# **CARE OF THE STANDARDBRED**

To help a Standardbred perform at its best, an adequate training schedule is required as long as the horse is in good physical and mental health.

The trainer of a horse is responsible for conditioning the horses in his care, making sure that the horses have proper jogging and training miles to build their endurance for racing.

Horses all have different personalities and different needs, so it is important for the trainer and/or groom to observe each horse in his care and become aware of the horse's habits. By being observant of his horses, the trainer can immediately detect if the horse is in discomfort or just not feeling a hundred percent. All trainers should want to provide the best care possible to the horses in their stables and keep them happy to minimize any stress which could be caused by excessive training and racing.

Taking good care of a horse starts with a good feeding routine, exercise, and some down time.

Caring for a horse with brushing and pampering will help keep the horse looking and feeling his best. Spending a lot of time around the horses will enable the trainer to notice any changes in the health of the animal as the horse's coat will usually become dull or ruff looking if the horse is not healthy. Soundness problems can also be detected by swelling or heat in the horse's legs. Another way to know if a horse is in good health is by observing his eating habits.

The temperature of a healthy horse at rest should range between 99° to 101° degrees or 37.5 to 38 Celsius. A resting horse normally has a pulse of 38 to 40 beats per minute. However, when exercising, a horse's maximum heart rate can exceed 180 beats per minute. You can take your horse's pulse by placing two or three fingers gently behind the eye or by placing three fingers on the inside of the jaw line (mandible pulse) or on the jugular groove on the neck. Another way of checking your horse's pulse is what is referred to as a digital pulse. The digital pulse is taken at the vessels on the back side of the fetlock using light pressure from the fingertips on, above or below the sesamoid bones.

# **CANADIAN PARI-MUTUEL AGENCY (CPMA)**

When speaking of prohibited drugs it must be clearly understood that they are not only injectables, but they are medications that can enter the horse's system via skin absorption or be ingested orally. Herbal remedies, leg rubs, liniment and feed supplements can only be prohibited. It is very important to carefully read product labels and consult the **Schedule of Drugs** booklet to prevent a positive test.

The **Schedule of Drugs** booklet provides information on prohibited drugs and their detection limits. However, it is to be noted that the use of the information in the CPMA **Schedule of Drugs** booklet does not relieve or lessen any trainer's responsibility for assuring that, during a horse race, a horse is free from any drug listed in the Schedule to the *Pari-Mutuel Betting Supervision Regulations* and for complying with provisions of the Regulations and provincial racing rules.

Horses are randomly chosen at every racetrack, after the finish of each race, for an official sample of urine or blood. The Chief Test Inspector is in charge of the test barn area, this includes collection of samples, supervision of the horses and their samples and associated paper work. The official sample will determine if there is the presence of a prohibited substance in a horse. A positive test occurs when a prohibited drug appears in the sample. These tests are conducted by qualified official chemists working in a laboratory under the direction of the CPMA.

The trainer is responsible to bring his horse directly from the racetrack to the test barn when selected for testing. The trainer or his representative may witness the collection, labeling, sealing and packaging of the sample. The person who is responsible for the horse must sign the accompanying documents. The trainer may be asked by the Chief Test Inspector to collect the sample.

The Exercise-Induced Pulmonary Hemorrhage (EIPH) program allows the trainer to race a bleeder horse on a medication named Furosemide (Lasix). For a predefined fee, horses enrolled in this program are given Lasix by a certified technician in the paddock at the racetrack where the horse is participating in a time frame of 4 hours 15 minutes and 3 hours 45 minutes prior to the race. Lasix alleviates the symptoms of EIPH, and can only be administer to horses diagnosed with EIPH. Appropriate documentation must be filed with the provincial racing commission/agency before a horse can be accepted to the program. After a horse is certified as a bleeder, this horse may not race for 15 clear days from the date it was certified and must remain on the program for at least 100 days.

# **MEDICATION CONTROL**

A trainer is responsible at all times for the condition of all horses trained by him. Trainers must exercise all reasonable precautions to ensure that horses are only treated by veterinarians licensed by the College of Veterinarians of Ontario and the Ontario Racing Commission. Trainers have a clear and direct responsibility not to administer any medications or products that may harm the horse or take any action that may harm the horse. Licensed trainers have a clear and direct responsibility for the horses in their care and can be guilty of an offence if the horses under their care are not protected or are found to have illegal substances and medications in their blood or urine.

