



# ***Colorado Horse Trainer Study Guide***

***State of Colorado  
Department of Revenue  
Division of Racing Events  
1707 Cole Blvd., Suite 350  
Lakewood, CO 80401***

***Revised April 2018***

## **TRAINERS TEST STUDY GUIDE**

### **Colorado Division of Racing Events**

**Note:** As a licensed trainer in Colorado you are expected to understand the Colorado Racing Commission Rules and Colorado Revised Statute §12-60-201 et seq. with regards to Horse Racing in Colorado. The following information is designed as a study guide to assist trainers in preparation for the written horse trainer's test. The Horseman's information packet and the condition book are also valuable resources, and are available at the State Racing office at the racetrack. The written test will also cover basic equine anatomy questions. The test will also include a practical examination. If you have any questions, please feel free to ask the Stewards or look on the State of Colorado, Department of Revenue Division of Racing Events website at <https://www.colorado.gov/enforcement/racing>

The following information was researched and compiled from the Colorado Revised Statutes Title 12, Article 60, Colorado Racing Commission Rules, Division Veterinary Staff, and The Colorado Board of Stewards. Also, further information was gathered with cooperation from the Oregon Racing Commission, and the Texas Racing Commission.

#### **BASIC HORSE CARE**

This section contains basic categories of horse care that are included in good horse management. There are many ways to develop a program that best fits your facility's particular needs and situation.

Normal Heart Rate : 30-42 beats per minute resting

Normal Respiration : 12-20 breaths per minute resting

Normal Rectal Temperature : 99.5 to 101.5 F

After a work or race, fit horses will regain normal vital signs within 5 minutes.

#### **PRESCRIPTIONS**

**All horse medications that require a prescription must be stored in the tack room when not in use. (CRCR 5.320 & CRCR 5.359)**

**CRCR #5.248 - (Modified Effective date May 15, 2018)** No person other than a Veterinarian licensed to practice veterinary medicine in this jurisdiction and licensed by the Commission may administer a prescription or controlled medication, drug, chemical or other substance (including any medication, drug, chemical or other substance by injection, or another method) to a horse at any location under the jurisdiction of the Commission. A trainer or a trainer's employee may administer a prescription medication to a horse under the trainer's care and custody, so long as all requirements regarding treatment records under Rule 5.510 are met. Non-Veterinarians found in possession or control of any syringe, tubing, or other apparatus that may be used to deliver unauthorized treatments to a horse may be subject to Summary Suspension and other administrative action.

## **VACCINATIONS**

Vaccinations are an essential part of a Healthy Horse Program. There are many commonly used vaccination schedules which take into consideration geographic factors, use of the horse and risk of exposure. Veterinarians and horsemen select vaccine types and schedules that will best protect their horses.

Knowledge of the types of viruses and bacteria that we vaccinate for, risk of disease and benefit of prevention will help you to develop a vaccination protocol that best suits your management style. Discussing your farm's particular needs with your veterinarian will be valuable to find the best cost solution while providing high quality care for your horses. Control of infectious diseases can be as important as vaccination itself. Vaccination is no guarantee that the animal will not contract disease. However, careful and thoughtful use of vaccines can decrease incidence and severity of diseases. Maximizing health, limiting exposure and a good working knowledge of how diseases are spread and the signs that indicate disease are important components of good management practices.

### **Equine Encephalitis (Sleeping Sickness) - Eastern, Western and Venezuelan Types (EEE/WEE/VEE)**

Equine Encephalitis is a mosquito-borne viral disease that is transmitted from birds and rodents that are natural reservoirs of the disease via mosquitoes to horses and humans. Horse to horse and people to people transmission from mosquitoes is unlikely because the amount of virus harbored in humans and horses is too low for transmission. EEE is the most devastating type with a 90% mortality rate and WEE has a mortality rate of about 50%. Risk of exposure varies with the mosquito and reservoir population.

EEE virus occurs in the eastern and southeastern parts of the United States. Outbreaks of WEE have mainly been in the West and mid-west and VEE in South and Central America. Because of the high mortality rate, EEE is regarded as one of the most serious mosquito-borne diseases in the United States. Clinical signs include loss of appetite, fever and neurological signs such as head pressing and blindness.

Vaccination with a 3 dose series is recommended starting at 6 months then 1 year and then annually in the spring. Unvaccinated adults should have an initial 2 dose (4-6 weeks apart) series and then annually in the spring. Pregnant mares should be vaccinated 1 month prior to foaling to give the foal the best passive immunity possible.

### **Equine Influenza**

Equine Influenza or better known as "Flu" is one of the most common respiratory diseases of horses. It is found throughout the world. Horse density and movement around the country increases the risk and spread of infection. It has been shown that quarantine of newly arriving animals and the use of vaccination can dramatically reduce the risk of infection. Horses that are between 1 and 5 years are most susceptible to Influenza and it is highly contagious and spreads rapidly through coughing, contaminated buckets and other equipment.

Clinical signs include nasal discharge, fever, lethargy, dehydration, anorexia, cough and soreness. Secondary bacterial pneumonia is possible. The incubation period is 1-3 days and

infected horses are contagious for up to 10 days. Immunity from the vaccine is short lived so prevention includes every 2-3 month vaccination. Vaccination can also be used to boost immunity in the face of an outbreak.

As with human “Flu” strains, equine Influenza strains mutate over time causing the vaccination composition to change. The manufacturers of vaccines are required to keep up with the viral changes but, development of the new types take time and is very expensive. For this reason, the Influenza vaccinations do not afford the horse optimal protection, so frequent boosters are recommended.

Vaccination of foals is recommended to start no later than 9 months and should be at 3 dose intervals 4-6 weeks apart. Pregnant mares should be vaccinated 4-6 weeks prior to foaling. Young horses, depending on exposure should be vaccinated every 3-6 months.

### **Tetanus**

Tetanus is an often fatal disease caused by a toxin released by the bacteria, *Clostridium tetani*. These bacteria are present and can live for many years in the environment and in the intestinal tract and feces of horses and other animals including humans. Tetanus is not a contagious disease, it cannot be transmitted from animal to animal. The animal develops the disease when a wound, surgery site or exposed tissue is infected with the *Clostridium* bacteria. Tetanus toxin causes rigid paralysis and muscle spasm. Respiratory paralysis and dehydration can lead to death.

All unvaccinated adult horses should be vaccinated against tetanus using the tetanus toxoid in a two dose series 3-6 weeks apart and then annually to induce and maintain immunity. These vaccines are safe and induce long lasting immunity. Since the passive immunity in colostrum from the mare is unpredictable, mares should receive a booster 1 month prior to foaling. Foals born to vaccinated mares should receive their first dose of tetanus toxoid at 6 months and 2 more doses 4-6 weeks apart and then annually. Foals born to unvaccinated mares should receive one dose (1500 IU) of tetanus antitoxin.

Any animal that has become injured and has not had a booster within 6 months should be administered a booster at the time of the injury.

### **Equine Herpesvirus (Rhinopneumonitis)**

Equine herpesvirus type 1 and 4 (EHV-1 and EHV-4) can each infect the respiratory tract causing signs from mild to severe including fever, lethargy, anorexia, nasal discharge and cough. Infection is common in babies and young horses in training especially when new horses are brought in.

Equine herpesvirus type 1 also causes abortion (last trimester) in infected pregnant mares or the birth of weak nonviable foals. The placenta and all fetal remains and fluids are able to spread infection.

EHV-4 primarily causes respiratory disease in young horses. Like all other herpesviruses, these viruses can remain latent (infections without causing clinical disease) in the majority of horses,

which do not show clinical signs but may later show signs and shed the virus when stressed. For this reason, it is hard to control this disease and outbreaks occur in closed populations of horses. The use of vaccines is primarily to prevent abortion in mares and the respiratory form in foals and other young horses that are at high risk. Consistent vaccination appears to reduce the frequency and severity of disease. All pregnant mares should be vaccinated at least at 5, 7 and 9 months of gestation and 1 month prior to foaling. Primary vaccination of foals is started at 4-6 months of age and consists of a 3 vaccination series 3-4 weeks apart. Young horses should be vaccinated every 3-4 months.

### **West Nile Virus (WNV)**

Equine West Nile Virus was isolated in 1999 in the US. It is maintained in reservoir hosts (primarily birds) and transmitted to horses by mosquitoes. WNV occurs mostly in the late spring and summer months. Horses appear to be the dead end hosts meaning they cannot transmit the disease. Clinical signs include lack of coordination, stumbling, anorexia, muscle twitching, partial paralysis and neurological signs such as head pressing, inability to stand, convulsions and death. Supportive care is the only treatment. Vaccination is recommended 1 month prior to mosquito season in a 2 dose series 3-6 weeks apart. 2-3 vaccinations per year are recommended. Elimination of standing water and use of insecticides will also help decrease the mosquito population and spread of the disease.

### **Rabies**

Rabies is an infrequently encountered neurological disease which occurs when horses are bitten by an infected wild animal. Although the incidence of Rabies is very low in horses, it is a fatal disease and a public health issue. Wildlife animals are a natural reservoir for the rabies virus which causes a fatal encephalitis. Clinical signs include fever, hyper-responsiveness to touch weakness, incoordination, , lameness, inability to swallow, blindness and convulsions. Death typically follows within 3-5 days. Any horse suspected of contracting rabies should be handled with utmost caution; humans can contract rabies through the saliva of the horse.

All horses kept where rabies is endemic in the wildlife population are at risk and should be vaccinated. Foals born to unvaccinated mares can be vaccinated at 3 months and then again at 1 year and then annually. Foals born to vaccinated mares should begin their vaccinations at 6 months. Adult horses are vaccinated yearly after the initial vaccination.

### **Strangles-Streptococcus Equi**

Strangles also known as Distemper is highly contagious and caused by the bacterium *Streptococcus equi*. It usually affects young horses and is transmitted by direct contact with pus and infected fluid from another horse. It also can be transmitted by tack, water troughs, stalls, trailers etc. It can survive in the environment for at least 3 months. The bacteria can be ingested or inhaled.

The horses infected show a severe inflammatory response to the bacteria which causes upper respiratory discomfort, anorexia, and copious mucopurulent nasal discharge. They also have pus filled enlarged lymphnodes that can make breathing difficult. Horses generally have a fever (102 to 106) and are lethargic before the abscesses drain. Most horses recover but some may develop internal abscesses (bastard strangles).

Vaccination appears to reduce severity and incidence by 50% during outbreaks. Reaction at the site of vaccination is common. Intranasal vaccination is available and should be given only after other injectable vaccinations to prevent contamination of the Strangles vaccine into the skin. Vaccination is not routinely recommended except where horses are at high risk or where there is a persistent Strangles problem. Foals at high risk can be vaccinated starting at 4 months and in a series 3 given 4-6 weeks apart. Adults can be vaccinated with an initial vaccination and 1-2 boosters given 2-4 weeks apart. All vaccinated horses should be revaccinated every 6 months. Following vaccination or natural exposure, certain individuals can develop purpura hemorrhagica, an acute, non-contagious syndrome caused by immune-mediated, generalized vasculitis. The signs include hives with pitting edema and subcutaneous hemorrhages. Immediate medical attention should be sought for horses suspected of developing purpura hemorrhagica.

### **Potomac Horse Fever-PHF (Equine Monocytic Ehrlichiosis)**

Potomac Horse Fever is caused by *Ehrlichia risticii*, a bacteria that lives in a parasite of freshwater snails and is transmitted by the parasite, not by horse to horse contact. The disease is seasonal during late spring and early fall in temperate areas. The disease is primarily along the waterways in the Northeast but has been found in other areas of the USA and Canada. The clinical signs include fever, lethargy, anorexia, abnormal gut sounds, diarrhea, colic (colitis), dehydration and laminitis.

Vaccinations are recommended in endemic areas or high risk animals. A 2 dose series 3-4 weeks apart and then every 3-4 months is recommended due to the short lived immunity. Foals are at low risk of acquiring the disease and it is recommended to wait until the foal is at least 5 months old to start vaccinating.

Treatment consists of antibiotics and supportive therapy including IV fluids. Keeping horses away from freshwater streams and ponds can aid in the prevention of PHF.

### **DENTAL CARE**

Routine dental care is essential to your horse's health. The domestication and confinement of horses has led to changes in their eating patterns, food types and natural selection for optimal anatomical configuration. So, now more than ever, periodic examinations, corrections and regular maintenance are especially necessary in order for your horse to be comfortable, utilize its feed more efficiently, perform better and live longer.

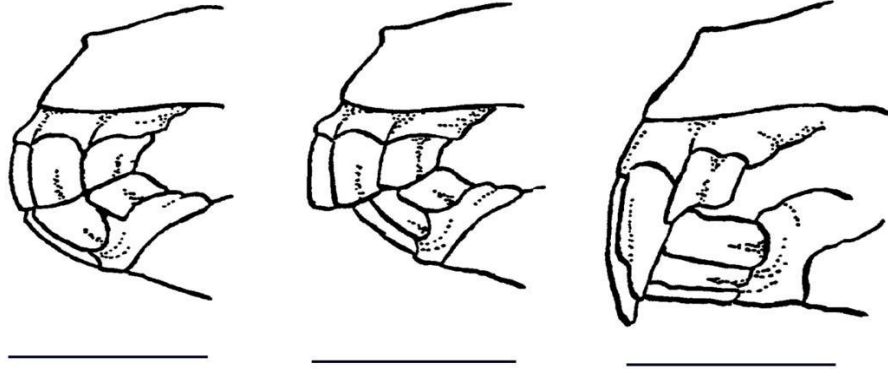
Horses have 2 sets of teeth, baby teeth or deciduous and adult or permanent teeth. Permanent teeth continue to "grow" or erupt until the horse reaches his 20's. The front teeth or incisors are used for shearing off forage. The canine teeth or Bridle teeth are located behind the incisors. Wolf teeth are the horse's first premolars. If not removed, wolf teeth interfere with the bit and cause the horse pain when the bit knocks against them. The cheek teeth or premolars and molars are used to grind the food before swallowing.

