

# ENDURANCE RIDERS OF ALBERTA



## VETERINARY CONTROL JUDGE HANDBOOK AND GUIDELINES

**FOR ERA ENDURANCE RIDES**

## **Introduction**

This handbook is meant to serve as a guideline for veterinary control of endurance competitions sanctioned by the Endurance Riders of Alberta and should be viewed as a base of knowledge upon which to build and expand throughout your involvement with the sport of endurance riding.

Endurance riding is a competition to test the competitor's ability to safely manage the stamina, fitness and health of the horse over an endurance course in competition against the trail, the distance, the climate, the terrain and the clock. The purpose of veterinary control judges is to safeguard the health and welfare of the equine athletes in the endurance competition. As a veterinary control judge, you will only see the horses at specific points during the ride. As such, the ultimate responsibility for the horse rests with the rider. We can help by educating riders as much as possible and by being honest, open and fair when we do examine the horses.

As a veterinary judge, you should familiarize yourself with the rules and regulations pertaining to endurance riding in Alberta. A copy of these rules can be found on the Endurance Riders of Alberta website or should be available from the ride manager. As a control judge, you are not employed for treatment or diagnosis of horses at the ride (unless you are also required by ride management to be the treatment veterinarian as well). Horses in metabolic or physical distress are referred to appropriate personnel or facilities. In Alberta, the size of most of our competitions does not allow for the hiring of a separate treatment vet and most ride managers arrange for treatment with the nearest available and equipped facility. Many times, in Alberta, the veterinary control judge may need to serve in a triage capacity to stabilize a horse for transport to a treatment facility.

# Control Judging Guidelines

## Qualifications

Control judges, who act as Head Veterinarian, are people who have graduated with a degree in Veterinary Medicine from an institution of recognized standing. All veterinary control checkpoints must be staffed by a veterinarian who will provide the required control. The second and/or third vet required, may be a College of Veterinary Medicine student, in their second to fourth year of study, who will be trained, and under the supervision of the Head Veterinarian, who will be responsible for all decisions regarding pulls or disqualifications throughout the ride. They provide judgment as to an equine's ability to remain in competition. (Special Resolution 2021 AGM.) A control judge need not be legally licensed to practice in the province or country of the ride unless also performing duties as a treatment veterinarian.

**Veterinary control judges should systematically qualify themselves for endurance judging.** This involves not only extensive self-preparation for those who have never been involved in endurance riding but also the constant updating and reevaluation of your skills and knowledge from time to time.

**It is not advisable for a veterinarian to undertake endurance judging without any previous experience with the sport.** Try to familiarize yourself through literature, discussions with other control judges, by observation or by providing volunteer assistance at other endurance rides. If you have been away from the sport, attend a ride and check the literature to see if there have been any changes since you were last judging. You will need to be thoroughly acquainted with exercise physiology, and diseases and disturbances associated with long distance activity in horses in order to make rapid and critical decisions in the course of a ride. It is helpful but not essential to have experience as a rider at some level and preferably in an endurance ride. This will give you an understanding of the sport from the rider's perspective and some of the issues that they face routinely in this sport.

No alcohol or recreational drugs should be consumed during competition. You should present yourself in a professional manner with regards to behavior and dress. A veterinary control judge should be tolerant, firm and fair. Conflict of interest should be minimized and eliminated where possible. It helps to have a good sense of humor. Be pleasant, helpful and kind. Above all, be concerned for the horses in your care and be aware and appreciative of the efforts put forth by both the two and four legged athletes and volunteers involved in this sport.

## Equipment

The amount of equipment will vary with the circumstances and whether you are serving as head veterinarian, assistant veterinary, control judge, or as both control judge and treatment veterinarian. For veterinary control judging you will require a stethoscope, thermometer and a watch with a second hand or second reading. Treatment vets should have supplies and equipment appropriate for treating the most common and pressing emergencies in the sport of endurance riding. A list is included at the end of this guide for your reference.

## Duties

Most of the time, the ride manager will have taken care of all the necessary arrangements prior to the ride. You may be consulted on a few of the details that affect horse welfare and safety. These include selection of checkpoints, layout of checkpoints, help needed, providing emergency care and access for removal of sick and injured horses. The head veterinarian sets the

pulse criteria and the length of the holds. This is usually done in the last 24 hours before the ride. The head vet will also brief ride management, other vets, volunteer staff and riders as to criteria, length of holds and any other concerns that may affect horse and rider. Veterinary control judges have absolute control over all matters affecting the welfare of the horse. Your presence at the ride site is required from the start of check in until at least an hour after the last horse has safely completed the course. You should arrange to have coverage for any other professional responsibilities so there is no interference with your duties as a veterinary control judge.

## **Control**

The veterinary control judge's purpose is to recognize and where possible prevent metabolic or physical injury to the horses involved in a ride.