The Ontario Racing Commission emphasizes that the use of non-therapeutic medications is a violation of the rules and a serious threat to public confidence.

The Ontario Racing Commission approves the legal use of two therapeutic drugs, namely Lasix and Penicillin G Procaine under strict guidelines.

### Lasix – Exercise Induced Pulmonary Haemorrhage (EIPH)

If a horse bleeds during a race, and the blood is detected during a veterinary examination after the race, it is declared a "bleeder" and permitted to race with the medication, Lasix.

Lasix (a.k.a. Furosemide) is a medication that is used to reduce the risk of exercise-induced pulmonary hemorrhage otherwise known as bleeding from the respiratory tract during a race.

Prior to a horse being put into the EIPH program, a licensed ORC veterinarian must certify that the horse displays symptoms of respiratory track bleeding and, on request of the trainer, issue a Form 1. This form must be presented to the SC representative and be input to the SC computer before the horse is entered to race. Form 1 is valid for a period of thirty (30) days from the date of issue or until the first time the horse races in a pari-mutuel races following the issuance of Form 1. Once a horse is certified as a bleeder, the horse is not eligible to race for fifteen (15) clear days from the date it was certified.

The administration of Lasix is controlled with requirements that it be administered by a designated veterinarian or technician acting under the supervision of the designated veterinarian or by a veterinarian licensed by the Ontario Racing Commission. The Lasix dosage is controlled and exceeding the dose, or administering it outside the time limit specified, will cause the trainer to be fined and/or suspended.

A horse certified to race on Lasix must be brought to retention at the track where it is racing at least four hours and fifteen minutes prior to post time and shall remain in retention until medicated with the correct dosage of Furosemide. Any certified horse that does not receive Furosemide no earlier than four hours and fifteen minutes and no later than three hours and forty-five minutes before the published post time of the race it is entered, will automatically be scratched from the race.

A horse enrolled in the EIPH program, must remain on the EIPH list for one hundred (100) days from the date of its first or most recent certification and be administered Furosemide prior to all of its races regardless of any change in ownership. If, after being in the program for the minimum of one hundred (100) days, it is certified by a Commission veterinarian that it shows no signs of exercise-induced pulmonary hemorrhage, the horse can be removed form the EIPH program and will be eligible to race without being treated with Furosemide prior to racing.

# Therapeutic use of Penicillin G Procaine

Penicillin G Procaine is an antibiotic that contains the local anesthetic component Procaine.

The Canadian Pari-Mutuel Agency (CPMA) offers an optional Quantitative Limit program which is a user-pay program that gives special consideration to low-level residue concentrations of Penicillin G Procaine. Therapeutic doses of the antibiotic may be administered to a horse in this program provided that the dose of the treatment is no more than 6 million IU and is administered at least 48 hours before the scheduled post time of the race in which the horse is entered. It is mandatory that appropriate documentation of the treatment is submitted to the test barn at least one half hour before the post time of the race in which the horse is entered. Penicillin G Procaine is currently the only drug regulated in this way.

An owner or trainer that wishes to race his horse on Penicillin G Procaine, in accordance with the regulations as set out by the CPMA, must make declaration on the applicable form as is required by the CPMA. This form must be signed by the horse's veterinarian or trainer and deposited in a locked box in a place designated by the Commission or provided to a test inspector no later than one half (1/2) hour before the post time of the race in which the horse is entered. If all conditions are met, a positive test will not be classified for procaine unless the concentration in the blood sample is greater than 0.025 ug/ml.

Caregivers should not use medications, especially prescription medications, unless they have a current client patient relationship with a veterinarian. The use of un-labelled, untested and unregulated medicines, including some medications purchased over the internet or from other sources may be unsafe or ineffective. Caregivers should always consult with their veterinarian to verify the safety of any medication.

# **DENTAL CARE**

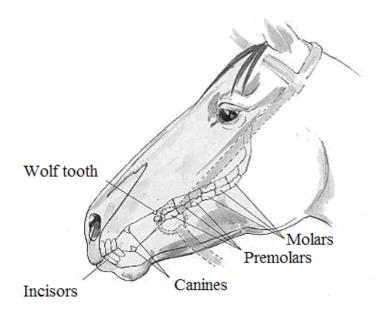
A proper and regular dental program for a horse will help keep the animal performing at its best. Routine examinations, such as floating, are especially necessary. A healthy mouth keeps the animal more comfortable, provides for better eating and a better control, whereas bad teeth may cause a horse to steer poorly.