Due to the horse's particular anatomy (for example parrot mouth or sow mouth), the fact that the upper jaw is wider than the lower jaw, and since the teeth continue to erupt some surfaces become more worn than others. The results are the common problems that we see for example enamel points, hooks, uneven bite planes, long teeth, poor alignment and subsequent gum

disease. Some key signs of horses with dental problems include pain or irritability, difficulty chewing, dropping feed from their mouths, excessive salivation, undigested feed in manure, head tilting and poor performance. They may also have a foul odor to their breath, facial swelling or traces of blood in their mouths. Some horses do not show a sign of teeth problems which is a main reason for periodic exams and maintenance.

“Floating” teeth is a term used to describe filing the teeth. Complete dental includes “floating” in addition to grinding the biting surfaces and maintaining natural alignment. To insure that your horse is receiving good dental care, talk to your veterinarian or veterinary dental specialist. As the horse ages there are various maintenance issues that arise. Young horses are losing teeth and often those teeth do not fall out on their own. This can cause problems with the adult tooth trying to erupt and cause problems for the adult teeth as well as discomfort to the horse. These caps should be removed. Older horses can suffer from gum disease and loose teeth. Since horse’s teeth erupt for many years a lost tooth will allow the opposing tooth to erupt into the space of the missing tooth. This will stop the horse from chewing by blocking the chewing motion. A good dental maintenance program can help you avoid major dental problems as well as other systemic problems that can arise from poor dental health such as colic and other digestive issues.

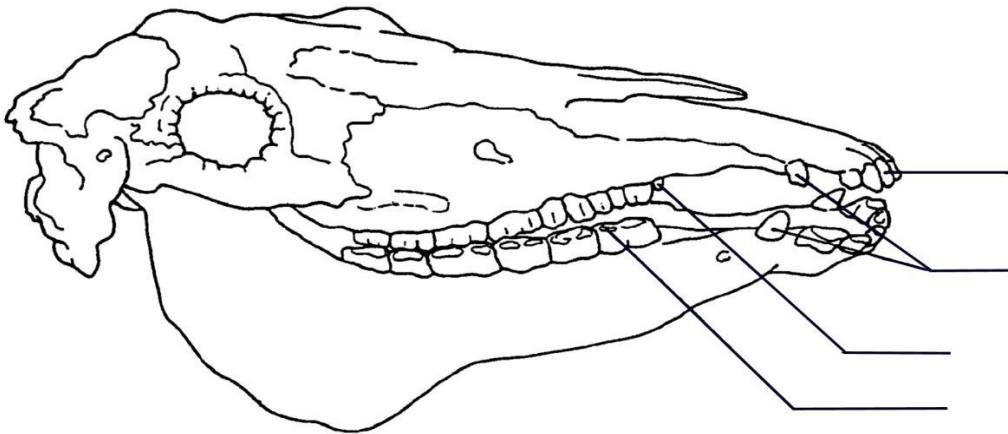
## The Equine Mouth



Match the description with the correct structure.

- A. Over-Bite Mouth
- B. Parrot Mouth
- C. Normal Mouth

- 1. Bridle Tooth or Tush
- 2. Wolf Tooth
- 3. Incisors
- 4. Molars





# A HORSES AGE

*To tell the age of any horse  
Inspect the lower jaw of course.*

*Two middle nippers you'll behold  
Before the colt is two weeks old.*

*Before six weeks two more will come;  
Twelve months the corners cut the gum.*

*At two the middle nippers drop;  
At three the second pair can't stop.*

*At four years old the side pair shows;  
At five a full new mouth he grows.*

*The side two pairs at seven years,  
And eight will find the corners clear.*

*The middle nipper, upper jaw,  
At nine the black spots will withdraw.*

*At ten years old the sides are light;  
Eleven years finds the corners white.*

*As time goes on the horsemen know,  
The oval teeth three-sided grow.*

*They longer get, project before,  
'Til twenty when we know no more!*

*~~~~Author Unknown~~~~*



2 Weeks



6 Weeks



8 Months



3 YR



4 YR



5 YR



6 YR



7 YR



8 YR



9 YR



10 YR



11 YR



15 YR



21 YR



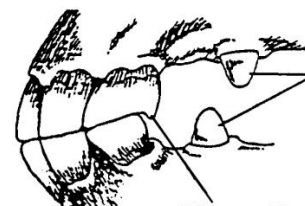
30 YR



Young Horse



Old Horse



Tushes

"Seven Year Hook"



Galvayne's Groove

Preventive maintenance starts in the young horse at 2 or younger depending on the horse's dental conformation or problems.

## **DEWORMING**

Internal parasites are the silent killers. They cause extensive damage without you even knowing that your horse is heavily infected. Signs of infestation include dull hair coat, unthriftiness, anemia, poor growth, colic and death. They also decrease the horse's resistance to infection and disease, decrease the horse's ability to maximize nutrition and cause permanent damage to internal organs. A good deworming program is as important as providing clean and high quality feed and water!

There are many deworming protocols. The important factor is exposure and consistency. You can have your veterinarian perform a laboratory test to determine the type and worm load in your horses by doing a fecal egg count and identification. The current recommendations include every 2-3 month paste or liquid deworming or using the continuous low dose in the feed products. It is important to understand that most of the damage by intestinal parasites is caused by the migration through the organs by the immature forms of these worms called larvae.

The larvae of the large and small strongyles migrate through the blood vessels and cause scarring in the intestinal blood vessels. This damage can lead to loss of blood supply resulting in organ death. One of the more common surgical problems seen in horses-Colic is often caused by larval migration resulting in damaged and dead bowel.

Clean stalls and a clean water supply cuts down on recontamination. Using feeders off of the ground, keeping foals and weanlings separate from older horses will decrease exposure, composting manure away from pastures and keeping a high acre to horse ratio will help in decreasing the contamination. Frequent deworming with a broad spectrum dewormer will eliminate a majority of parasites.

## **Types of Internal Parasites**

The most important parasites in terms of health risks are the large and small strongyles, ascarids and tapeworms. Most worms have an egg that is picked up from the environment, swallowed and mature into an immature form called larvae inside the horse. The immature forms will often migrate out of the intestine, cause damage and then migrate back to the intestine as adults, produce eggs and the eggs are eliminated by the horse in the feces. The cycle then starts again. Large Strongyles also called bloodworms or redworms, as larvae penetrate the bowel and migrate along the blood vessels that supply the intestines. A small number can cause extensive damage.

Small Strongyles do not migrate through the tissues. They tend to burrow into the intestinal lining and remain dormant or "encyst". Encysted larvae are not affected by most of the dewormers. When large numbers of encysted larvae emerge, they cause severe damage and the horse suffers severe colic and diarrhea. Ascarids also called round worms are a problem in young horses. The adults which are several inches long can cause blockages in the intestine (impactions). The larvae also migrate through the lungs and cause pneumonia. Colic in foals over 3 months is common as is a pot belly appearance and rough coat.

Tapeworms cause both surgical and medical colics. The horse eats the tiny mite that lives in the grass, hay or grain and the tapeworm resides inside the mite. Treatment for tapeworms involves seasonal timing and specific de-wormers.

Other internal parasites include lungworms that cause coughing. Donkeys are the natural host meaning that they do not show signs. Pinworms lay eggs on the skin around the anus and causes irritation and tail rubbing. Bots can cause damage to the stomach and mouth lining. Bot eggs are laid on the horse's skin by the bot fly and are licked up by the horse. Threadworms are mostly a problem in young foals causing diarrhea.

### **External Parasites**

Flies are the most common external parasite and cause not only a nuisance but spread disease. Mosquitos and lice also cause irritation and diseases in the horse. Good manure management and the use of pesticides help in controlling pest populations. The use of fly predators is an alternative method. Standing water invites mosquito breeding; control of standing water is helpful in decreasing mosquito populations.

## **ANATOMY AND CONDITIONS OF THE HORSE**

### **DISEASES**

#### **EPM-Equine Protozoal Myeloencephalitis**

This is a difficult disease to diagnose because the signs mimic other equine diseases and the signs can be mild to severe in nature. More than 50 % of horses have been exposed to the *Sarcocystis neurona* protozoal parasite that causes EPM. It is not a contagious disease, it is spread by the definitive host, the opossum, which acquires the organism from scavenging carcasses of cats, raccoons, skunks, armadillos, seals and sea otters. Only a small percentage of horses exposed to the protozoa will develop signs. Most horses will mount an immune response and combat the disease before it has a chance to get a foothold. Stressed horses can quickly succumb to the disease while others can harbor the infection only later to develop signs of the disease. The infective stages of the organism, the sporocysts, are passed in the opossum's feces. The horse comes in contact with the infective sporocysts while grazing or eating contaminated feed or water. The sporocysts get into the blood stream and enter the brain where they attack the horse's central nervous system.

Clinical signs depend on the area of the brain that has been affected and include: incoordination, spasticity, abnormal gait or lameness, muscle atrophy, paralysis of facial muscles, difficulty swallowing, abnormal sweating and seizures. Horses may show a worsening or weakness when going up or down slopes or when the head is elevated. They also may show a head tilt or lean against walls for support.

The progression of the disease depends on the number of organisms ingested, how long the horse has had the disease before treatment, where the damage has occurred in the brain and spinal cord and the general stress in the horse's life.

The diagnosis involves a thorough physical exam by your veterinarian, blood and CSF (cerebrospinal fluid) analysis. Treatment is best begun as early as possible. There are several treatment regimens available.

Prevention includes keeping feed in a closed and sealed container, use feeders that minimize spillage or contact with animal access, feed heat treated feeds, keep waterers clean, maintain optimal health and fitness and schedule regular appointments with your veterinarian.

### **EVA-Equine Viral Arteritis**

EVA is a contagious respiratory and abortion disease of horses. Standardbreds seem not to show clinical signs but act as carriers. Other breeds including Thoroughbreds do not seem to carry the disease, but show fulminant signs when infected. The virus is of special concern because it can cause abortion in pregnant mares, death in young foals and establish a carrier state in stallions. Outbreaks are difficult to diagnose because the signs are similar to clinical signs in other diseases such as Rhinopneumonitis, Influenza and EIA. Fevers, loss of appetite, depression, skin rash, diarrhea and edema are common. Aerosolized virus can be transmitted from horse to horse. Carrier stallions can transmit the virus to mares either through natural breeding or artificial insemination.

As with other viral infections, rest, supportive therapy and antibiotics for secondary bacterial infection are the most common treatments.

In the mid 1980's a large outbreak of EVA prompted the development of a modified-livevirus vaccine. Horses must be negative for the virus prior to vaccination. Vaccination of stallions and mares is a safe way to control the disease.

### **EIA-Equine Infectious Anemia (Swamp Fever)**

EIA is a disease that threatens the world's horse, donkey and mule populations. Even though there are excellent testing and eradication methods in place, more than 500 new cases are identified each year. There is no cure for EIA and most horses show no symptoms yet they remain contagious for life. For this reason the USDA requires euthanasia or strict lifelong quarantine for horses testing positive for EIA.

Equine Infectious Anemia is a potentially fatal viral disease that attacks the immune system. It causes inflammation to vital organs and secondary infections like pneumonia.

EIA has 3 forms: Acute seen within 4 weeks of exposure, Chronic horses are those that survive the acute phase and show fever, weight loss, depression, hemorrhages in the mucous membranes with repeated flare-ups and Inapparent which are carriers for life and serve as a source for infection for other horses.

EIA is transmitted by blood or placental transfer. Blood sucking insects such as flies and mosquitoes, contaminated needles and instruments, semen and milk can transmit the disease. The way to accurately determine if a horse is infected with the EIA virus is through a blood test called The Coggins Test. A negative Coggins test means that there are no detectable antibodies

and the horse is clear. A positive test indicates that a horse is a carrier and is infected. It is up to the State Veterinarian to determine the course of action for a positive test.

The USDA requires that any horse being imported from a foreign country have a negative Coggins Test. Each state has its own requirements regarding interstate movement and EIA testing. By law, EIA is a reportable disease and all positive cases must be filed with the state veterinarian and the Federal Animal and Plant Health Inspection Service (APHIS).

Since there is no cure and there are very few options should your horse test positive, prevention is crucial. All new horses should be quarantined, use only disposable needles and syringes, sterilize all instruments, test all horses yearly, test any horse at a prepurchase examination, require any new horse in your barn to be negative.

### **Botulism**

The soil-borne, spore-forming bacteria *Clostridium botulinum* causes 3 forms of botulism. Shaker foal syndrome results from the action of the toxins released by spores of the ingested bacteria or through entry of spores via the umbilical cord. "Wound Botulism" is caused by toxins of these spores acquired through a contaminated wound. Forage botulism is caused by the ingestion of toxins present in decaying plants or animals in the feed. Botulinum toxin is the most potent biological toxin known. It acts by blocking nerve impulses leading to weakness, inability to swallow, stumbling, muscle tremors and frequently death.

Shaker foal Syndrome is a significant problem in Kentucky and the mid-Atlantic seaboard states in foals between 2 weeks and 8 months. The vaccine (toxoid) is used to prevent this syndrome by vaccinating pregnant mares.

Horses with clinical signs of Botulism can be treated with an anti-toxin and antibiotics. The anti-toxin is not effective on toxin that is already inside the nerves, so clinical signs may persist until the toxin has acted at the end of the nerves.