The pre-ride examination should find and prohibit from the competition horses that are mechanically or metabolically either unsuited or unprepared.

Checkpoints during the ride detect undue stress levels and eliminate from competition those horses unable to cope with the given conditions of the ride.

The post-ride examination qualifies a horse for completion and is a chance to advise the rider as to how their horse performed so they can better manage their horse in the future.

As to the course, make sure the test is reasonable without undue hazards of mechanical injury or metabolic exhaustion. Make sure there are sufficient checkpoints and that those checkpoints are easily accessible for staff, crew and horses. Plan for ample hold time. Make sure that all horses have adequate access to water at checkpoints, crew points and along the trail. Assure that completion within the time allowed under the circumstances presented is reasonable. Work with ride management to change start times, hold times or even cancel the ride if weather, terrain or other conditions create an unacceptable hazard to the horses' health.

Ride management is there to deal with all disputes that involve non-veterinary matters. In the event of a dispute over veterinary judging, consult with the head veterinarian or, if you are the head vet, render a decision. The decision of the head vet is final in all matters pertaining to the health and welfare of the horse.

## **Pre-Ride Veterinary Examination**

The purpose of this exam is to assess the readiness of every horse entered to withstand the rigors of this ride. Screening at this point can prevent problems during the ride. This is not a full physical, but rather a targeted examination to eliminate those entries that may not complete the ride in the allotted time due to metabolic fatigue, injury or mechanical failure. Be systematic. All parameters on the rider card should be assessed.

In many instances, rectal temperatures are not routinely taken pre-ride. This is generally reserved for situations where we have the suspicion or likelihood that the horse's temperature is elevated and want a baseline to monitor if the horse can adequately cool itself. **The ERA has added a Pre-Ride temperature check to the Vet Card (2022). The head vet, in consultation with other line judges, will decide the procedure to be used for this temperature check. (i.e., riders could take their own equine's temperature while waiting in line for the Vet-in)**

Evaluate the heart rate and rhythm at rest. The horse can now be trotted for soundness. If the horse trots unsound to any degree, it may be worthwhile to have the rider return with the horse for further examination later. The purpose of this is to separate those horses who may be a bit trailer sore from those horses that are truly lame or have any other significant process going on.

Examine the heart and lungs again when the horse returns from the trot. The pulse should decline relatively rapidly back to a resting rate. Note any abnormalities of rhythm or heart sounds on the rider card.

Complete the metabolic exam according to the order on the rider card. When you practice this from the first horse, it becomes second nature and easy to perform in a rapid but thorough manner during the ride at veterinary checks. These metabolic parameters are best rated A-B-C-D rather than assigning a numerical value. As a guide A is superior, B is acceptable, C is cause for concern and D is unacceptable and cause for elimination.

The individual parts of the examination will be discussed in more depth under the checkpoint exam. Suffice it to say that the standard of fit to continue is applied. All horses with Grade III or greater lameness cannot start. Obviously sick horses and horses that are already showing serious wounds or metabolic unbalance before the ride starts should not be allowed to start. If you are in doubt, get a second opinion from another vet. If the horse is allowed to start, please make note on the rider card of pre-existing abnormalities of gait or other parameters. Also note any wounds or lesions especially those that have the potential to be exacerbated during the ride.

Lameness grades used are those approved by the AAEP and are as follows:

**Grade I.** Difficult to observe. Not consistently apparent regardless of circumstances.

**Grade II.** Difficult to observe at a walk or trotting a straight line. Consistently apparent under certain circumstances (e.g. Circling).

**Grade III.** Consistently observable at a trot under all circumstances.

**Grade IV.** Obvious lameness at a walk; marked nodding, hitching or shortened stride.

**Grade V.** Minimal weight bearing in motion or at rest; inability to move.

A horse which constitutes a clear danger to other horses and/or persons may be disqualified at any time from competition by the ride manager or control judge.

Horses shall have a body condition score of no less than 3.0 and no greater than 8.0 to start an endurance ride. Control judges will use the National Farm Animal Care Council (NFACC) Condition Scoring Guide in determining body condition score. Body condition scores will only be judged during the pre-ride veterinary examination. (Special Resolution 2020).

### **Rider Briefing**

This is the time to establish a relationship between the veterinary control judges and the riders. Introduce all of the vets and other staff assisting, review procedures and the recovery criteria for the ride. Remind riders that they are more familiar with their horse and see it more often than we do. It is to their horse's benefit to bring any issues to the attention of the veterinary judges. Discuss traffic patterns at the checkpoints and the logistics of hauling any horses that may require it. Advise riders on how to handle a horse that becomes seriously tired or lame between checkpoints on trail. Now is the time to answer any questions that riders or staff may have.