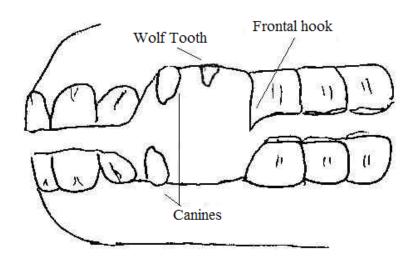
Like humans, horses have two sets of teeth, the baby teeth and the adult teeth. The baby teeth may erupt before the foal is born and the last of the baby teeth come at about 8 months of age. The baby teeth will start to be replaced by the adult teeth when the horse is about 2 ½ years old. Most horses have their full complement of permanent teeth at the age of 5. Adult females have from 36 to 40 teeth whereas the adult males have 40 permanent teeth.

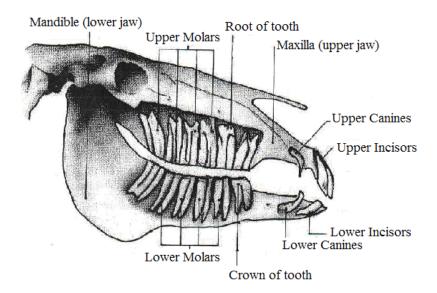
Horses may suffer from common dental problems such as sharp enamel or hooks forming on cheek teeth, lost or broken teeth, caps, wolf teeth, infected teeth or gums, gum diseases or just excessively worn teeth. Some horses will show obvious signs of discomfort and some may show no signs, as they will adapt to their discomfort. For this reason, it is important to maintain routine dental examinations. Some horses may lose feed from their mouths while eating because they have difficulty chewing. Bad breath, nasal discharge, getting on a line, lost of weight and undigested feed in the manure are indicators of bad dental health.

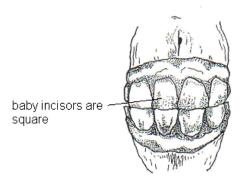
Floating is a process of rasping or filing sharp points of enamel on the cheek teeth that are the result of the lower jaw being narrower than the upper jaw, which cause the horse to grind his feed with a sideways motion. Regular floating will create a more even bite plane. Wolf teeth are very small teeth mostly found on the upper jaw and are located in front of the second premolar and have short roots that set firmly in the jaw bone. Wolfe teeth are very rarely found in the lower jaw. Some horses might have one, two or no wolfe teeth at all. These teeth usually get removed by the veterinarian to prevent them from interferring with the overcheck bit. A dental check-up should be done before the horse's training program begins. Floating of the teeth to remove any sharp points and a check for any retained caps is all part of a good dental program.

Over time as the horse gets older the wear of his teeth help in determining his age. The surface of the incisors gradually changes, the teeth become more triangular, giving a good horseman a pretty good idea of the horse's age.