### **Anthrax**

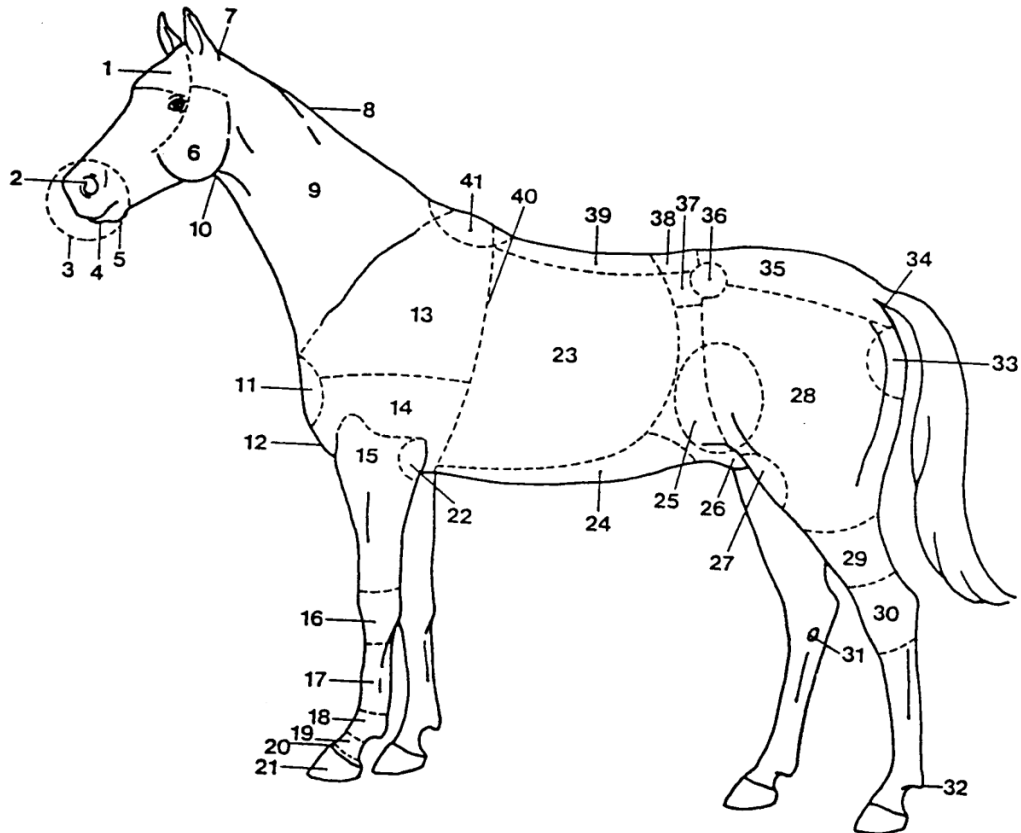
*Bacillus anthracis* causes a serious and rapidly fatal infection that enters the blood stream via ingestion or wound contamination. Vaccination is only indicated for horses that live in endemic areas. There is no vaccine licensed for use in horses, but the cattle strain is used and there is evidence that suggests it affords the horse protection.

### **Rotavirus**

Equine rotavirus causes a foal diarrhea that accounts for about 50% of all foal diarrheas. It is transmitted via fecal-oral contamination and damages the small intestine resulting in maldigestion, malabsorption and diarrhea. Vaccination of pregnant mares has shown to decrease the incidence of disease in foals that have nursed from those mares.

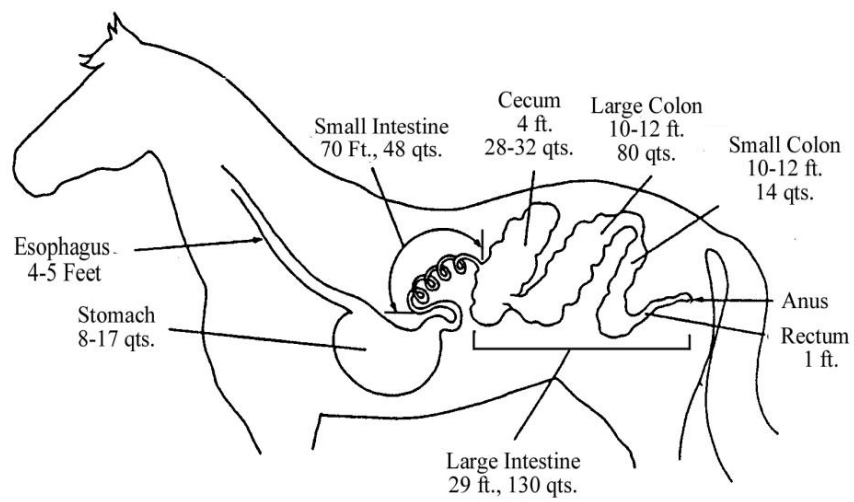
## DIAGRAMS

### Parts of the horse

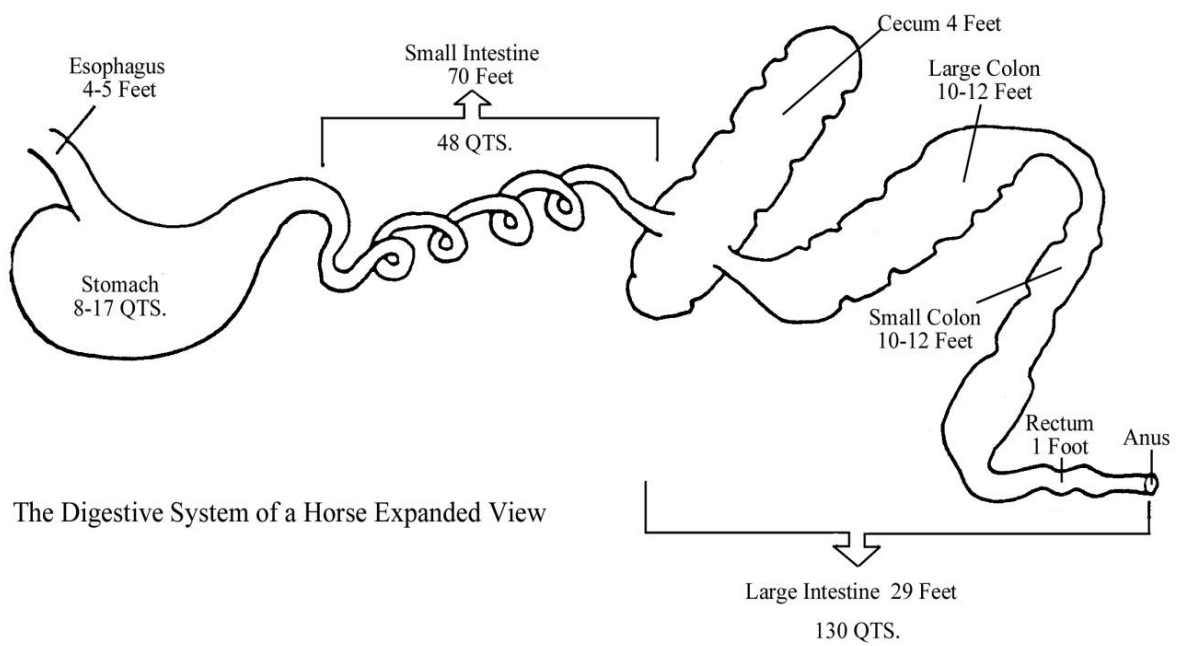


#### Parts of the horse

- |                 |                       |            |                      |
|-----------------|-----------------------|------------|----------------------|
| 1. Forehead     | 11. Point of Shoulder | 21. Hoof   | 31. Chestnut         |
| 2. Nostril      | 12. Chest             | 22. Elbow  | 32. Ergot            |
| 3. Muzzle       | 13. Shoulder          | 23. Barrel | 33. Point of Buttock |
| 4. Lower Lip    | 14. Upper Arm         | 24. Belly  | 34. Dock             |
| 5. Chin         | 15. Forearm           | 25. Flank  | 35. Croup or Rump    |
| 6. Cheek, Jaw   | 16. Knee              | 26. Sheath | 36. Point of Hip     |
| 7. Poll         | 17. Cannon            | 27. Stifle | 37. Coupling         |
| 8. Crest        | 18. Fetlock Joint     | 28. Haunch | 38. Loin             |
| 9. Neck         | 19. Pastern           | 29. Gaskin | 39. Back             |
| 10. Throatlatch | 20. Coronet           | 30. Hock   | 40. Heart Girth      |
|                 |                       |            | 41. Withers          |

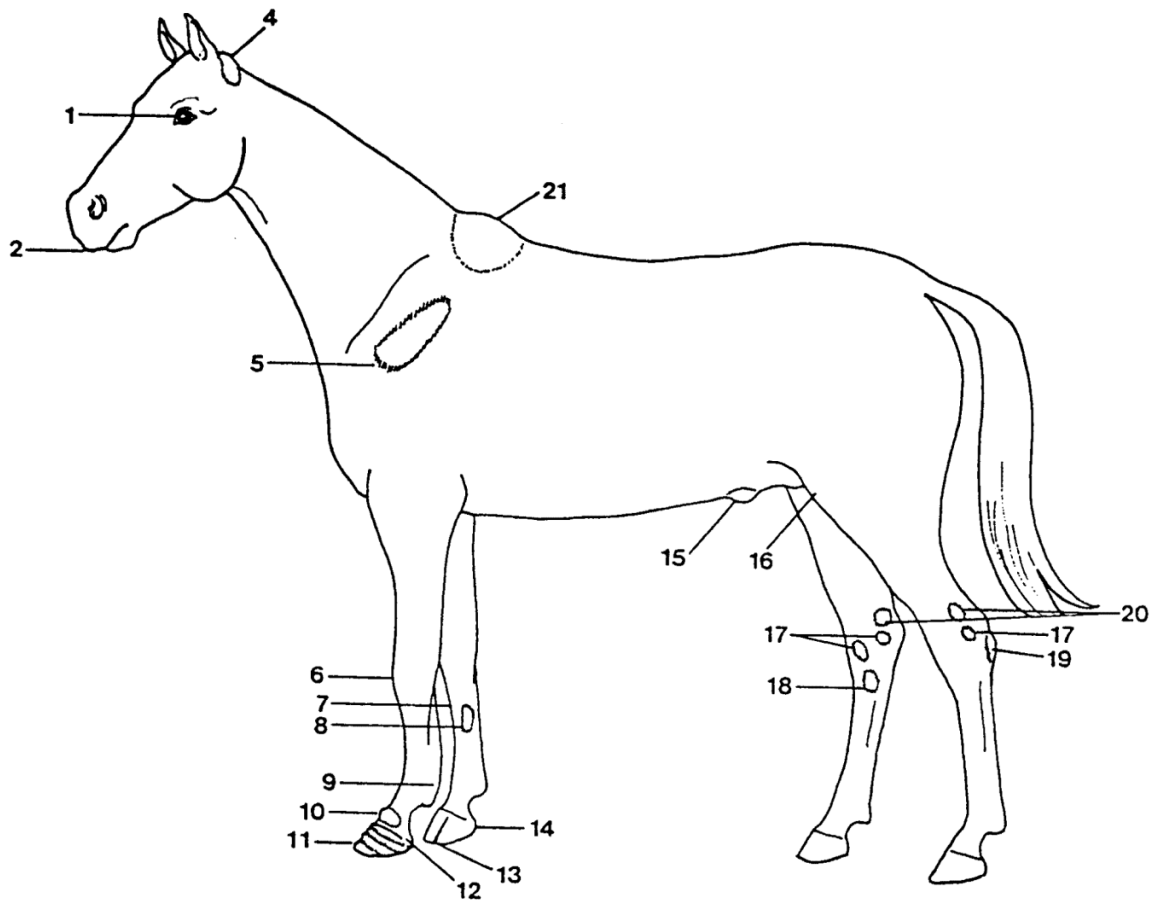


The Digestive System of a Horse



The Digestive System of a Horse Expanded View

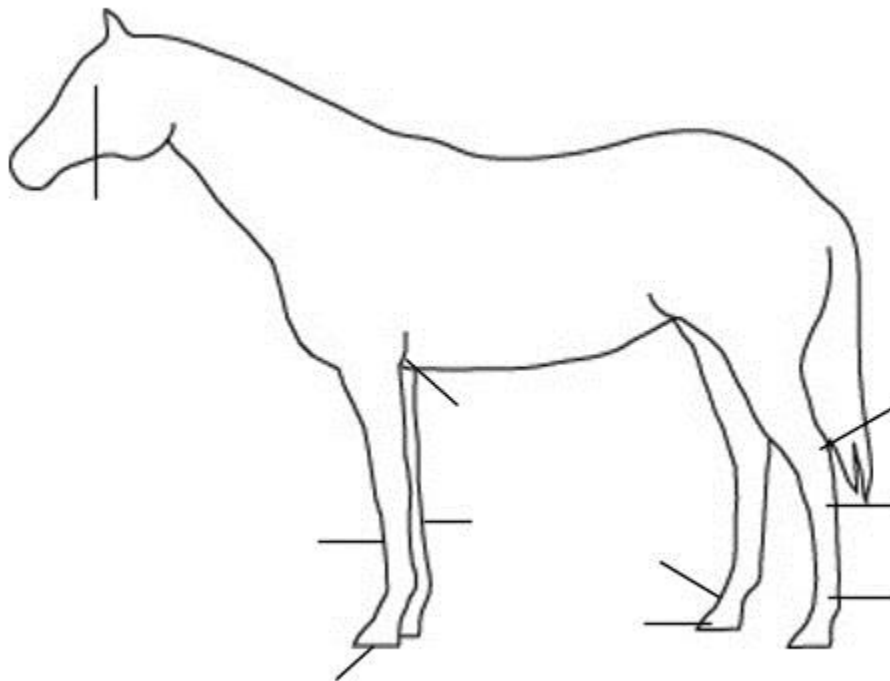
# Unsoundness in the Horse



## Unsoundness in the Horse

- |                              |                     |                        |
|------------------------------|---------------------|------------------------|
| 1. Blindness                 | 8. Splint           | 15. Hernia             |
| 2. Parrot Mouth              | 9. Bowed Tendon     | 16. Stifle             |
| 3. Undershot Jaw (not shown) | 10. Ring Bone       | 17. Bog Spavin         |
| 4. Poll Evil                 | 11. Founder         | 18. Bone Spavin        |
| 5. Sweeney                   | 12. Sidebone        | 19. Curb               |
| 6. Bucked Knee               | 13. Quarter Crack   | 20. Thoroughpin        |
| 7. Calf Knee                 | 14. Contracted Heel | 21. Fistula of Withers |



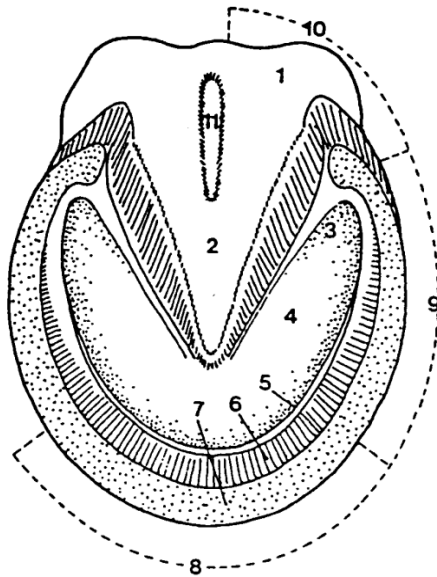


**Figure 1 Injury or Affliction of a Horse**

You will have to know the particular injury or affliction of a horse, and label it on a diagram. You will have to label the following injuries:

- Shoe boil
- Bowed tendon
- Laminitis
- Corneal ulcer
- Bucked shins
- Thrush
- Bog spavin
- Wind puffs
- Curb
- Osselet

You will need to label the following parts of the hoof.