### **Records and Recording**

All riders are issued a rider card that, at most rides, they are expected to carry with them at all times and to all checkpoints. These cards enable vets to carefully monitor any changes in the horse from one check to the next. Usually, you will be given an assistant to record data on the rider card. Prior to the start of the ride, go over the rider card with them and how you would like

the data recorded. Rider cards are kept by the vet at the end of a ride or after a horse is pulled and are returned to the ride manager.

## **Pull Codes**

There are eight pull codes to describe why a horse or owner did not complete an endurance ride. A horse can be pulled aside at any point or at any time, during the event, even if they have received a pass from a control judge, and evaluated for a perceived lameness or metabolic issue.

**Lame (L)** - The **Lame** code is used when any equine is found to be consistently lame at Grade III or greater by the veterinary control judge.

**Metabolic (M)** - The **Metabolic** code is used for various reasons all pertaining to the equine's ability to cope metabolically or cardio vascularly with the conditions. In general, no one physical exam parameter would require a horse to be eliminated and all signs should be considered together.

**Surface Factors (SF)** - The **Surface Factor** code is used for any tack gall, laceration or abrasion on the horse that the vet deems would render the horse unfit to continue.

**Disqualification (DQ)** - The **Disqualification** code is used by ride management for rule infractions by the rider.

**Overtime (OT)** - The **Overtime** code pertains to horses that have gone over the total allowed ride time or did not meet a hold cut off time.

**Rider Option (RO)** - RO code is for Rider Illness NOT for the horse. **RO** code is used in a case where the vet has passed the horse as fit to continue, but the rider is unable to continue, or chooses to withdraw.

**Rider Option – Lameness (RO-L)** - The **Rider Option – Lameness** code is used in a case where the vet has passed the horse as fit to continue but the rider feels the horse is not really sound.

**Rider Option – Metabolic (RO-M)** - The **Rider Option – Metabolic** code is used where the horse has passed the vet check as fit to continue but the rider feels the horse is not up to par.

In **ALL** cases where the rider option code is used, the horse **MUST** have completed and passed the exam at the vet check as fit to continue for the rider option to be used. Horses that do not pass for lameness or metabolic reasons **cannot** be a rider option. Do not offer riders the choice of RO or Pull. If the horse is not fit to continue, it is a Pull.

A horse can be pulled aside at any point or at any time, **during the event**, even if they have received a pass from a control judge, and evaluated for a perceived lameness or metabolic issue.

## **Control Checkpoints/Holds**

The most common type of control checkpoint is the gate into a timed hold (15-60 minutes). When entering the checkpoint, the horse is given an arrival time and it must meet recovery criteria within 30 minutes of arrival. The hold time for that particular checkpoint starts as soon as the horse meets recovery criteria. The gate tends to group together horses of like ability and to slow those horses not capable of the pace at which they have been traveling. Most fit horses ridden at the level of their ability will recover within three to ten minutes of arrival at the check.

If pulse criteria are met at the first check, the rider may go directly to the veterinary control judge for the remainder of their examination. During the timed hold, riders and horses can rest. If necessary, a horse may be re-presented to the vet for evaluation of fitness to continue. The time of a mandatory hold can be shortened or lengthened during a ride if unexpected weather conditions or other problems arise. The hold time must be modified and riders notified before the first horse leaves the checkpoint.

## **Veterinary Examination at Checkpoints**

Examine the horses regularly and often during a ride (at least three times for most 50-mile rides and five to eight times for 100-mile rides). Remember that there are no conditional releases!!!! You can give a rider advice as to how to better manage their horse, but there is no guarantee that they will follow it. If you have any doubts about a horse's ability to complete the next phase of the ride, do not allow it to leave the hold. A veterinary control judge should perform a complete hands-on exam of every horse at every control point.

## **Examination and Criteria**

**Pulse:** Pulse recovery with rest is one of the main objective criteria for fitness to continue. If a horse's parameters are questionable, refer to the in-time to see how much time has elapsed since arrival. A recovery rate of 64 bpm or less within ten minutes of arrival should be expected. The palpable pulse and auscultable heartbeat should be regular and full, not wandering, labile, thin or "slapping". The horse must recover to pulse criteria within 30 minutes of arrival at the checkpoint.

**Cardiac Recovery Index:** The CRI may be performed at all control checkpoints during a ride including the finish line. The horse is not presented until it has met recovery criteria established for that ride. At presentation to the veterinary judge, a resting heart rate is taken. (Do this first before any other parameters are assessed!) Then the horse is trotted 125 feet out and 125 feet back. Start your time from when the horse starts the trot out. During the trot out, you can observe the gait for lameness and assess attitude and impulsion. At **exactly** one minute from the time the horse has started the 250-foot trot out, the heart rate is again taken. Most horses will complete the trot out in 25-30 seconds, allowing the horse to stand quietly the rest of the minute. For a horse that does not object to being handled, the vet can use this time to assess jugular fill, skin tent, gut sounds, back, withers, muscle and anal tone and tack galls and wounds. Do not do anything that may disturb the horse!! I usually avoid assessing mucus membranes and capillary refill until after the second pulse. A horse that is compensating metabolically for the ride conditions should recover to the same resting heart rate taken before the 250-foot trot out or preferably to a heart rate that is four bpm less. If the heart rate elevates during the CRI, you may want to take a closer look at other parameters or even have the horse re-present to you in 10-15 minutes to check for progressive recovery. Heart rate elevations of eight bpm or more or elevations over 64-68 bpm are a real cause for concern. Recheck other parameters carefully.