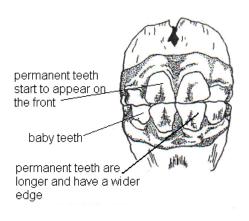




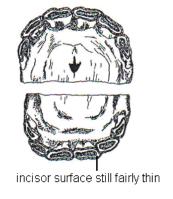


Thin surface on incisors

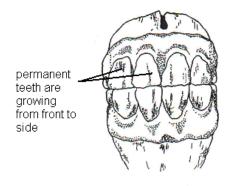
1 Year old

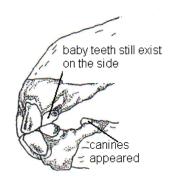




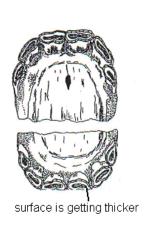


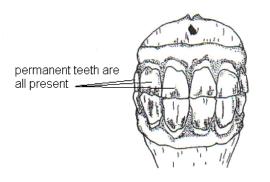
3 Years old

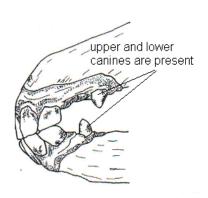


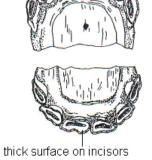


4 Years old

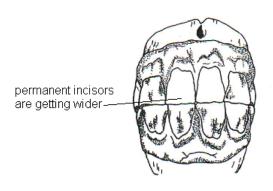


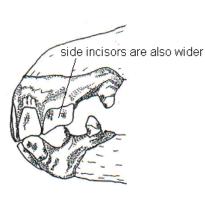


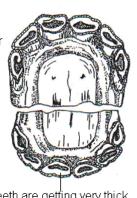




5 Years old

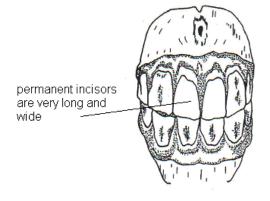


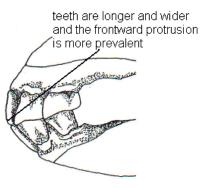


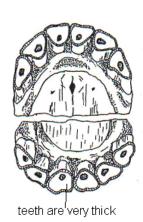


7 Years old

teeth are getting very thick

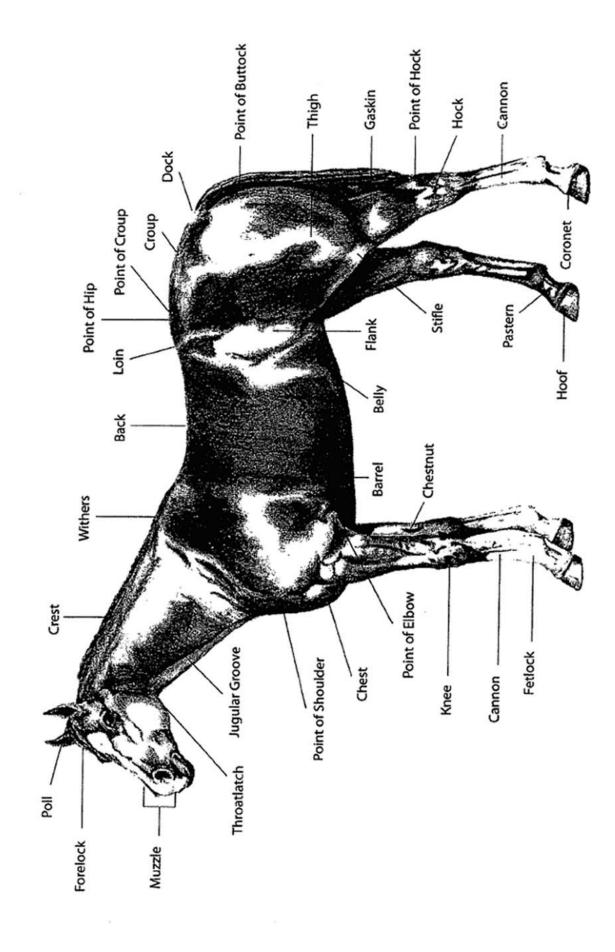




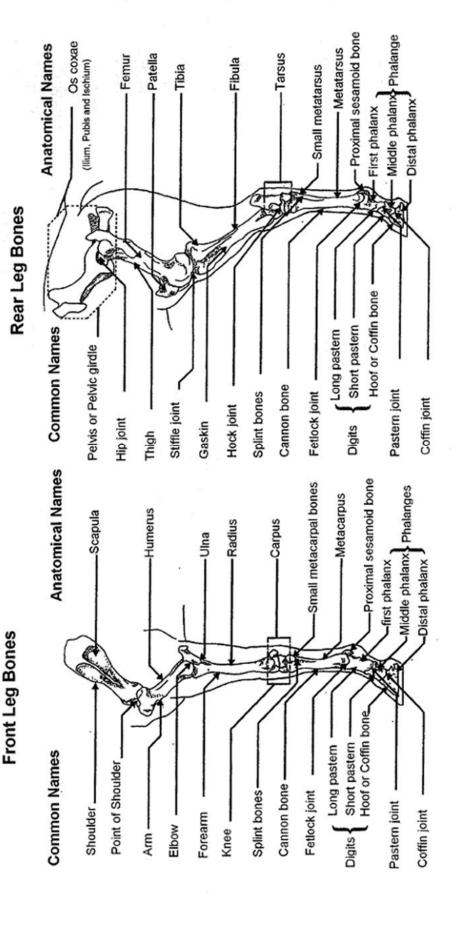


15 Years old

# ANATOMY OF A HORSE



# Leg Anatomy



# **Hoof Care**

Another aspect of a trainer's job is to ensure that the stalls for the horses in his care are cleaned properly and kept dry by putting hydrated lime in the stall and then adding new bedding like straw or wood shavings. Peat moss can also be used for bedding to help a horse with allergies. Standing in a poorly mucked and wet stall could cause a horse to develop a fungal infection in the frog and heel of the hoof called "trush" which, if not treated properly, could cause lameness. Trush is easily recognized by its bad odor and rotting of the frog, it can be treated by using iodine, hydrogen peroxide, bleach or specialized medication such as Koppertox®.