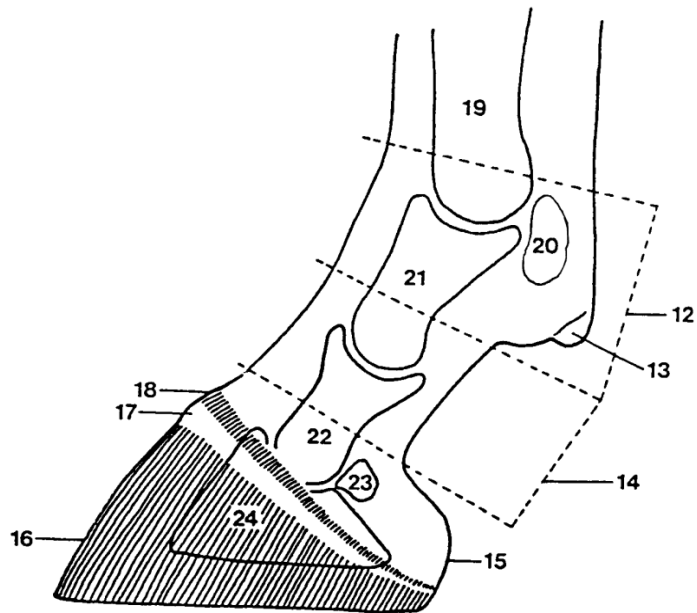


#### Parts of the Hoof

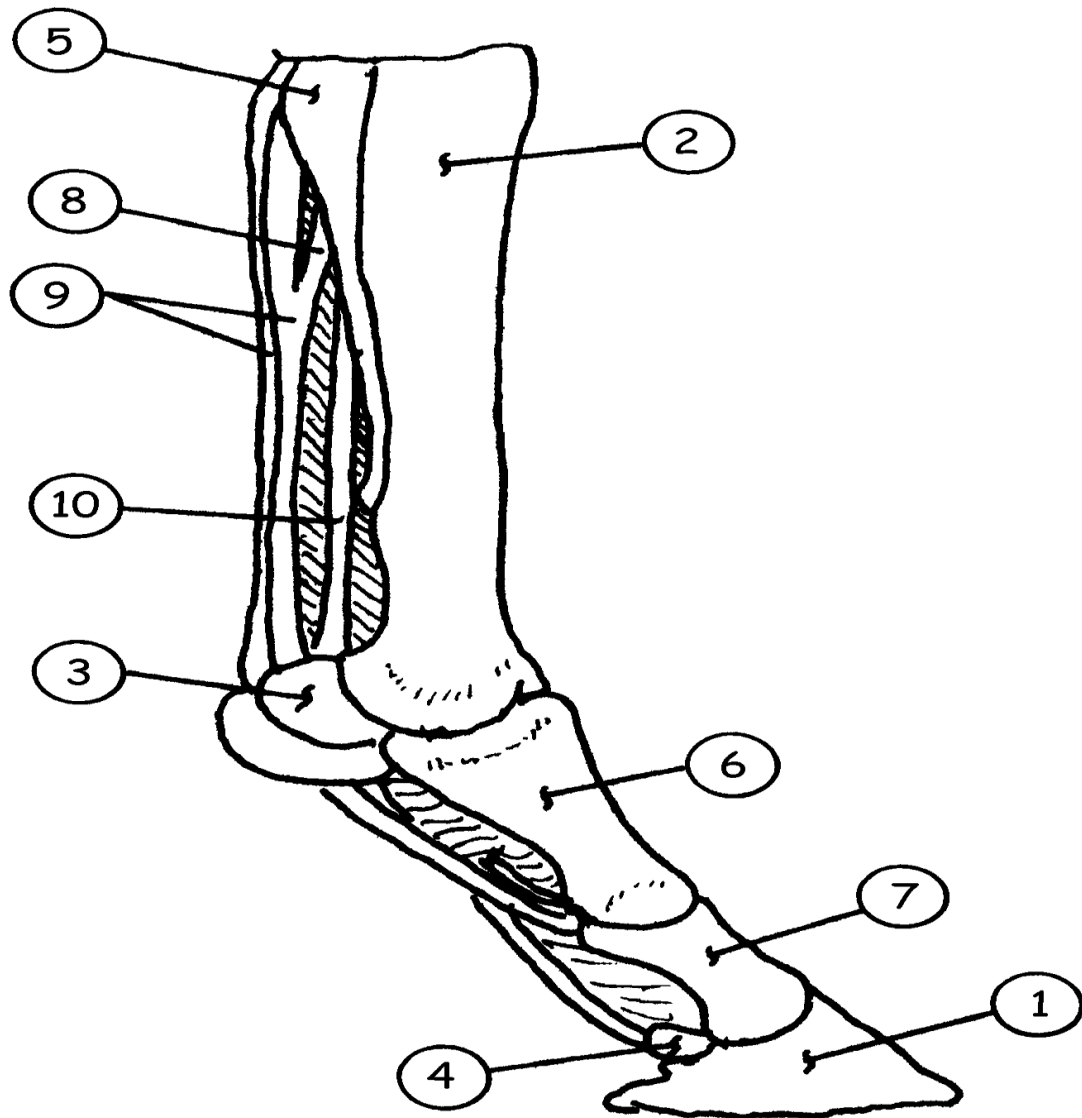
1. Bulb of Heel
2. Frog
3. Bars
4. Sole
5. White Line
6. Laminae of Wall
7. Wall
8. Toe
9. Quarter
10. Heel
11. Cleft

#### Parts of the Lower Leg

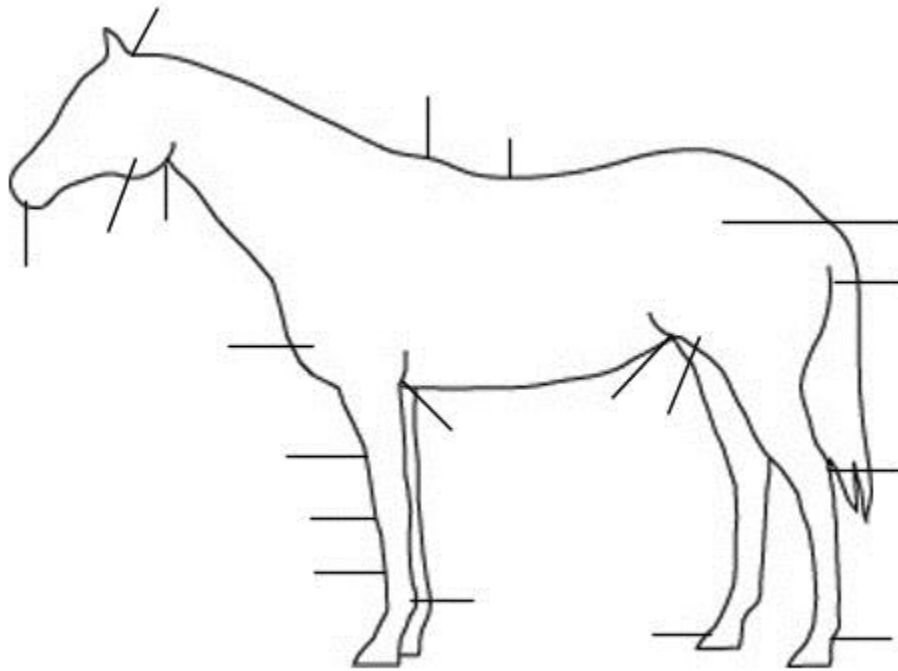
12. Fetlock
13. Ergot
14. Pastern
15. Heel
16. Wall
17. Periople
18. Coronet
19. Cannon Bone
20. Proximal Sesamoid
21. First Phalanx
22. Second Phalanx
23. Navicular
24. Coffin Bone



## The Equine Distal Forelimb Structures



- |  |  |
|--|--|
| 1. Coffin Bone                         | 6. First Phalanx (Long Pastern Bone)   |
| 2. Cannon Bone                         | 7. Second Phalanx (Short Pastern Bone) |
| 3. Sesamoid Bone                       | 8. Check Ligament                      |
| 4. Distal Sesamoid bone                | 9. Back Tendons (Superficial and Deep) |
| 5. Small Metacarpal Bone (Splint Bone) | 10. Suspensory Ligament                |

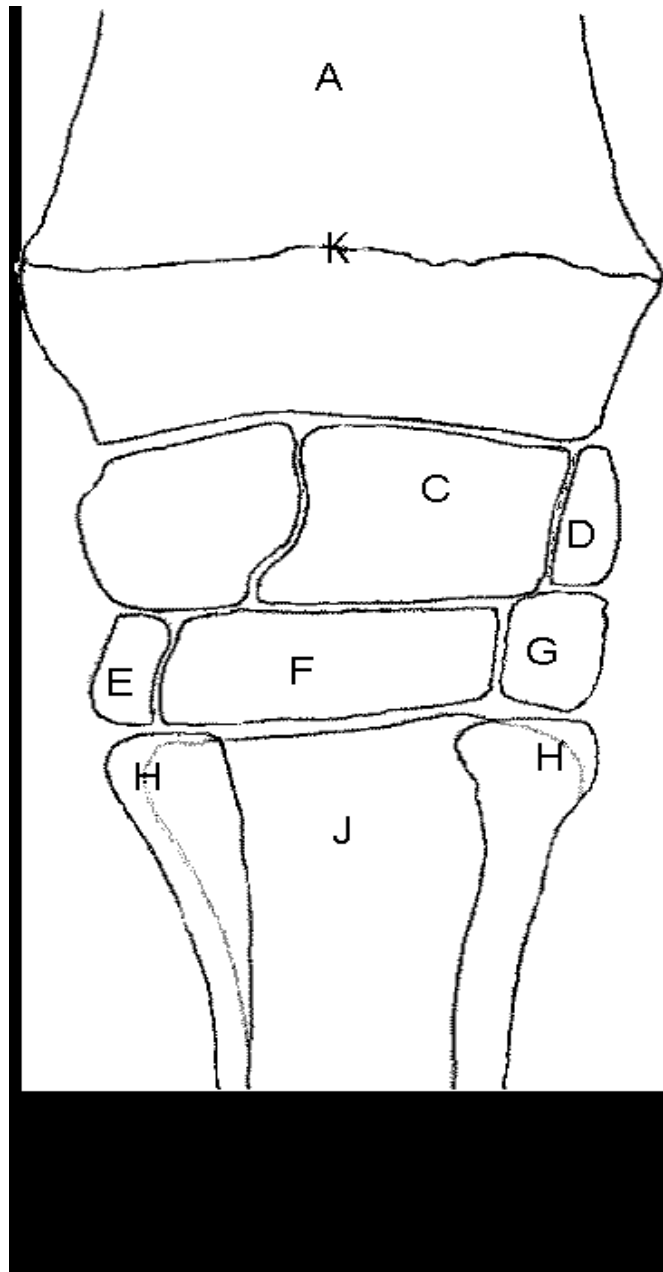


**Figure 2** Parts of a Horse

You will need to know the names of the parts of a horse listed in the diagram above. Parts may include knowing the following body parts:

- Coronet
- Pastern
- Cannon
- Muzzle
- Withers
- Poll
- Cheek
- Knee
- Fetlock
- Forearm
- Stifle
- Hock
- Elbow
- Point of buttocks
- Point of shoulder
- Throat latch
- Flank
- Hip
- Back

## Bones of the Horse Carpus (Knee)



Label the following:

Radius  
Radial Carpal Bone  
Intermediate Carpal Bone  
Ulnar Carpal Bone  
Third Carpal Bone  
Fourth Carpal Bone  
Splint Bones  
Cannon Bone

## The Head and Neck

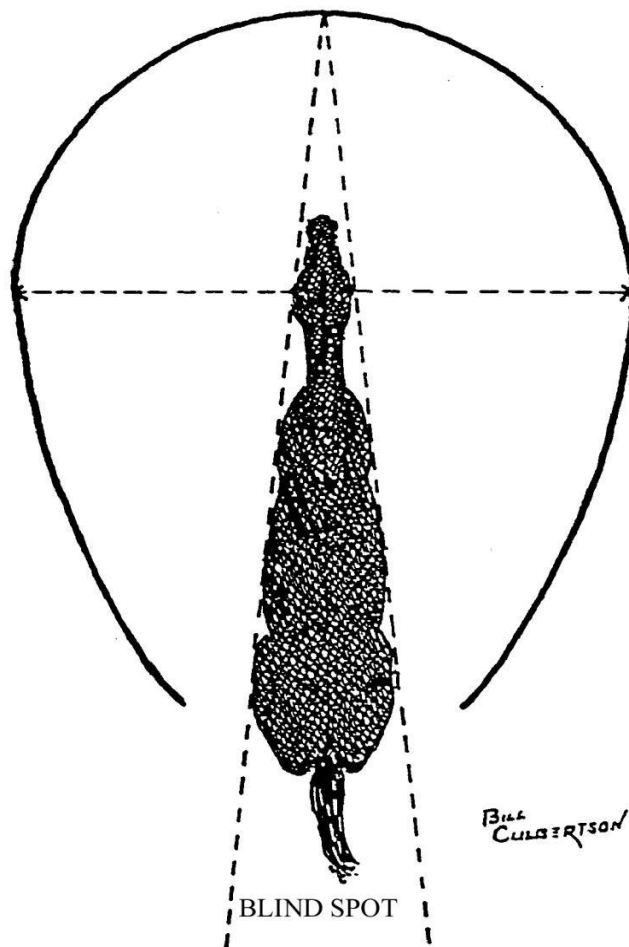
The head and neck serve the same purpose on the horse as on other animal species. So far as behavior is concerned the most important feature of this portion of the horse's physical make-up is the eye.