Have the horse come back for a recheck if you are unsure whether to pull or release the horse. **The CRI is not necessarily used to eliminate a horse from competition; the entire clinical picture is used to assess the ability of the horse to continue in the event!!!!!!**

**Respiration:** Respiratory recovery varies with the weather conditions. It is the volume of air being moved per minute that is the critical factor. Under normal cooling conditions, the respiratory rate will subside parallel to and below the pulse rate. Since endurance effort produces high body heat and since horses vary in their response to poor cooling conditions, panting in hot, humid weather can be entirely consistent with optimal performance. If pulse and other signs of recovery are prompt and progressive, panters with a true core temperature below 39.7 C are merely devoting respiratory effort to further cooling within the physiologic range. Any horse with a rectal temperature above 39.7 C should be closely scrutinized for other signs of fatigue and made to reach and maintain a cooler body temperature in order to be fit to continue on trail. Some panters can be recognized at the pre-ride exam in hot, humid weather by their tendency to rapid, shallow breathing with rates in the 40s or 50s at rest. Watch for bleeders. A tinge of blood may be acceptable, but a trickle of blood no matter how small is cause for elimination.

**Body Temperature:** At least 70% of the energy of muscle metabolism converts to heat within the working muscle. Horses working near their maximum aerobic rates develop elevated body temperatures. Rectal temperatures of 38.3 C-39.5 C are common and tolerable. Rectal temperatures above 39.5 C for longer periods can be dangerous. Horses with temperatures above 39.7 C should be subjected to supplementary cooling with water both at checkpoints and on the trail. A horse with a rectal temperature above 39.5 C for 30 minutes following cessation of exercise and despite external cooling may not be adequately compensating for the heat stress and may be deemed not fit to continue. Take rectal temperatures on all panters and horses with poor pulse recoveries. If a horse is over 39.5 C, subject the horse to external cooling and recheck the temperature at 30 minutes. A very slow bowel may accompany high rectal temperature and should factor into the decision as to whether the horse continues.

**Skin Tent (Dehydration):** The persistence of a skin fold pinched at the point of the shoulder may indicate body water lost in excess of 3% of the horse's body weight. The skin pinch on the side of the neck is less reliable as an indicator of hydration since it is easily influenced by skin elasticity and fat content. Increased skin tent, scant sweat, dry, injected mucous membranes and sinking of the eyeball are all signs of dehydration. This is the time to start looking for other signs of fatigue or metabolic failure.

**Capillary Refill and Mucous Membranes:** Lightly blanch a spot on the gum above an upper tooth with pressure from a thumb or finger. Time the return of full color at the spot. Normally this takes one to two seconds. Refill time over two seconds denotes low blood volume and/or low blood pressure. Poor capillary refill often corroborates findings of dehydration, as do dry, tacky mucous membranes. Muddy or injected mucous membranes or purplish gum margination are reliable indicators of metabolic disease.

**Jugular Refill:** Jugular refill is prolonged with falling blood pressure and capillary perfusion. Block the vein and estimate how quickly it fills cranial. Two or three seconds is normal. Horses with slow resting heart rates may give the impression of delayed jugular refill time.

**Gut Motility:** The diversion of blood from visceral to muscle circulation can cause diminished gut sounds or even a complete ileus. Reduced gut sounds in an apparently healthy horse are less concern than absent gut sounds in a horse with other abnormalities. Both of these



horses should be monitored and brought back for re-examination before the end of the hold to determine if the horse can continue. Hyper-motile gut sounds can be a prelude to an ileus.

**Attitude:** Sleepy looking eyes and droopy ears may be related to fatigue. Loss of attentiveness is significant. Loss of appetite is alarming. Loss of thirst in the dehydrated horse is seen with metabolic fatigue and electrolyte imbalances. Experienced horses will usually stand very quietly at rest. It is important to determine which horses have passed a point of safe and reasonable fatigue.

**Impulsion:** The loss of elasticity, power and length of stride are proportional to muscle fatigue and often moderately deteriorate over the ride. Electrolyte imbalances, dehydration and other physiologic disease processes such as exertional myopathy, overheating or glycogen depletion may adversely affect impulsion.