A horse's hooves should be kept from getting too dry. A dry hoof may crack, which is called a "quarter crack". Quarter cracks are very painful and very often, as a solution, your blacksmith will patch the hoof with glue or stitch it with wires to keep the crack from expanding.

A good maintenance program is to use hoof grease a few times a week and packing the sole of the hoof with clay or a poultice, which keeps it from getting too hard.

# **LAMINITIS**

Laminitis, also known as Founder, is a conformation change in the foot. This painful disease affects the sensitive laminae of the foot wall and the coffin bone. Founder is the failure of the distal phalanx (coffin bone) to adhere to the laminae, which causes severe pain as the weight of the horse is now directly resting on the coffin bone instead of the hoof wall. The coffin bone may penetrate the hoof capsule, causing damage to blood vessels and crushing the sole of the foot as the horse moves. A less severe laminitis would see the coffin bone not detached but rotated. In some cases, the bone could rotate and penetrate the sole making it externally visible.

Early detection of Founder is crucial as it is possible for a horse to make a full recovery without long-term complications. Treatment begins with cold water or ice on the foot for a long period to reduce circulation to the foot, thereby reducing the amount of toxins getting to the foot. Changing the horse's diet and using anti-inflammatories are both necessary. X-rays are necessary to determine the severity of the rotation. Corrective shoeing and consistent hoof care can help treat laminitis. There is no actual cure for Founder, but with proper treatment such as diet, hoof care and creating proper support with corrective shoeing, will help a horse live with the disease for many years.

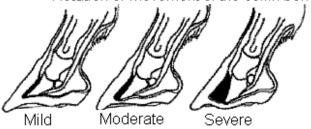
# Symptoms of laminitis are:

- Lameness or reluctance to walk
- Heat in the foot and rings in the hoof wall becoming wider from toe to heel
- Signs of pain in the toe when pressure is applied with hoof tester
- Strong pulse in the foot
- Flat sole, bruised sole, abscesses and widening of the white line
- Dished hooves
- The horse stands with his hind legs under his body with visible trembling
- Horse is sweating, blowing and lies down whenever possible

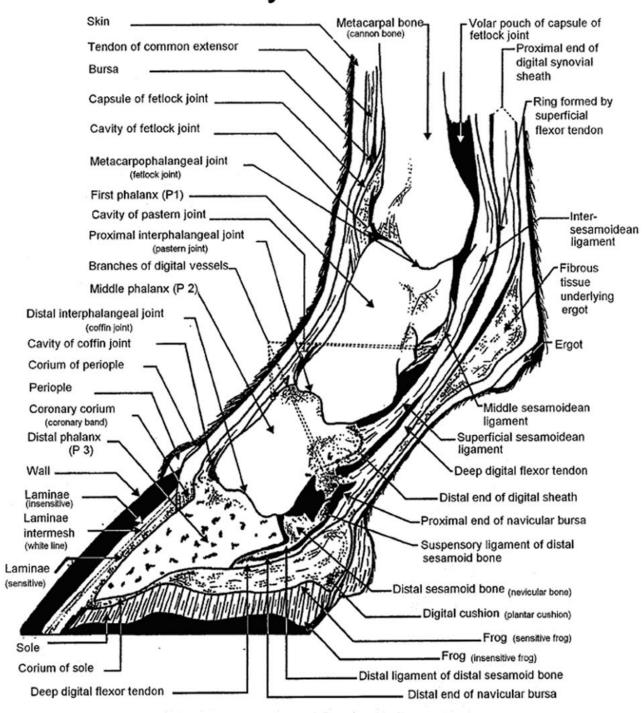
#### Factors that can cause laminitis:

- Poor digestion, grain overload, severe colic, obesity
- Lush pasture, consumes too much fresh grass (Grass Founder)
- Hard ground (Road Founder)
- Infection, high fever
- Consumption of large amounts of cold water
- Black walnut bedding
- Foot disease
- Retained placenta by mare after foaling