The eyes of the horse are rather large and are set wide apart on the sides of the head. This gives the horse monocular vision or the ability to see separate objects with each eye at the same time. The horse can also see anything behind it that is not narrower than its body. The horse does not have binocular vision except when interested or excited enough to lift its head and point its ears forward. In such case, the object must be some distance away and not closer than four feet. Likewise, the horse cannot see directly downward and, therefore, can't see what it's eating. Neither can a high-headed horse see the ground in front of it.

The horse, because of its abilities to make a quick getaway, has no need for acute vision, as does man. However, its ability to see objects on either side at once, and to the rear, is a prime feature of its ability to survive.

It is believed that horses do not all have perfect eyesight. No doubt poor eyesight may have an effect on the behavior of certain horses. Shying at unfamiliar objects may be the result of faulty vision.

By reason of being ever alert to danger, the horse, through its eyesight, is very sensitive to quick movements. Any training procedure involving quick motions such as roping or polo must, therefore, be started slowly and speeded up only after the horse has become familiar with the motion.



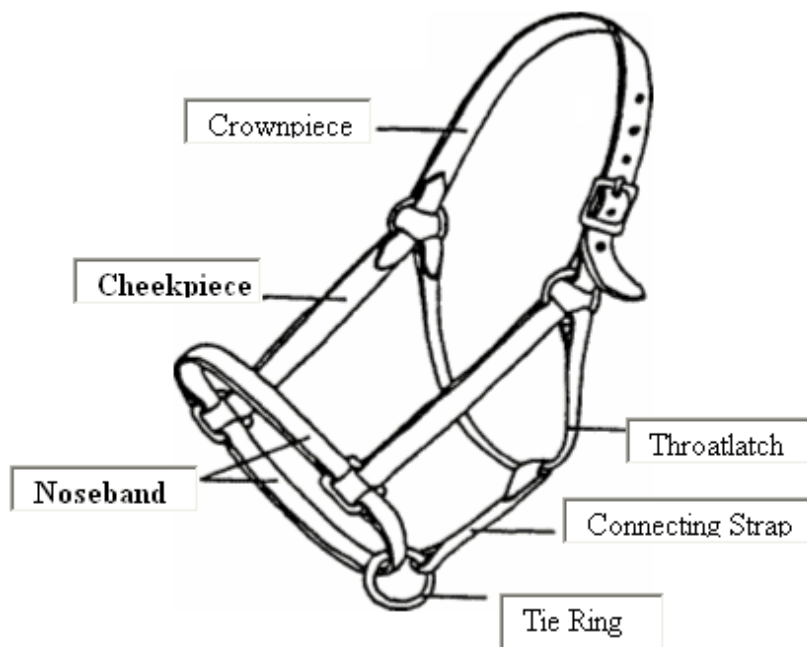
Range Of Vision Of The Horse

## EQUIPMENT

### Halters and Leads

Halters and Leads are available in several materials and at various prices.

Rope halters are inexpensive and come in many sizes. They are difficult to keep clean, may rot and mildew and sometimes shrink when wet. If they shrink, they may cause pain or choking. A similar type is made of nylon rope, which is easily cleaned and not affected by dampness. The size adjustment may slip, so check the fit periodically.



Nylon web halters are made like leather halters but are cheaper, last longer and are easy to clean. Matching leads come with (or without) a short length of chain. A flat nylon lead, even when tied with a quick release knot, may be very difficult to untie and the edges may cut bare hands. Leather halters have many adjustments for proper fit. They require more care and must be inspected and cleaned regularly.

Halters are constructed in many sizes according to age, type or weight of the horse. The noseband of the halter should be about two inches below the bony point of the cheek. If it is too high it may rub against the cheek and irritate it. If the noseband is too low it may restrict breathing or the halter may slip off. The noseband should not be so loose that it fails to give good control. Never leave a halter on a loose horse as it may catch on something. If the horse catches a foot in a halter it could die in a short period of time.

Halter ropes should be at least ½ inch in diameter and 6 to 10 feet long with a heavy-duty snap. Nylon ropes are stronger than cotton or manila. A lunge line allows the horse to be exercised or trained in a circle without a rider while the handler stands in the center. The rope or nylon line should be about 40 feet long.

## **EQUIPMENT**

There are a variety of different types of equipment that is used on the racehorse. As a trainer you will often have horses that require added or special types of bits, horseshoes, blinkers, wraps, etc. In this study guide we will only refer to some of the more common types of tack and equipment.

**a. Horseshoes.** Racehorses wear aluminum racing plates when actually racing. Often when a trainer is breaking or starting a young horse out he will use lightweight steel training plate. There are far too many different types of plates to list in this study guide. As a trainer you work with a farrier (blacksmith, plater) to determine the needs of each horse. The following are the more common used racing plates.

**Regular Toe** is the most popular style front plate used.

The **Wedge** raises and protects the heel with a solid tapered design. It allows the hoof to roll over faster and reduces tendon and muscle strain. Also used in horses with low heels.

**Queens Plate** is for tracks that do not allow inserts, calks or toe grabs that protrude above the plate. These are usually used on turf courses.

**World Racing Plate**, for front hooves is designed from observing the natural hoof wear of horses in the wild. It provides easier break over, reduced leg fatigue and reduced chance of bucked shins.

**Front Jar Calk** shoe is used on extremely wet, muddy or sloppy racetracks. Jar Calks can add stability and traction for the racehorse. These shoes are usually removed when the track condition improves. On off track conditions you must declare the use of this shoe.

**Hind outside sticker** is used for control of side slipping on turns especially on deep or muddy racetracks.

**Hind Block** shoes are used to lift the heels and prevent excessive heel grab or running down.

**Hind shoes with side clips** will help the nails hold the shoe in place. Help to keep the shoe from twisting or sliding back. Recommended for wall kickers and large hooves.

**b. Bits.** There are many different types of bits that are used on the racehorse. Trainers will use the bit that they feel the horse will respond to the best or may change based on the running style or temperament of the horse. The following are some of the more common used bits.

D – Bit (Snaffle) - One of the most common bits used on racehorses. There are several variations of this bit.

Ring Bit – Used when more control is needed primarily from side to side such as when a horse is either getting in or out.

Rubber D Bit - Used when a horse has a very sensitive or sore mouth.



Sliding Leather Bit – Used when more control is needed when a horse is getting in or out. When the bit slides through the leather tube, and extends further out on either side, a higher degree of leverage is attained.

**c. Racing Bridle.** Bridles are usually either leather or nylon. Racing bridles are equipped with special reins that are longer and have a section covered with rubber that allow for the jockeys or exercise riders to grip the reins better. Bridles consist of the headstall, brow band, chinstrap, and reins. Often a noseband (caveson) is also used with the racing bridle. The noseband is tightened around the horse's nose and aids in keeping their mouth closed.

A new advancement has been made recently to aid the riders when the reins break. A key feature to the new **safety rein** is a snap hook attached to a second reserve rein. The reserve rein or line is anchored inside the original rein or line and emerges from the original rein or line at the buckle where the snap hooks attaches to the bit. The snap hook and reserve rein extend beyond the end of the loop from the original rein or line at the bit and in the event that the reins break, the reserve rein is designed to assist the rider to maintain control of the horse.

**d. Blinkers.** Many horses race in blinkers. These are hoods that fit over the horse's ears with openings for their ears and eyes. The eye openings have cups placed to the outside in various sizes. The most common type of cups is full cups, 3/4 cups, 1/2 cups, and French cups. Blinkers are placed on horses to limit their vision behind them or to the sides. Often trainers cut slits into the cups of the blinkers to allow the horse to have some vision and see other horses coming up along side of them. If you have a horse that tends to get out or bolt on the turns you may want to use some type of extended blinker cup. The following are some of the reasons a trainer might use blinkers on a horse:

- Horse looks around too much and has problems concentrating on racing.
- Horse is shy when the rider moves around while mounted or uses his whip.
- When a horse is getting in or out.
- Shies or is intimidated by other horses.

**e. Shadow Roll.** A large fur cover that is placed over the nose band and adjusted so that it is located on the bridge of the nose or higher. This causes the horse to look further down the track and not notice or shy from shadows or lights on the track.

**f. Figure Eight.** A leather noseband that goes around the horse's nose and mouth like the shape of a figure eight. It is adjustable and when tightened helps to keep the horses mouth shut but also holds the bit higher in the horse's mouth.

**g. Breast Plate.** A leather strap that attaches to the girth on one side and goes across the horse's chest and attaches to the girth on the other side to help keep the saddle from sliding back on the horse.

**h. Martingale (rings).** A type of harness of leather straps that connects the horse's girth to the bridle reins that is designed to keep the horse from throwing up his head. Helps the riders to maintain control over the speed that the horse travels during training.

**i. Wraps.** There are various types of wraps used on the racehorse. There are standing bandages that are used when applying a variety of ointments, braces, and etc. to the legs. These are used while the horse is in the stalls. Again if you walk through the barn area you will see various types of these bandages and it is usually a personal preference. The biggest issue with putting on any type of bandage is that it is put on properly so that there is no pressure put on the horse's tendon. There have been many racehorses whose career ended due to improper bandaging. Many trainers use polo bandages when the horse goes to the track for training. Again you must apply these bandages

properly. When a horse is in a race many of them require different types of bandages for protection while they are racing. The most common problem is when a horse “runs down”. This affects the back of the fetlock causing the hair and skin to be scraped off leaving a sore or blister. Trainers usually apply run down bandages when this happens. These are usually low bandages just covering the ankle area. Usually these are applied using vet wrap, elastoplasts or ace bandages. Again it is a personal preference. Often the trainers apply high front or hind bandages for support.

### **Measuring Height**

Mark a 6-foot stick in inches, with every 4 inches being a "hand." Stand the horse square on level ground with the head lowered. Hold the stick vertically beside the horse's shoulder. Place another short stick horizontally across the withers to the vertical stick. Read the mark under the horizontal stick. If it is 62 inches the horse is 15-2 hands (15 hands and 2 inches).

### **Shoes**

The old adage still holds true, “No foot, No horse.” Feet are a very important component of the horse’s anatomy and the ability of the horse to remain sound. Balanced shoeing for the particular horse and his conformation are essential for the sound performance horse.

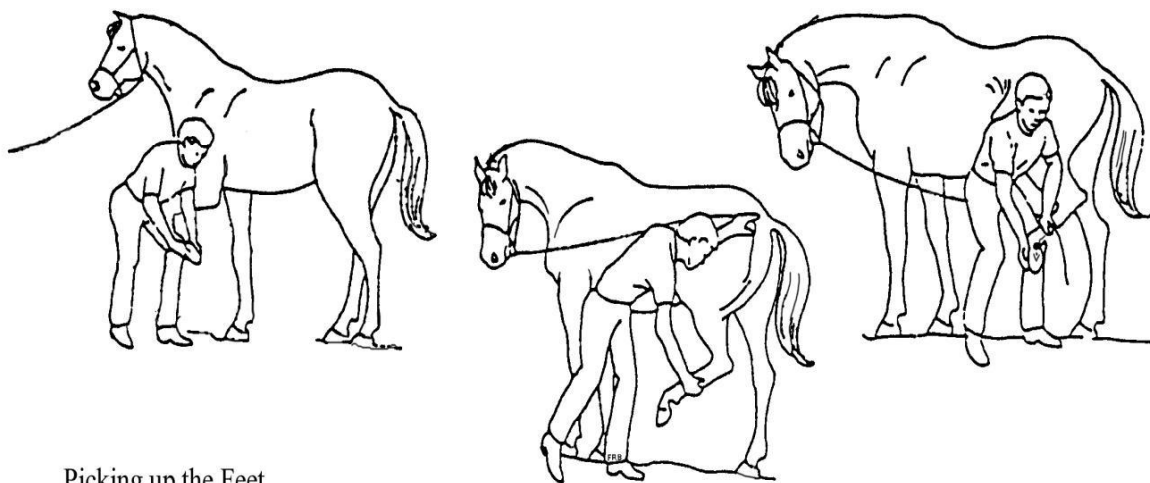
There are various thoughts on the types of shoes that best suit the horse for the different footings on tracks and training areas.