**Gait:** Lameness on the trail or at a checkpoint is evaluated the same way as the pre-ride inspection. Grades I and II can usually go on with caution. Consider the prognosis of the lameness with work. Grade III lameness or greater for any reason should be eliminated whenever it occurs.

**Wounds:** Bleeding or tender interference injuries should be carefully assessed for ability to continue. Any new wounds should be noted and old wounds checked for exacerbation.

**Tack Galls:** Severe saddle, girth or bit injuries should be disqualified if a change of equipment will not relieve them. Improperly fitting saddles can contribute to severe back discomfort and even lameness and can be cause for elimination.

**Back and Withers:** Carefully palpate the back and withers. These are the most common areas for saddle soreness from ill fitting tack or “hard” riding. Most commonly, a saddle will cause bridge soreness at both the withers and caudal lumbar area. Rider issues can cause soreness in the center of the back. Feel the muscles lateral to the spine for areas of hardness and pain as this can be an area where we find signs of tying up.

**Muscle Tone:** Gently lift the tail and palpate the large muscles of the hind legs. Horses that are tying up may start with stride shortening, but this usually progresses to tight hard muscle cramps in the hind quarters.

**Anal Tone:** As with other parameters, sluggish anal tone is indicative of metabolic fatigue and exhaustion.

## **Completion Examination**

The same criteria and procedures that are applied throughout the ride should be applied at the finish line. The post-ride completion exam must take place within one hour of crossing the finish line (for LD – one hour from the time pulse criteria is met). A rider may choose to do this as soon as the horse has met pulse recovery criteria. Apply the same standard of “fit to continue” as was applied during the ride. For completion, a horse must meet the pulse criteria within the specified time, demonstrate progressive recovery, have remaining reserves, has not been treated with any medication and not have a lameness of Grade III or greater.

## **Best Condition Examination**

This examination is to select the horse considered the most fit, freshest and in the soundest condition at the end of the ride. If no animal is in acceptable condition, the award may be withheld. The evaluating procedure for Best Condition uses the same parameters as all other examinations, but may be more demanding and detailed to discriminate between contenders.

The examination is usually performed one hour after the finish but may be at such other time as

the head vet and management may specify. Do not take this exam lightly as many competitors value their vet score and best condition award as much as their finish. Usually only the top ten finishing horses in each distance are considered eligible for Best Condition. In ERA, Junior and Youth riders are considered separately and the top ten Junior and Youth finishers at a given distance are also eligible for Best Condition Junior and Best Condition Youth.

### **Guidelines for Judging Best Condition (BC)**

1. It is very useful to perform a CRI on all eligible horses 10 minutes after they cross the finish line. These horses may not have met pulse criteria yet or be fully recovered. If the CRI is elevated, this is not a pull. The horses still have a further 20 minutes to meet pulse criteria. Horses that are recovered may choose to continue with the completion exam at this time. The 10-minute CRI will allow you to differentiate BC contenders on recovery.
2. For the veterinary portion of the BC score, the definition of best condition is “the horse, at the time of Best Condition examination, that is in the best condition and deemed most fit to continue...”.
3. The actual award is modified to include time and weight factors in addition to veterinary judging. This is generally done by ride management.
4. It is very important to use the full range of points in each category. If only the upper end of the scale is used, a fatigued or mildly lame horse ridden by a fast or heavy rider will be the highest scoring horse once weight and time are factored in. This is not to minimize weight and time but to ensure that tired or unsound horses aren't receiving BC awards.
5. All horses judged for BC will be judged against a standard of a well-conditioned, fit, sound and metabolically normal endurance horse. With regard to gait and movement, consider what is normal for the breed, type and disposition.
6. **Any horse with a severe abnormality in any category should not be considered for Best Condition.**
7. Consider what is only showmanship and detracts from evaluating the horse's true state of ability to continue.
8. If all horses score low using these standards, it is possible that none are worthy of the BC award.
9. Horses should be evaluated for gait abnormalities prior to any palpation or manipulation. It is common to trot a horse straight out then have it trot a circle clockwise and counter clockwise before returning straight back. Don't forget a second CRI at the hour.
10. **Be consistent!!!** To this end and to give you some pointers, I have included an article reprinted from Endurance News by Dr. Art King about condition scoring. Develop your own system and stick to it.

### **Ride Debriefing, Critique and Reports**

Management and/or sanctioning bodies may request or require specific commentary on the event and veterinary service. This may be an oral debriefing or a formal written report on forms provided for this purpose. Be thorough, frank and tactful. The head veterinary control judge should complete the ERA veterinary report and present their findings to management so a ride can be improved in the future for the benefit of the competing horses.

## ERA Drug Testing Policy

The ERA Sanctioning Director will randomly select two rides throughout the year, and will request the testing kit through Bureau Veritas Labs. Either, the head veterinarian, the ride manager or Sanctioning Director will receive the supplies and directions for drug testing prior to the selected ride. The Head Vet will randomly select the placing of the two horses to be tested prior to the start of the ride.