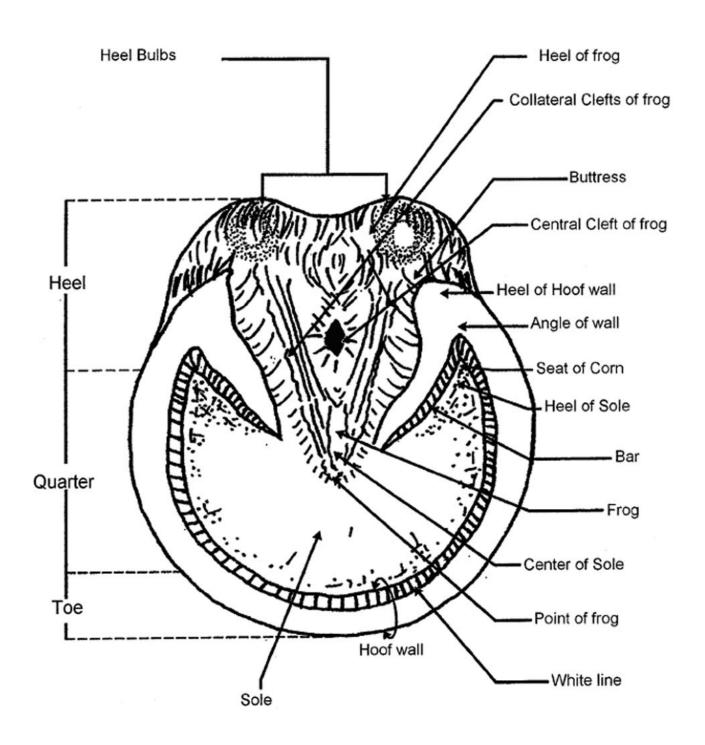
Rotation or movement of the coffin bone



# Anatomy of the Foot



# Parts of the Hoof



# **LAMENESS**

Lameness is usually defined as a change to a horse's gait. The horse will have a "nod" (bobbing of the head) to its gait if lame in front and will "hike" (hiking) if sore behind. Some horses might show their lameness discomfort by a change of attitude or performance. Identifying the problem is essential for proper treatment.

A veterinarian should always look at a lame horse as early detection of the problem could save time, money and pain to the horse.

You may be able to find the affected area causing the lameness by feeling the leg for any swelling or heat. On the racetrack, a lame horse will usually go away from the pain, in other words, if the horse is sore on the right he will be bearing in (pull to the left side) while exercising.

When called, the veterinarian might want to see the horse jogging to locate the soreness. The horse might show lameness by shifting his weight to the opposite leg. Some horses may not land squarely on all four feet, show a head bobbing, stiffness or shorten their stride.

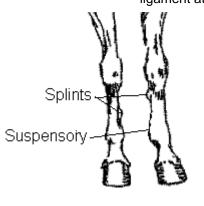
Often times the veterinarian might flex the joints to find the problem or he may decide to x-ray (for bones), ultrasound (for soft tissue injury) or draw joint fluid or take a tissue sample (for infections).

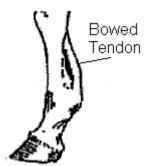
A foot tester is always a good instrument to have in the barn as it allows you to apply pressure to the sole of the horse's feet to check for any discomfort, corns or infected pockets. Infection or a corn in the horse's hoof must be drawn out by applying a poultice to the foot, and may require the blacksmith to take the pressure off the affected area by trimming the hoof.

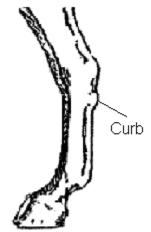
In Standardbred racing, it is very important for both safety and performance that a horse be 100% sound. It is the trainer's responsibility to have his horses safe and sound for racing.

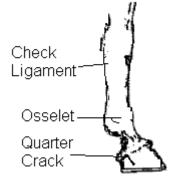
# **SPECIFIC AREAS OF LAMENESS**

Lameness	Definition	Treatment	
Corns	Severe bruising of the sole of the hoof	Blacksmith can open and burn it, hoof packing, poultice, iodine, hydrated lime	
Gravel or foot abscesses	Pocket of infection in the foot	Draw out infection with a poultice, iodine or soaking in warm water	
Quarter cracks	Crack in the hoof wall	Blacksmith can patch it or wire it	
Osselets	Arthritis of the fetlock joint, (swelling on the front of the ank	Injection, cold water, liniment le)	
Suspensory	Tear or strain in the suspensory ligament	Cryo, blister, cold water, time	
Bowed tendon	Severe strain, over-stretching, or tear of the superficial flexor tendon	Might be a career-ending injury, must be detected early, cold water, blister, surgery, time	
Splints/broken Splint bone	Swelling from new bone production on the cannon bone or upper splint bone	Cryo/if the splint bone is broken it can be removed by surgery	
Check ligament	Tear in the high suspensory just below the knee or hock	Blister, cold water, time	
Curbs	Tear or rupture of the large ligament at the back of the hock	Cold water, cryo, blister	









# **EQUINE PARASITES**

Parasites can cause your horse extensive internal damages without you even realizing that your horse is infected. Parasites can weaken the horse, take valuable nutrients away from the horse and cause stomach problems. Parasites can also cause colic, intestinal ruptures and death.