Bar Shoes are used for heel support for horses with heel problems such as navicular disease.

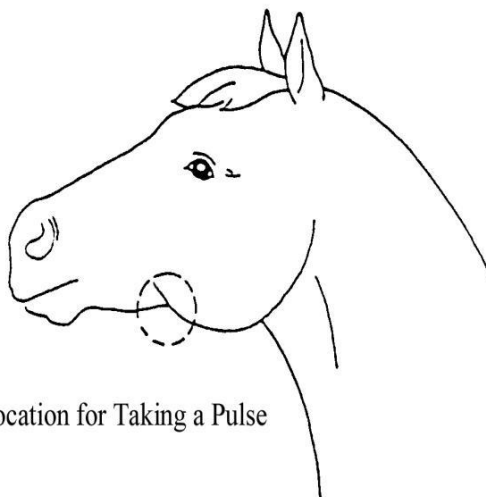
Because of their increased surface area, they can be slippery and decrease traction.

Toe Grabs are used for added traction on running surfaces. They can cause an imbalance to the foot which results in tendon and ligament problems.

Chalks are used for added traction and can cause excessive pressure on the wall resulting in cracks and bruises.



Picking up the Feet



One Location for Taking a Pulse

### **Types of Shoes:**

- “Front”: a standard plate fashioned with a toe and used on a fast or dry track. Also called a “plain.”
- “Outer rim front”: a variety of the front shoe. It has a grab around the outer rim to keep a horse standing level and to reduce the hoof shock. It can be used on either the turf or the dirt.
- “Jar caulk”: a shoe used on the front hooves for muddy and sloppy tracks.
- “Mud caulk”: a plate with a toe and a sharp sticker on the heel which gives the horse a better grip or tread on a muddy track.
- “Blocked heel”: a shoe constructed with a raised block behind and used to prevent horses from running down on their heels and to prevent slipping.
- “Inner rim front” and “inner rim block heel”: used to keep a horse standing level at all times. These are excellent plates on the grass.
- “Block heel sticker”: a plate that prevents a horse from running down and at the same time incorporates the features of the “mud caulk.”
- “Bar”: a shoe with a bar across the heel with or without stickers and used primarily for protection against quarter cracks.

### **Trainer Responsibility**

**CRCR 5.500** - Whenever the laboratory test results are obtained as indicated herein, there shall be a rebuttable presumption that the trainer and/or assistant trainer of the animal were responsible for the administration of the unauthorized medication. At any hearing conducted to determine responsibility for the administration of any unauthorized medication, unless other evidence of sufficient credibility and weight is presented to the contrary, the Board, a hearing officer, or the Commission may make a finding in accordance with the presumption.

**CRCR 5.502** – The trainer shall be responsible for and the absolute insurer of the condition of the animals entered for his or her stable regardless of the acts of third parties except as provided in these rules. If the chemical analysis of a sample indicates the presence of an unauthorized drug or medication regardless of the effect on the racing condition or the performance of a horse in a race, the trainer of the horse and any other person shown to have care or attendance of the horse or shown to have administered or conspired to have administered the drug are subject to disciplinary action. The owner of the horse shall not participate in the purse distribution of that race, a redistribution of that purse shall be ordered, and the horse shall be declared unplaced for every purpose except for pari-mutuel wagering. “Unplaced for every purpose” means any placement based upon the race would be declared invalid and the purse or prize for any such race would be returned. “Unplaced for

every purpose” includes, but is not limited to, any placement, purses or prizes that an owner may have earned in subsequent races, for which the horse would not have been qualified due to the presence of an unauthorized medication found in a previous race. A trophy received by the owner of the horse shall be returned.

**CRCR 5.504** - A trainer whose horse has been claimed remains responsible for any violation of rules regarding that horse’s participation in the race in which the horse is claimed.

**CRCR 5.506** – The trainer is responsible for:

- :1 Maintaining the assigned stable area in a clean, neat and sanitary condition at all times;
- :2 Using the services of those veterinarians licensed by the Commission to attend to horses that are on association grounds.

**CRCR 5.508** - Additionally, with respect to horses in his/her care or custody, the trainer is responsible for:

- :1 The proper identity, custody, care, health, condition and safety of horses;
- :2 Ensuring that at the time of arrival at locations under the jurisdiction of the Commission a valid health certificate and a valid negative Equine Infectious Anemia (EIA) test certificate accompany each horse and which, where applicable, shall be filed with the racing secretary;
- :3 Having each horse in his/her care that is racing, or is stabled on Association grounds, tested for Equine Infectious Anemia (EIA) in accordance with the jurisdiction’s law and for filing evidence of such negative test results with the racing secretary;
- :4 Using the services of those veterinarians licensed by the Commission to attend horses that are on association grounds;
- :5 Immediately reporting the alteration of the sex of a horse to the horse identifier and the racing secretary;
- :6 Promptly reporting to the racing secretary and the Division veterinarian when a Posterior Digital Neurectomy (heel nerving) is performed and ensuring that such fact is designated on its certificate of registration;
- :7 Promptly notifying the Division veterinarian of any reportable disease and any unusual incidence of a communicable illness in any horse in his/her charge;
- :8 Promptly reporting the serious injury and/or death of any horse at locations under the jurisdiction of the Commission to the stewards and the Division veterinarian and compliance with the rules in this chapter governing postmortem examinations;
- :9 Maintaining a knowledge of the medication record and status;
- :10 Immediately reporting to the stewards and the Division veterinarian knowledge or reason to believe, that there has been any administration of a prohibited medication, drug or substance;
- :11 Ensuring the fitness to perform creditably at the distance entered;
- :12 Ensuring proper bandages, equipment and shoes;
- :13 Presence in the paddock at least fifteen (**15**) minutes before post time or at a time otherwise appointed before the race in which the horse is entered;
- :14 Personally attending in the paddock and supervising the saddling thereof, unless excused by the stewards; and
- :15 Attending the collection of a urine or blood sample or delegating a licensed employee or the owner to do so.

**CRCR 5.110** - Every person having care and custody of a racing animal including but not limited to veterinarians, owners, trainers, assistant trainers, kennel helpers and grooms shall comply with the current animal health care and medication standards as adopted by the commission.

Failure to comply with the minimum procedures or standards approved, pursuant to this section, may result in a fine, penalty, or revocation of license.

Licensees will be provided written notice of any changes to the minimum procedures or standards approved, pursuant to this section, and will have thirty (30) days, unless otherwise specified, in which to comply with such changes.

**CRCR 5.120** - The division veterinarian shall have the authority to require follow-up care to any racing animal seen for injury or other reason. Any requirements so imposed by the division veterinarian shall be documented and give specific referral instructions and time frame to complete.

It will be the trainer's responsibility to seek adequate care as instructed by the veterinarian. Documentation shall be provided to the division veterinarian within 48 hours of treatment.

Failure to provide proper care to a racing animal, pursuant to this section, may result in a fine, penalty, or revocation of license.

## **Licensure of Trainer**

**CRCR 3.200** - Any applicant for licensure may be required by the Division to demonstrate knowledge, qualifications and proficiency related to the license for which application is made through an examination approved and administered by the Division or its designee.

**CRCR 3.206** - Applicants shall be fingerprinted

**CRCR 3.208** - Any applicant for a license may be required to establish age by the presentation of a certified birth certificate. The applicant shall also be required to establish proof of lawful presence.

**CRCR 3.212** - Any applicant for a license may be required to establish age by the presentation of a certified birth certificate. The applicant shall also be required to establish proof of lawful presence.

**CRCR 3.304** - The Commission or Division Director may deny a license to any person who demonstrates untrustworthiness or incompetency in the performance of the duties required of the applicant. The Commission or Division may require and procure any proof deemed necessary with reference to the truthfulness, honesty and competence of any applicant.

**CRCR 3.406** - Each supervisor, owner and/or trainer shall be held responsible for the licensing of every employee under their supervision and shall make every effort to insure that any of their employees who are discharged surrender their license(s).

**CRCR 3.426** - An owner, trainer, racing official, or other association employee shall not accept directly or indirectly, any bribe, gift, reward, favor or gratuity in any form which is intended to or might influence the results of a race.

**CRCR 3.500** - Owner(s) and trainer(s) must obtain a license prior to race time designated for the race in which the animal(s) is entered. There shall be no minimum age requirement for a horse owner license, so long as the parent or guardian of a minor under the age of sixteen (16) is licensed by the division as the authorized agent for the minor owner. An owner may be granted an extended period of time by the Division to obtain a license.

**CRCR 3.504** – A person under 18 is not eligible for a trainer or assistant trainer license, unless they get special permission from the Division.

**CRCR 3.506** - An applicant for the occupations of trainer or assistant trainer, if not so previously licensed, or if previously licensed and said license has been expired for more than three years, shall be given an examination, oral or written, by a Division Representative, who will administer a test to determine the applicant's qualifications. This will include a practical component given by the Stewards, and/or a Division Representative.

(1) Eligibility for applicants for license as a trainer:

(A) Shall be at least 18 years of age, and;

(B) Shall, in the case of not being previously licensed, be qualified, as determined by the Stewards or other Commission designee, by reason of at least 2 years of experience as a licensed assistant trainer, or comparable experience in racing or other equine disciplines, or college-level education in equine science and/or horsemanship.

(C) Shall be required to pass a written examination, oral interviews with the Stewards and regulatory Veterinarian; and demonstrate practical skills.

(2) A trainer licensed and in good standing in another jurisdiction, having been issued within a period as determined by the Commission, may be accepted if evidence of experience and qualifications are provided. Evidence of qualifications shall require passing one or more of the following:

(A) A written examination;

(B) A demonstration of practical skills; and

(C) An interview with the Stewards.

(3) An applicant may submit a request to the Stewards due to disability or other factors affecting the applicant's ability to effectively complete the trainer's test (such as illiteracy or language barriers), reasonable accommodations may be made for the applicant including, but not limited to oral administration of the examination, use of a pre-approved translator, and aid from pre-approved assistant where deemed appropriate by the Stewards administering the examination.

(4) In order to maintain a current license, trainers must complete at least four (4) hours per calendar year of continuing education courses approved by the Commission or the ARCI. However, the Commission may waive this requirement if no continuing education course is available that meets the approval of the Commission.

## **Duties of a Trainer**

**CRCR 3.510** - A trainer of horses shall file with the Division a current roster of all employees and shall amend the roster filed with the Division within seventy-two (72) hours of when an employee is discharged or a new employee is hired.

**CRCR 3.512** - A trainer shall not knowingly allow in their stable/kennel an animal owned, in whole or in part, by a disqualified person.

**CRCR 3.514** - The trainer is solely responsible for a horse's sex printed on the foal certificate. A trainer shall call to the attention of the stewards a mistake in the printing of a horse's sex in the daily program.

**CRCR 3.520** - A trainer who is also licensed as an owner and is actively participating at a meet must train any horse(s) in which he/she owns an interest and may not assign the training of such a horse(s) to another trainer at a meet without the permission of the stewards.

**CRCR 3.522** - A trainer who is absent from his/her kennel or stable or the grounds where his/her animals are racing, and whose animals are entered or are to be entered, shall provide a licensed assistant trainer to assume the training duties for the animals which are entered or are to be entered or running. The trainer and the assistant trainer shall sign in the presence of the Board a form provided by the Division acknowledging that both the trainer and the assistant trainer may be held liable for the condition of the animals at all times. The program shall carry the name of the trainer and the horse program shall also carry the name of the assistant trainer.

**CRCR 3.524** - A trainer who has no assistant trainer and is absent from his/her kennel or stable or the grounds where his/her animals are racing for more than five consecutive days or on a day in which the trainer has an animal in a race, and whose animals are entered or are to be entered, shall provide a licensed trainer to assume complete responsibility for the animals being entered or running. Such licensed trainer shall sign in the presence of the Board a form furnished by the Racing Commission accepting complete responsibility for the animals being entered or running, including the training and conditioning of the horses.

**CRCR 3.716** - A trainer, who is also a licensed owner or part owner, may use a stable/kennel name as owner or part owner. However, a trainer may not be licensed as a trainer other than in the trainer's legal name.

**CRCR 3.518** - A trainer shall not move a horse from the block of stall(s) assigned to the trainer or remove a horse from the racetrack without written permission from the association.



## **Continuing Education Requirement for Trainers**

Beginning no later than January 31, 2014, in order to maintain a current license, trainers must complete at least four (4) hours per calendar year of continuing education courses approved by the Commission or the ARCI. However, the commission may waive this requirement if no continuing education course is available that meets the approval of the commission.

## **Practical Knowledge**

**Blinkers.** Whether a horse wears blinkers or not will depend on its previous race. The equipment used in the previous race (as shown in the daily racing form) is what the horse must use unless a change has been made at time of entry. If you are making a blinker change, you must obtain the approval of the official starter prior to entering the horse. If you make the change on an entry and the race is not used or your horse is scratched, you must list blinker change on the entry the next time you enter the horse. There are occasions when a late change could be allowed, however, trainers should know that a fine may be imposed. **Remember, if you are making a blinker change it must be declared at time of entry and on the entry card.** Trainers should double-check the overnights to make sure the racing office has shown the blinker change.

You must know the proper procedure for saddling a horse for a race. The association provides valets to assist the trainers with the saddling of the horses. A valet will bring the jockeys tack with him from the jockey room. The following saddling equipment is used for racing:

**Chamoise** or non-sliding material or breast plate. These are provided by the trainer and are used to help keep the saddle from slipping during the race.

**Jockey saddle.** Each jockey has his/her own saddle. The saddles are various weights depending on the individual preference of each jockey.