Sampling horses necessitates creating an area near the finish line and vet examination areas where selected horses can be held under veterinary control and observation until sampling is complete. Fill out all forms and make sure samples are handled and packaged correctly for testing.

Horses selected for random drug testing at rides shall be reported on a form to be completed by the ride veterinarian drawing the blood sample, witnessed by the person responsible for the horse (over the age of 18 years of age) and submitted to the Sanctioning Director by Ride Management.

The list of banned substances is extensive. As of this writing, I would refer you to the FEI website (Safe Sport) for lists of drugs that are prohibited. Generally, these are substances that have the ability to affect the performance of the horse, substances that mimic performance affecting substances or substances that mask the detection of another drug. (Exception as per Special Resolution AGM 2021: Pergolide mesylate administered exclusively for the purpose of treating Pituitary Pars Intermedia Dysfunction (PPID/Equine Cushing's Disease)) There are also many treatments that are not allowed during the course of a ride. These include acupuncture, chiropractic manipulation, ECSWT and anything of an invasive nature including blood sampling, injections and nasogastric tubing. Care needs to be taken with the use of herbal products, tonics and feed supplements or compounded feeds as these products may contain unlisted substances or contaminants that will test positive for a prohibited medication.

In general, the following are allowable preceding and during competition:

- Vitamins and minerals
- Electrolytes given by oral syringe or in the feed
- Topical agents that do not contain a banned substance
- Ice and ice water administered topically or orally
- Progesterone/progestagens (Regumate) only in mares to control heat
- Chondroprotective agents: chondroitin, glucosamine, hyaluronate, Polysulfated glycosaminoglycan – **NOT** administered by needle and syringe while in the competition
- Acid neutralizers including aluminum hydroxide (Maalox)
- Topical insect repellents
- Anthelmintics (dewormers)
- Vaccines

It should be noted that many prohibited substances can persist in the body for extended periods of time. It is better to avoid use where at all possible during ride season.

## **Commentary/Acknowledgements**

At this time, I would like to acknowledge all of the sources I have drawn on to compile this handbook. These include ERA Rules and Regulations, the previous ERA Veterinary handbook done by Dr. Trish Dowling, the AERC Guidelines for Judging AERC Endurance Competitions, Endurance News, FEI and many notes, articles and personal experiences gleaned along the way. Lastly, I would credit all of the other endurance vets, officials and other volunteers as well as riders from whom I have learned more than from anywhere else and from whom I continue to gain new insights and information every year.

As an addition to this handbook, I have included in the appendices a sample rider card, a Best Condition score sheet, Dr. Art King's article on Best Condition scoring and a list of suggested equipment and medications for treatment veterinarians. If you want further information sources, you can consult both the FEI and AERC websites as well as peruse articles on line regarding equine exercise physiology, electrolytes and any other aspects of endurance riding you want information on.

There's a saying to the effect that the only person who never makes mistakes is the person who does nothing. Further to that, the person who does nothing can also do no good. In this sport, you will learn with every ride, with every mistake and with every person and horse you meet. If you choose to stick with it in any capacity, you will find you are drawn not only into a sport but also a large family that shares triumphs, argues, debates issues and shares the common interest of growing their sport and sharing that enjoyment with others. I wish you all the best!

Dr. Deanna Spiker DVM

## *VETERINARIAN FEES*

	Head Vet	Second Vet	Vet Student
Vet-In	\$200 \$300 if one vet present vets in 30+ horses, or is mentoring vet students	\$200 \$300 if one vet present vets in 30+ horses	\$100
Day 1	\$600 +\$150/75 mile or +\$200/100 mile +\$200 if mentoring a vet student	\$550	\$275
Day 2	\$400 +\$100 if mentoring a vet student	\$350	\$175
Additional Fees	Working with previously mentored vet student \$150/weekend	Whomever brings the treatment kit \$50	Travel - \$0.61/km both ways

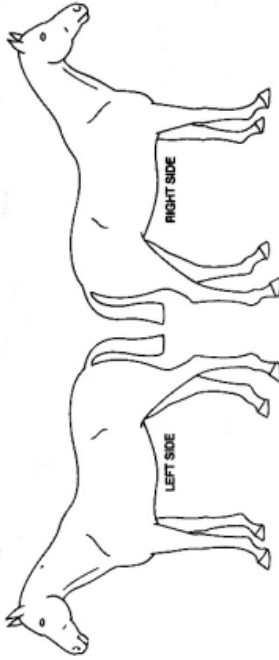
# Appendix 1 Sample Rider Card

## VET CARD

Rider Name: \_\_\_\_\_ Horse Name: \_\_\_\_\_ Rider #: \_\_\_\_\_  
 Date: \_\_\_\_\_ Ride Name: \_\_\_\_\_ Miles: \_\_\_\_\_  
 Junior Rider?  No  Yes  Jr. Rider Sponsor: \_\_\_\_\_

