ premolar hooks
- ∞ Extract incisor
- ∞ Adjust incisor length and determine when is appropriate
- ∞ Extract molar
- ∞ Incisor reduction
- ∞ Appropriately fill out dental charts

Skin:

- ∞ Local blocks
- ∞ Suture wounds –know concepts, anesthesia, restraint, prognosis, etc for foals and adults
- ∞ Lumps, bumps, and masses
 - Biopsy skin (punch) – block, biopsy, suture
 - Excisional biopsy of a mass
- ∞ Obtain sample from wound for culture and sensitivity
 - Interpret results for treatment
- ∞ Obtain sample for fungassay
- ∞ Skin scrape
- ∞ Diagnose and manage
 - Proud flesh
 - Trim
 - Manage medically/wound care
 - Refractory hives
 - Rain rot
 - Scratches
 - Ectoparasitism
 - Dermatophytosis (ringworm)
 - Oncology
 - Squamous cell
 - Melanomas
 - Sarcoid diagnosis and treatment options

Administrative/Office:

- ∞ Basic knowledge of the practice territory
- ∞ Calls
 - Call charges for regions
 - Shared and recheck call charges
 - Emergency charges
 - Local Non profit
 - Special circumstances
- ∞ Paperwork
 - Billing and medical record
 - Coggins and health papers
 - Dental forms
 - Farm sheets
 - Mare records
 - Prepurchase forms
 - Maintaining a record
 - Treatment orders
 - PE findings
 - Medications – what, how much, when, how, etc?
 - Client Communications

- ∞ Filing system basics (medical records, xrays, ultrasound printouts, labwork, etc) – finding paperwork when needed
 - Logging in and out
 - For in house use and to send out of clinic
- ∞ Client communication
- ∞ Computer
 - Client financial records – find a balance, enter a payment, etc
 - Patient information – history, vaccines, etc
- ∞ Hospitalization and Patient care
 - Admitting a patient
 - Daily flow sheet medical records
 - Daily patient care inhouse and stabled patients and AEH
 - Ambulatory preparedness
 - Discharging a patient

Lab:

- ∞ Sample submission procedures (basic)
- ∞ Lab tests
 - Run CBC on QBC analyzer and Unipette technique
 - Hand differentials
 - fibrinogen
 - Quantative blood smear
 - PCV and TS
 - Fibrinogen normals and abnormal
 - Use the Heska dry chem machine for chemistry panels
 - Qualitative and quantitative fecals
 - Qualitative semen analysis
 - Staining procedures
 - Diff-quick
 - Gram stains
- ∞ EIA (Coggin's)
- ∞ Autoclave use and maintenance

Practice management:

Participate in DISC profile when performed

Competitions and outside events:

- ∞ Local Endurance horse trials
- ∞ Horse shows
- ∞ Pony club events
- ∞ AAH and Roaring fork horse Council Spring Winter Seminar and other short courses
- ∞ Speaking and demonstration opportunities
 - Horse show and summer rodeo series on wed/Thurs
 - Radio show once annually KDNK ask the vet



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- Monthly blog and newsletter writing
- ∞ Client handout biannually