There are more than 150 different species of internal parasites that can affect a horse at the same time at different stages in the life cycle of the parasite, some of which can produce up to 200,000 eggs a day. This is why worming must be done periodically.

Different parasites can damage tissues of vital organs including the major blood vessels to the lungs, liver, stomach, and intestines while traveling through the horse's body to complete their life cycle. They can cause severe irritation when laying eggs and cause obstructions and ulcerations within the digestive tract.

Weight loss, dull and rough coat, tail rubbing, colic, no appetite and low energy can be signs that a horse has parasites. However, some horses with dangerous parasite levels can appear very healthy. They may look fat and shiny on the outside but have a worm infestation on the inside causing major problems.

There are three methods to administer dewormers; oral paste, tubing and as a feed additive. They are all effective but the key is to make sure that the horse takes in the proper dosage. It is also very important to alternate deworming agents, as the parasites can develop a resistance to some chemicals used to kill them.

# **EQUINE INFECTIOUS ANEMIA**

Equine infectious anemia, often referred to as EIA, is a viral disease affecting the horse's immune system. The virus circulates throughout the body in the blood cells where it reproduces. Anemia is cause by the immune system which attacks and destroys the infected blood cells. The reduced blood count can cause damage to vital organs. The horse may become susceptible to other infections.

The EIA is transmissible by blood, mostly by blood-sucking insects such as mosquitoes and flies. It can also be transmitted by re-using the same needle on different horses.

The Coggins' Test is the most popular way to determine if the horse is infected. A positive Coggins' Test equates to a lifelong quarantine for the horse <u>or</u> the animal must be destroyed.

There are three stages to EIA. The acute stage is when the horse shows the symptoms of the disease, which include fever, listlessness, swelling in the chest, belly or legs, and no appetite.

Horses that survive the acute phase of EIA enter the chronic phase where they will have recurring symptoms of the disease including weight loss, fever and anemia. These horses can survive up to a year or more in this stage before

finally succumbing to the disease. While appearing healthy at some times, horses can experience acute episodes again when under stress such as when faced with hot weather, hard work or other disease.

Some horses can also be in what is called the "asymptomatic carrier stage" where they don't show any signs of disease but test positive on the Coggins' test. These horses can also experience acute episodes when stressed. Horses in the asymptomatic carrier stage present the greatest risk to healthy horses as they don't show any signs of the disease and appear healthy.

Surviving horses will remain infected for the rest of their lives. Effective control of the disease depends on isolation of new, sick, untested or positive testing horses. Extremely good hygiene with regard to needles and like equipment such as dental tools, fly control and identification of positive animals is imperative.

Proof of a negative Coggins' test is required when transporting a horse across the Canadian border and may be required when moving a horse to a new stable or when a horse is being sold. A negative Coggins' test proves that the horse is safe to have around other healthy horses. Check with your provincial regulator on how often this test is required.

To determine if a horse is negative on a Coggins' test, a blood sample from the horse is tested for the presence of EIA antibodies. Antibodies are proteins produced by the immune system that recognizes and helps fight infections and other foreign substances in the body. The antibody is specific to the EIA antigen (a foreign substance causing an immune response).

To reduce the risk of horses being infected with EIA, it is strongly recommended that you:

- Never share needles among horses
- > Sterilize instruments thoroughly after each use
- Dispose of needles immediately after their use
- Keep stable area clean and dry to avoid attracting insects that could spread the disease
- Use insect controls
- Quarantine any new horse entering your stable until it has a negative Coggins' Test.

# COLIC

Colic is a pain in the abdomen. This pain can range from mild to life threatening or even fatal. It is very difficult at the early stages to know if it's mild or potentially fatal. That is why a horse showing any signs of abdominal pain should be treated immediately.