**BODY CONDITION SCORE**  
 Must be between 3 & 8 for PASS  
 Circle Score

- 1 - Poor
- 2 - Very Thin
- 3 - Thin
- 4 - Moderately Thin
- 5 - Moderate
- 6 - Moderately Fleshy
- 7 - Fleshy
- 8 - Fat
- 9 - Extremely Fat



FINISH TIME:
PLACING:

Pre-Ride (First) Examination	Post Ride (Final) Examination
Heart Rate	CKI (beginning/exit)
Gait	Gait
Impulsion	Impulsion
Attitude	Attitude
Mucus Membranes	Mucus Membranes
Capillary Refill	Capillary Refill
Jugular Refill	Jugular Refill
Skin Tenting	Skin Tenting
Gut Sounds	Gut Sounds
Anal Tone	Anal Tone
Muscle Tone	Muscle Tone
Back/Withers	Back/Withers
Tack Galls	Tack Galls
Wounds	Wounds
Overall Impression	Overall Impression
Examiner	Examiner
Comments	Comments

## VET CARD

	#1	#2	#3	#4	#5	#6	#7
Rider Name: _____	Horse Name: _____						Rider #: _____
CRI (beginning/exit)	/	/	/	/	/	/	/
Gait							
Impulsion							
Attitude							
Mucus Membranes							
Capillary Refill							
Jugular Refill							
Skin Tenting							
Gut Sounds							
Anal Tone							
Muscle Tone							
Back/Withers							
Tack Galls							
Wounds							
Overall Impression							
Comments							
Examiner							

L = Lameness      RO = Rider Option      ROL = Rider Option Lameness      D = Disqualified  
 M = Metabolics      ROM = Rider Option Metabolics      HI = Horse Injured

# Appendix 2

## Best Condition Score Sheet

### ERA Best Condition Evaluation



RIDE NAME: \_\_\_\_\_ DATE: \_\_\_ M \_\_\_ D \_\_\_ 20\_\_\_ DISTANCE: \_\_\_\_\_ MILES  
 RIDER NAME: \_\_\_\_\_ RIDER # \_\_\_\_\_  
 HORSE NAME: \_\_\_\_\_ HORSE# \_\_\_\_\_

PLACING
---------

\*\*The riders finishing weight is determined at the end of the ride with tack and the same clothes worn during the ride.

**VETERINARY SCORE** Maximum score 500 points

**STANDING EVALUATION/MOVEMENT EVALUATION**

**Recovery:**

Based upon ability to demonstrate recovery; e.g. the Cardiac Recovery Index; recommend use the CRI took 10 -15 minutes post finish time. Base the respiratory aspects on quality of respiration as determined visually and by auscultation. SCORE 1 - 10 \_\_\_\_\_

**Hydration Factors:**

Use all the metabolic parameters that indicate the state of hydration, i.e. skin tenting, mucous membranes, capillary refill time, jugular refill time and sounds SCORE 1 - 10 \_\_\_\_\_

**Lesions Producing Pain and Discomfort:**

Major concerns are back pain and pain/swelling in joints, tendons and ligaments that may be indicative of potentially serious pathology. Also consider Girth, Saddle and other tack induced lesions and all wounds. Note: do all but cursory palpation after the movement phase. SCORE 1 - 10 \_\_\_\_\_

**Soundness:**

Note: Not eligible for consideration for B.C. if there is a pathological gait aberration greater than grade II. Consider regularity of gait and movement SCORE 1 - 10 \_\_\_\_\_

**Quality of Movement:**

Consider Attitude, Co-ordination and Impulsion (deterioration exhibited as a reluctance or refusal to trot, stumbling, leg weariness, muscle fatigue and stiffness). SCORE 1 - 10 \_\_\_\_\_

**SUBTOTAL OF ABOVE:** \_\_\_\_\_

**TOTAL VETERINARY SCORE = SUBTOTAL × 10:** \_\_\_\_\_

**B. TIME FACTOR**

**Maximum 200 Points (Awarded to Fastest Rider)**

Riding Time of THIS Rider _____	(Value one point per minute)		
Riding Time of Winner _____	Maximum	200	_____
Difference: _____	Less Difference (-)	_____	_____
(Calculate time in minutes – exclude hold time)	<b>Total Time Score</b>	_____	_____

**C. WEIGHT**

**Maximum 100 Points (Awarded to the Heaviest Rider)**

Weight of Heaviest _____	(Value one-half point per pound)		
Weight of THIS Rider _____	Maximum	100	_____
Difference: _____	Less (Difference ÷ 2) (-)	_____	_____
Difference ÷ 2 _____	<b>Total Weight Score</b>	_____	_____

**(Total score not more than 800 points) Total Score = A + B + C = Score** \_\_\_\_\_

\*\* The Rider's finishing weight is determined at the conclusion of the ride with tack and the same clothes worn during the ride.