**Number cloth.** Each horse must wear a number cloth that corresponds with his/her official program number and color.

**Pommel Pad.** Each jockey supplies the pommel pad that is a small thick or heavy cloth or crocheted piece that is placed under the pommel section of the jockey's saddle. This is used to give extra padding between the saddle and the horse's withers.

**Under-girth.** This is an elastic girth that is attached to the jockey's saddle. The valet will have the girth on his/her side of the horse and stretch it under the horses belly and hand it to the trainer. The trainer stretches the girth and attaches it to the saddle.

**Over-girth.** This is a longer elastic girth that is stretched over the top of the saddle and around the horse's girth area and connects back to itself. It is important that the girths are placed and tightened properly or else the saddle can slip during the race.

**e. Safety Equipment.** The following are requirements for all licensees that are on horseback. As the trainer you are responsible for insuring that your employees (this includes all exercise riders or pony riders that are working with your horses) are using the proper safety equipment. **Approved safety helmets and safety vests must be worn when on horseback on association grounds. The safety helmet must be securely fastened.** This means the helmet must be secured and the chinstraps must be fastened, no exceptions.

## **Claiming**

Claiming races make up the majority of the races that are carded daily. When you enter a horse in a claiming race it is subject to be claimed. The following are some of the specific rules you need to know: Any licensed owner or prospective owner may claim any horse. If you work for an individual that does not currently own a racehorse, they must apply for an owner's license and obtain a "Claim Certificate" from the Stewards. As a trainer, you must work with the owner or prospective owner to make sure they understand the claiming process and procedures. The prospective owners will be issued a "Claim Certificate" which they must place inside the envelope along with their claim form. Should the owner or prospective owner's claim be unsuccessful and they wish to claim a different horse in a later race, you must ask for the "Claim Certificate" to be returned to you.

Go to the horsemen's bookkeeper and make sure you have an account set up. **Make sure the account is in the name or stable name you are going to claim under.** If you are going to claim for one of your owners, the owner must have filled out the application to make you an authorized agent for them.

The amount of the claim must be in your account. The sex of the horse as listed in the program can be incorrect and it is the responsibility of the claimant to know the correct sex. **The claim form is only good on the date issued.**

You must fill in all the blanks on the claim form. If any blanks are left empty, the claim will be voided. The name or stable that the horse is being claimed under must match the name on the account shown by the bookkeeper. **Both the name of the claimant and their signature must be on the claim form.** Remember, if a person is signing as an authorized agent, the owner must have completed the authorized agent process.

When the form is completed, put it in the envelope. If you are a prospective owner, the prospective owners claiming certificate must be in the envelope with the claim form. Seal the envelope and put the race number on the outside of the envelope.

The race number and time stamp must be on the outside of the envelope. The claim form must be time stamped and deposited in the claim box **10 minutes before** post as shown on the infield tote board. This means that if the time on the tote board actually reads **9** minutes to post you are too late. If either of these are omitted the claim envelope is not even opened.

When a claim is deposited it cannot be withdrawn. When the horse sets foot on the racetrack, the horse becomes the property of the successful claimant. Should more than one claim be filed for the same horse, the claim of the horse shall be determined by lot under the direction of one or more of the Stewards, or their representative.

A horse which has been claimed shall not be delivered by the original owner to the successful claimant until authorization is given by the Stewards or their representatives. A proper transfer of certificate of registration or eligibility certificate of registration shall be made by the Stewards or the delegated racing official indicating transfer of ownership to the successful claimant. No person shall willfully refuse to surrender any document of ownership or other document required by the Stewards for the purpose of avoiding or hindering the transfer of a successfully claimed horse to a successful claimant.

**A trainer whose horse has been claimed remains responsible for any violation of rules regarding that horse's participation in the race which the horse is claimed. (CRCR 5.504)**

**a. Transfer of claimed horse.**

**CRC Rule # 8.600** – When a horse is claimed from a race, it shall be taken to the test barn after the race for delivery to the successful claimant or representative. Authorization from the stewards shall be given before the original owner delivers the horse to the successful claimant. A person shall not refuse to deliver a claimed horse to the successful claimant. In the event of refusal, both the person and the horse may be disqualified until delivery is made. The successful claimant or representative must report to the test barn immediately after the race to take possession of the horse claimed.

**b. Claimed horse goes to test barn.** If a claimed horse is required to go to the test barn, the original trainer or his/her representative is responsible to be with the horse during the testing procedure. The original trainer is still the responsible party for the results of the test so he/she must oversee the testing process and sign for the test. The new trainer or his/her representative must wait outside the test barn to take custody of the horse once the testing procedure is complete.

**c. Sale or transfer of claimed horse.** If a horse is claimed it shall not be sold or transferred to anyone wholly or in part, except in a claiming race, for a period of 30 days from date of claim, nor shall it, unless reclaimed, remain in the same stable or under the control or management of its former owner or trainer for a like period.

**d. Ineligible to start.**

**CRC Rule #8.118** - A claimed horse shall not race elsewhere for a period of thirty (30) days or until after the close of the meet, whichever comes first, except by special permission of the stewards at the meet where the horse was claimed.

## **ENTRY DATES, SCRATCHES**

The following are some key issues each trainer should know:

**a. Entry Dates.** The racing secretary establishes a preference date system to determine which horses get into a race when there are more entries than allowed to race. The following are some guidelines used:

- Horses will not be eligible to receive a date until foal certificate papers are on file with the race office.
- Before entering, maidens must be tattooed and approved from the starting gate.
- Horses on the veterinarian, steward's or starter's list cannot run until removed from those lists.

- In all races, winners are preferred.

**b. Eligibility.** The trainer enters a horse by filling out an entry form in the race office or calls in the entry by telephone. If entries are made by telephone, please verify the information to confirm its accuracy. If there are changes in equipment (blinkers) or medication you must declare this information at the time of entry and make sure it is on the entry form. When entering horses, owners and trainers are responsible to verify the eligibility of their horses and weight allowances. The following are some of the eligibility rules:

- Maidens are not permitted to exclude winners in non-maiden races, except where a winner is the second choice of a same ownership.
- Non-winners of a stated amount apply only to the purse money received from finishing first.
- Eligibility for starter races shall remain with the horse following a claim.
- First-time starters must be starting gate approved by the official starter before entry will be accepted.
- Horses penalized in a race shall not be entitled to any of the allowances in such race.

The clause “Maiden races, Claiming races...not considered” applies to both eligibility and allowances. In addition, the term “Maiden Races” refers to a win in any and all races restricted to maidens. In addition, maiden races refer to a win in any and all races restricted to maidens, except in races run under National Steeplechase Association (NSA) Rules where a winner on the flat is still a maiden over jumps. These rules shall apply unless otherwise stated in the condition book.

The following are some reasons a horse may not be eligible:

- The horse is on the Stewards, starters, veterinarian or paddock list.
- The horse is not the correct age or sex as required by the condition of the race.
- The horse has not been approved from the starting gate.
- The horse is not tattooed.
- The horse does not meet the conditions of the race.
- A disqualified person owns the horse.
- The horse does not have the required workouts.
- Ineligible to race in Colorado due to reciprocal rules with another jurisdiction.

**c. Weight Allowance.** You need to check the weight allowances listed in the condition book to determine the weight your horse will carry and list this weight on the entry. Some weights can be waived and based on the weight of the jockey you plan to ride, you may want to waive some of the weight allowances. You may not waive an allowance for sex.

**Owners, trainers and duly authorized agents must be careful to claim allowances at the time of the entry, and state penalties, and are solely responsible if a horse starts with the incorrect weight and is, therefore, disqualified.** The weight declared at time of entry cannot be reduced after the posting of entries, except an error by the racing office may be corrected.

**d. Registration Papers.** Prior to entering the horse, the trainer should turn the registration papers on the horse into the racing office so they have the required information on the horse. If for some reason the papers are delayed you must give the racing office the name, age, sex, color, and the name of his/her sire and dam. The registration papers need to be turned into the racing office as soon as possible. Error or omissions could result in the horse getting scratched.

**e. Jockey named to ride.** A jockey must be named at the time of entry. As a trainer you should secure the services of a jockey either from the jockey or his/her agent prior to entering. **If the jockey named on the entry at the time of the draw does not accept the mount, the Stewards may name a replacement jockey and the trainer may be fined.** If you want to make a change, you need to contact the Stewards before the deadline for making any changes. Any changes will require a double jocks mount fee.

**f. Non-recognized race meets.** If you are entering a horse that has been participating at a non-recognized race meet you must give the racing office the performance records of the horse.

**g. Coupled/multiple entries.** Two or more horses owned or leased in whole or in part by the same owner must be joined as a coupled entry (hard entry) and single betting interest when entered in the same race.

A coupled entry may not exclude a single entry, except in a race where the conditions are specific as to preference. **At the time of making a same ownership entry, the trainer, owner, or authorized agent must select the horse which has the best preference date.**

**If a trainer enters two horses for an overnight race, a preference must be expressed. First preference must be given to the horse with the best preference date.**

**When a trainer enters two horses in the same race that have different owners the horses will race uncoupled and is referred to as a “soft entry.”** In this type of entry each horse stands on its own entry date. If either horse has a date the trainer must prefer the horse with the best preference date. You must inform the racing office when you are entering more than one horse in a race. There are situations when an owner has their horses with more than one trainer. When this happens the trainers need to have some type of communication either with the owner or other trainer so that both trainers do not enter the owner’s horses in the same race. If this happens and it has not been declared at entry so that the horses can be coupled, the horses may be scratched.

**h. Preference in race.** Preference will be given to starters as provided in the conditions for each race by the Racing Secretary.

**i. Overnights.** After close of entries, the races will be drawn and the horses will receive their post positions from the random draw of the numbers. Shortly after all the races have been drawn, the racing office will publish the “overnight” which lists the horses in each race, their riders, and weight and equipment changes. The trainer should review this for accuracy and inform the racing office of any errors.

**j. Also Eligible.** If the number of entries for a race exceeds the number of horses permitted to start, the racing secretary may create and post an also-eligible list. If any horse is scratched from a race for

which an also-eligible list was created, a replacement horse shall be drawn from the also-eligible list into the race in order of preference. Any owner or trainer of a horse on the also-eligible list who does not wish to start the horse in such race shall so notify the racing secretary prior to scratch time for the race, thereby forfeiting any preference to which the horse may have been entitled.

**k. In Today.** Horses drawn into a race will be considered “in-today” horses until the race has been run. In-today horses must be noted at time of entry.

**l. Scratches.** A request to scratch a horse must be in writing on a form provided by the association. Only a racing official, the owner or trainer of the horse, or the authorized agent of the owner may request that the horse be scratched. A horse may not be scratched from a race without the approval of the Stewards.

**m. Enter to Run.** If the association is using the “enter to run” method, there is no designated scratch time. The only way a horse can be scratched is upon receipt of a veterinarian’s certificate of unfitness or by permission of the Stewards.

## **PROHIBITED CONDUCT**

**CRCR 3.428** - Any licensed person whose conduct while on the premises of any racetrack or simulcast facility interferes with the orderly and proper conduct of a meet shall be subject to disciplinary action. Such prohibited conduct shall include but not be limited to bookmaking, acting as a runner for a bookmaker, touting, pickpocketing, altering pari-mutuel tickets or offering to cash altered pari-mutuel tickets, attempting to enter into any restricted area of a racetrack or simulcast facility, being intoxicated by the **use of alcohol or drugs**, or possession of a narcotic or drug which violates state or federal laws. In addition, disciplinary action may be taken against a person who violates guidelines set forth by the Division for misuse of personal medication, candy, food, drink and tobacco in restricted areas in the paddock building during a racing performance or acting in a disorderly manner. Such conduct includes, but is not limited to, using abusive language towards another, making unreasonable noise, fighting, striking or threatening to strike another person, discharging or displaying a firearm, treatment that affects the safety and welfare of an animal as determined by a veterinarian. A licensee who violates the above shall also be subject to immediate summary ejection.

**CRCR 3.430** - A licensee **shall not obstruct or interfere with or use abusive insulting language** to any Commission or Division representative, racing official or assistant or medical personnel while in the discharge of their duties. Abusive insulting language shall be construed to be language which tends to incite others to unlawful conduct or making unreasonable noise.

**CRCR 3.432** - At horse racetracks, a licensee shall not engage in any conduct which would present a **fire or safety hazard** or which would constitute a traffic infraction at any racetrack. Pursuant to this rule, the Division may from time to time issue and post guidelines for licensees concerning traffic and fire and safety hazards at each individual racetrack.

## **Equine Inspections**

All horses at locations under the jurisdiction of the Commission shall be subject to inspections at the discretion of the Stewards or a Commission veterinarian. The trainer will make his/her horse available for inspection by the Commission veterinarian.

## **Veterinarian's List**

The Commission veterinarian maintains a list of all horses which are determined to be unfit to compete in a race due to illness, physical distress, unsoundness, infirmity or other medical condition. A copy of the list may be found in the Racing Office. If you have any questions about the veterinarian's list you may call the Test Barn at the racetrack during a live race meet.

**CRCR 5.608** – The Division Veterinarian shall maintain the Veterinarian's list of all horses which are determined to be unfit to compete in a race due to illness, positive test or overage, physical distress, unsoundness, infirmity or any other medical condition. Horses so listed are ineligible to enter to race in any jurisdiction until released by the Division Veterinarian or their designee.

**CRCR 5.610** - Except as provided in CRCR 5.330 and unless authorized by the Division veterinarian, a horse placed on the Veterinarian's list must remain on that list a minimum of four (4) calendar days after the day the horse was placed on the veterinarian's list.