Colic can be classified in three types:

- **Intestinal Dysfunction**: the horse's digestive track is not working properly, there are signs of impaction, namely paralysis and excessive gas. Intestinal dysfunction is the most common of the three.
- Intestinal Accidents: intestines are injured and torn usually requiring emergency surgery.
- Enteritis or Ulcerations: caused by infections, inflammation or disease in the intestine from parasites and/or stress.

# Signs of colic:

- Getting up and lying down repeatedly
- Rolling
- Sweating
- Pawing
- Stretching out as if to urinate
- Kicking at belly
- Turning the head towards the belly
- Little or no gut sound
- · Lack of appetite
- Change in attitude or depression

If you suspect your horse has colic, immediately call your veterinarian and explain what the horse is doing. If the horse is lying down or rolling you should get him up, as the intestine can twist while the horse is rolling. You should take the horse's temperature and walk him for 15 minutes then release the horse and observe his behavior. Do not walk the horse until exhaustion. Keep any water and food away from the horse and keep him as calm as possible until the veterinarian arrives.

Stabled horses in intense training and fit horses with recent injuries are at high risk of colic and should be monitored closely.

#### Prevention of colic:

- Regular feeding
- Constant access to clean water
- Access to forage for most of the day
- Do not let the horse drink or eat as much as he wants before being cooled out
- Consistent exercise
- Control of intestinal parasites
- Do not feed moldy hay or grain

# **COLD WEATHER CARE**

Horses cope much better than humans with the cold weather, as they are better at maintaining their body temperatures in a well below freezing temperature. Their coat works as a water repellent and their guttural pouches, situated at the back of the throat, warm up the air before it reaches the delicate tissues of the lungs.

However, working a horse during brutally cold weather can cause a horse to suffer from respiratory, muscle and immune system problems, which could cause the horse to perform poorly.

The following steps can protect your horse during extremely cold weather:

- Using less water when bathing your horse will help to dry the horse more quickly and adding some rubbing alcohol to the bath water will also help him dry faster. Some people like to clip their horses for winter racing, however a clipped horse will need a well-fitted warm blanket when at rest and a shelter from the wind and the cold.
- Keep the horse from direct drafts when cooling him down as respiratory problems can occur when a horse gets chilled after exercising. A horse is fully cooled down when his coat is completely dry.
- Most people will close all the windows and vents when transporting a horse, which can cause a horse to overheat and can lead to respiratory problems if the horse gets chilled. Protect your horse from direct drafts, but make sure to open the trailer vents to allow fresh air to flow through the trailer.
- Properly warming up the horse before the race will prevent leg and muscle injury.
- □ The tongue of the horse shouldn't be tied outside the mouth as the tongue is susceptible to freezing.
- Increasing the hay portion during the cold period will help the horse maintain his weight. Horses will use more energy during the winter as they generate body heat by digesting plant fibres.
- Giving your horse lukewarm water during the winter will encourage his water intake, as horses will be reluctant to drink ice-cold water, which can leave them dehydrated and increases the chances of impaction colic.
- Horses rarely get frostbite, but the most likely spot for frostbite is the tip of the ears. Frostbites are more frequent on newborn foals, older, thinner, dehydrated horses or horses with heart problems.

# **HEAT EXHAUSTION**

Intense exercise in hot humid weather can result in heat exhaustion or heat stroke. Heat exhaustion can potentially be fatal.

Heat exhaustion or heat stroke is marked by an increase in body temperature; rectal temperature higher than 40.5 C or 104.9 F. Staggering gate, week, disoriented, rapid shallow breathing and shaking muscles are some signs of heat exhaustion. In severe cases, the horse may collapse. These signs can develop soon after exercise or during the cool-out period.

Horses generate a lot of heat in their muscles during exercising and sweating is their way to dissipate body heat. When the weather is very hot and the humidity is high, heat loss is slowed down and the body temperature rises quickly, even after the exercise is over. On a hot and humid day, horses should be cooled out in a ventilated area and out of the sun. Dehydration is also a factor, so horses on diuretics are at higher risk.

What to do when heat stoke strikes:

- Spray the horse with cool water by using a hose or buckets
- Scrape the water off and repeat spraying on a continual basis
- □ Make sure the horse is not in direct sun and keep the horse in a well ventilated area (electric fan or in a nice breeze)
- Apply ice packs or cool towels to the horse's head and neck
- Call your veterinarian
- Continue cooling steps until rectal temperature falls to at least 39.5 C or 103 F.