**CRCR 5.611** - A horse may be removed from the Veterinarian's list after the minimum days provided by rule #5.610 when, in the opinion of the Division veterinarian and/or the association Veterinarian or a practicing Veterinarian not representing the horse or trainer, the horse has satisfactorily recovered the capability of competing in a race. A horse placed on a Veterinarian's list for a positive test may only be removed with the authorization of the Division Veterinarian.

1: If a practicing Veterinarian removes a horse from the Veterinarian's list, a form provided by the Division veterinarian shall be signed and submitted to the stewards.

**CRCR 5.612** - Any horse from which a positive test sample was collected and confirmed by the Commissions' primary testing laboratory shall be placed on the Veterinarian's list for a specified amount of time (pursuant to CRCR 5.441). In the interest of health, safety, and welfare of the racing animal, the horse will be immediately placed on the Veterinarian's List for the minimum days specified in the Penalty Guideline Chart in CRCR 5.441 and must pass a Commission-approved examination before becoming eligible for entry. Subsequent laboratory testing that may be required in the approved examination process shall be at the expense of the owner or trainer of the horse. Any horse from which a positive test sample was collected and confirmed by the Commissions' primary testing laboratory in the initial sample test or in any required subsequent laboratory testing, may also be subject to disciplinary action by the stewards, a hearing officer or the Commission prior to the horse's next entry. This shall not apply to a first offense overage of an authorized medication, where the violation would not result in a loss of purse, pursuant to rules 5.312. In cases where a split sample comes back negative, the horse must pass a Commission-approved examination before becoming eligible for entry, and then shall be removed from the Veterinarian's List after passing the exam.

**If a horse is placed on a list (Stewards, Starters, Paddock, etc.) then the trainer will be notified by posting of such lists in the racing office.**

## **HORSE HEALTH CARE**

### **DEFINITIONS**

**Anemia:** A blood condition where the number of red blood cells or the amount of hemoglobin or both are below the normal limits.

**Arthritis:** Inflammation of a joint.

**Azoturia:** Also referred to as Equine Rhabdomyolysis or tying up, is a condition that affects the muscles of horses, ranging from stiffness and mild cramps to the horse becoming unable to stand and will pass discolored urine. A serious disease of horses manifested by: degeneration of muscles, particularly the large muscles of the hindquarters, a dark brown colored urine (myoglobinuria), lameness, severe pain and frequently death. It has been called Monday Morning disease because it often occurs in horses that have been rested for a day or so, such as after a weekend.

**Bleeder:** Any horse known to have bled from its respiratory tract during a workout or race, and so designated by the commission veterinarian, or any horse that has internal bleeding that is observed by the commission veterinarian through scoping within one hour post-race or within one hour post exercise.

**Blister:** A chemical ointment or liquid which, when applied to a limb, causes an acute inflammation. It is used to treat chronic conditions such as osselet, ring bone, bowed tendon, etc.

**Blood spavin:** Swelling of the large vein that passes over the bog spavin.

**Blood worms:** Blood worms are recognized to be one of the most dangerous of all internal parasites that are found in a horse. The adult lives in the large intestine and the larvae migrate in the arteries causing a thickening of the blood vessels and sometimes a local stoppage of blood flow.

**Bog spavin:** A chronic distention of the joint capsule of the hock that causes a swelling of the front-inside aspect of the hock joint.

**Bone spavin:** A bony enlargement on the lower portion of the inside of the hock joint. It usually is associated with lameness in the affected leg.

**Bots:** Internal parasites that, in the larval form, live in the stomach of the horse and can interfere with digestion. The small yellow eggs are laid on the legs and face of the horse during autumn. Adults look like bees and are seen during the fall, darting at the horse and laying their eggs.

**Bowed tendon:** A traumatic injury to the flexor tendons behind the cannon bone as a result of severe strain in which there is tearing and stretching of tendon fibers. This gives a bowed appearance to the tendons externally.

**Brittle feet:** Feet that have lost too much moisture and have become dried out and contracted. Certain horses have a predisposition to this condition, while other horses acquire it as a result of dry weather and poor grooming. Dry feet are prone to quarter cracks, bruises and the like.

**Broken wind:** An all-inclusive term used to describe any abnormality that causes difficult breathing. It is often used to describe a horse with heaves (emphysema) or a roarer.



**Bucked shin:** A painful swelling on the front surface of the cannon bone caused by injury to the membrane (periosteum) that attaches to the cannon bone.

**Calf kneed:** A conformation fault of the forelegs where the knee is seen to bend backwards when viewed from the side.

**Canker:** A chronic, moist deterioration of the frog of the hoof. Most frequently seen in horses that stand in bedding soaked with urine and feces or mud, and whose feet do not receive regular attention.

**Capped hock:** A swelling found at the point of the hock and caused by a bruise. It usually stems from kicking in horse vans or in stalls.

**Cocked angle:** Usually in hind feet, horse stands bent forward due to contracted tendons.

**Colic:** A term used to describe any abdominal pain in the horse. Most often such pain is associated with digestive upsets.

**Contracted feet:** Abnormal contractions of the heel.

**Corn:** A bruise under the sole of the hoof. It usually comes from stepping on a stone or some other hard object.

**Counter-irritant:** Blister.

**Cow hocks:** A conformation fault where the hocks are very close together while the rest of the rear legs are widely separated and toed out.

**Cracked heels,**

**(greased heels/scratches):** A weeping, moist dermatitis found on the back of the pastern just above the quarters.

**Cribbing**

**(stump sucking):** An incurable vice or habit largely learned by imitation. The cribber closes its teeth on any convenient surface (manger, gate, part of the stall partition, etc.) extends its neck and swallows a deep draft of air with a grunting sound.

**Crowding:** When a horse consciously crowds the handler against the wall. This can be cured by bracing a pointed stick against the partition and letting the animal put its weight against it.

**Cryptorchid:** A male horse in which one or both testicles are retained in the abdomen.

**Curb:** Hard swelling on the back surface of rear cannon about four inches below the point of hock.

**Dehydration:** The excessive loss of body fluids such as would occur in severe diarrhea.

**Dropped hip:** The condition where the point of the hip is knocked down. It is due to either a fracture of the point of the hip or to the muscles being torn off the cartilaginous attachments in the area.

**Epiphysitis:** An abnormal enlargement of the epiphysis (the horizontal growth line at the end of long bones) in young horses. It is often called "big knees" because of an enlargement over the knees.

**Firing:** An old method of treating chronic pathologies found in the legs. It consists of inserting red hot points through the skin (pin firing) over the area involved. Line firing consists of burning in a bar inflammation which is said to hasten healing.

**Fistula of withers:** Inflamed swelling of the withers.

**Founder (laminitis):** Inflammation of the laminae or the inner part of the foot.

**Gimpy:** A term describing a horse that is slightly lame.

**Grunting:** The noise most "roarers" make when they tense their abdomens. It is heard when they jump fences, roll in their stalls and make any quick moves.

**Heat exhaustion:** A condition caused by overexertion in hot, humid weather. The animal so affected stoops sweating, becomes listless, runs a high fever and is a very sick horse. Salt and electrolytes in a horse's ration will usually prevent this condition during hot months.

**Heaves (emphysema):** A lung disease in which air is trapped in the lungs and cannot be sufficiently expelled. It is manifested by coughing and shortness of breath.

**High flanker:** A condition where one or both testicles are found in the inguinal canal rather than in the scrotum.

**Hip down:** Fracture or prominence of hip falling away.

**Joint mice:** Small pieces of bone or cartilage floating free in a joint.

**Knee spavin:** A bony growth at the back of a horse's knee on the inner side.

**Knees sprung**

**(sprung at the knees):** A conformation fault where the knees are bent forward when viewed from the side and are unsteady.

**Lampas:** A swelling of the hard palate just behind the upper incisor teeth.

**Monorchid:** A term describing a male with but one testicle in his scrotum.

**Moon blindness**

**(periodic opthalmia):** This is a disease of the eyes where recurrent attacks usually cause blindness. The condition is not contagious.

**Navicular disease:** A frequently painful, progressive inflammation and degeneration of the navicular bone of the foot.

**Neurectomy:** An operation in which the sensory nerve is severed with the idea of permanently eliminating pain that arises from that area.

**Digital neurectomy**

**(heel-nerved):** An operation performed on the digital nerve between the fetlock and the foot.

Horses that have had their nerves removed can run at most race tracks.

**Volar neurectomy**

**(high-nerved):** An operation performed on the volar nerve that lies between the bottom of the knee and the fetlock joint. Horses that have been high-nerved are barred from most race tracks.

**Nerve:** To remove a nerve, usually in a horse's leg, to deaden pain. Nerving horses is forbidden in some jurisdictions.

**Osselets:** A swelling of the front part of the fetlock joint. The swelling may be due to an arthritis of the fetlock joint or to a bony growth.

**Over reaching:** When the rear toe strikes the quarter of the front foot on the same side as the horse is in motion. Another name for "grabbing his quarters," this usually happens when a horse stumbles upon breaking away from the starting gate.

**Pawing:** Most yearlings are inclined to paw the stable floor when first confined and may continue when not exercised for long periods. The habit is destructive to a horse's bedding and may result in serious trouble with the feet. In some cases, it may be a symptom of pain and warrants a thorough examination. The vice is most easily discouraged by a hard packing of dirt in the stall. Loose dirt is an open invitation to the habit.

**Pin worms:** Small thread-like worms that live in the rectum of the horse. They cause the horse to rub its tail and stamp its hind legs.

**Poll evil:** A swollen infection found on the top of the head between the ears. It is usually caused by a bruise.

**Popped knee:** A knee with a distended joint capsule that protrudes between the row of carpal bones. The swelling is soft and contains an excess of synovial (joint) fluid and is caused by inflammation within the joint.

**Proud flesh:** An overgrowth of granulation tissue in a wound that protrudes above the skin as a tumor-like mass.

**Quarter crack:** This is a crack found in the wall of the hoof in the area of the quarter. It often runs from the bottom of the wall up to the coronet.

**Quittor:** An infection involving the cartilage of the coffin bone that drains through cracks at the level of the coronary band.

**Radial paralysis:** An injury to the radial nerve causing the horse to have a partially paralyzed foreleg. When this occurs, the horse has great difficulty bringing the affected leg forward.

**Ridgling (rig):** A lay term used to describe either a monorchid or cryptorchid. Monorchid: a male horse of any age that has only one testicle in his scrotum. Cryptorchid: a male horse of any age that has no testes in his scrotum but was never gelded.

**Ring bone:** A bony enlargement seen in front and on both sides of the pastern. If it is under the top of the hoof, it is called a low ring bone. If it is found halfway up the pastern, it is called a high ring bone.

**Roarer:** A horse with paralyzed vocal cords. The condition causes a fluttering noise when the horse inhales and a grunt when the horse makes a quick move. It interferes with the horse's ability to race, especially in distance races.

#### **Round worms**

**(ascarids):** Long, white, round worms that live in the intestines of the horse.

**Rupture (hernia):** Protrusion of abdominal organs, mainly the intestines through an abnormal opening in the body wall.

**Sand crack:** Cracks in the hoof wall. These cracks are identified as toe, quarter or heel cracks depending on their location in the hoof wall.

**Scalping:** The toe of the front hoof hits the pastern of the rear foot on the same side when the horse is in motion.

**Sesamoiditis:** The sesamoids are two pyramid-shaped bones found at the rear of the fetlock joint and act as a pulley for the flexor tendons. When they become arthritic and coated with mineral deposits, the condition is known as sesamoiditis.

**Shoe boil:** A large, soft, tender swelling at the point of the elbow usually caused by bruising from the hoof when the horse is lying down.

**Side bone:** An ossification of the lateral cartilage located just above the quarters of the hoof. It is generally considered a disease of old horses.

**Sinusitis:** An infection of one or more sinuses of the head.

**Splints:** An enlargement over the splint bone about three inches below the knee.

**Stall walking:** A nervous habit of older horses in which there is constant walking round and round in the stall.

**Stifle out:** A condition where the patella locks causing the leg to remain in the extended position.

**Strangles:** Disease primarily of young horses caused by a streptococcus organism and manifested by a fever and upper respiratory tract infection. Later it causes abscesses in many areas of the body but chiefly under the jaw and around the throat.

**String halt:** A condition found in one or both hind legs where the leg is snapped upward prior to moving forward when the horse is walked or jogged.

**Suspensory ligament strain:** The suspensory ligament is a broad ligament that lies behind the cannon bone and splits into two branches a few inches above the fetlock joint. It attaches to the outside of the sesamoids and ends in front of the pastern as a part of the extensor tendon. It supports the fetlock joint. When strained, the suspensory ligament becomes thickened and inflamed.

**Sway back:** Faulty conformation.

**Sweeny:** Atrophy (wasting away) of the shoulder muscles due to paralysis of the nerve supply.

**Thoroughpin:** Puffy swelling which appears on the upper part of the hock and in front of the large tendon.

**Thrush:** A degenerative condition of the frog.

**Tying up:** Severe muscles spasms, analogous to a charlie-horse in man, that chiefly affect the large muscles of the hind legs following a period of vigorous exercise.

**Vices:** Undesirable habits acquired by a horse, such as wind sucking or stall walking.

**Weaving:** A more tense form of stall walking, weaving in a constant back and forth movement, from side to side, of head, neck and body, with the forelegs always lifted and put down in the same place. Like stall walkers, weavers are extremely nervous horses who are usually bad feeders.

**Whistling:** This describes a wheezing sound made by the horse as it runs when it is suffering from an inflammation of the respiratory tract.

**Wind puff:** A puffy swelling occurring on either side of the tendons above the fetlock or knee.

**Windsucker:** A horse who places its upper incisor teeth on a ledge, presses down and swallows air at the same time.

**Wobbler:** A disease of young horses caused by damage to the spinal cord in the neck and characterized by an unsteady or wobbling gait.