SCORE OF WINNER

RIDE MANAGER \_\_\_\_\_ HEAD VETERINARIAN \_\_\_\_\_

Distribution of copies: **White:** (Rider) **Pink:** (Ride Manager, This form must be submitted along with ride results to the sanctioning director)



# Appendix 3

Arthur B. King, DVM **VET FORUM**

## Understanding your horse's BC score

**WINNING THE BEST CONDITION (BC) AWARD**—or high vet score award, if one is available—is an important goal for many endurance competitors. However, the BC score, especially the equine score section of the BC evaluation form, is poorly understood by many riders and therefore they do not appreciate what they could or should do to improve their score.

The control judges at an AERC endurance ride are responsible for judging the horses that are eligible for the AERC BC award. Sections 9 and L9 of the AERC rule book contain the rules for the AERC BC award. The AERC control judge handbook (Guidelines for Judging AERC Endurance Competitions) contains additional information for BC judging. The AERC best condition evaluation form and instructions for its completion can be found on the AERC website.

The AERC rules state that a BC award **will** be available for an AERC endurance ride and **may** be available for an AERC limited distance ride. Any horse that completes in the top ten is eligible for the BC award. The award does not have to be presented if the control judges do not believe that any of the eligible horses deserve the award.

Although AERC does have a BC judging system, control judges do not have to use that system to judge the BC award. However, AERC will only award points towards the year-end regional and national BC awards for horses that have been judged using the AERC best condition system.

### The control judge's role

Control judges have some leeway in interpreting and applying the AERC BC system and guidelines. For example the AERC guidelines recommend that the cardiac recovery index (CRI) assessment be used within 10 minutes to 15 minutes after completing the ride. However in some circumstances, this time may be extended, especially if the finish line is a considerable distance from a suitable location to complete the pulse and CRI assessment.

The guidelines also recommend that the BC judging be performed one hour after completion. While this is the case for most events, BC judging after a 100-mile event is often completed the morning after the ride.

This is an advantage in that the judging can be done in daylight as opposed to after sunset. Another advantage is that the control judges can form a panel to judge the horses, as opposed to only one judge, usually the head judge, doing the judging.

When the control judges act as a panel, each judge assigns a score from 1 to 10 for the soundness and quality of movement categories for each horse. These scores are then averaged to get the final score for those categories for each horse. The other three categories can be assigned to individual judges, with one judge assessing the same category on all horses. This should improve the consistency among the scores. Having one judge assess the same category on all horses also avoids the situation where a horse with a painful back or sore girth gall is subjected to repeated palpation to assess pain by each of the judges.

The AERC definition of best condition is "the horse, at the time of the best condition examination, that is in the best condition and deemed most fit to continue . . ." The BC evaluation form consists of the equine score sheet section and the ride management score sheet section. The ride management score sheet section consists of the time factor and weight factor.

### Equine score sheet

The control judges, usually the head control judge, completes the equine score sheet section. This section, to a maximum of 500 points, is based upon the control judge's assessment of the horse's physical condition, usually based upon cardiac recovery index and heart rate taken 10 minutes after the finish of the ride, and a complete evaluation, usually one hour after the finish of the ride. The horse's physical condition at the end of a ride will vary depending upon its fitness and the effects of the stress of the ride.

The **time factor** is based upon the horse's ride time (excluding hold times). A horse that travels at a faster speed is more stressed compared to a horse that travels at a slower speed. Since horses that travel faster have a shorter ride time, they are scored higher in the time factor category.

The **weight factor** is based upon the weight of the rider with tack. A horse that carries a heavier weight is subjected to more stress compared to a horse carrying a lighter weight and is accordingly scored higher in the weight factor.

Therefore the final best condition score reflects the horse's physical condition or equine score adjusted to compensate for the time and the weight factors.

Time and weight factors are readily understood since they are based upon the actual numerical measurements of time and weight. The equine score is less readily understood by riders. Although the score is based on some objective measurements (heart rate, skin pinch time, etc.) it is largely subjective, based on the control judge's observations and interpretations of such factors as gut sounds, pain, impulsion and soundness.

The control judge is subjectively comparing, on a scale of 1 to 10, the horse being judged, to the judge's own perception of the "perfectly conditioned horse." A lack of consistency among control judges may lead to further misunderstanding of BC scoring among riders, especially if similar horses receive widely varying scores when judged at different rides by different control judges.

continued on next page

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## Vet Forum . . .

### Standing and movement

The equine score has five categories divided into the standing and movement evaluation. The categories, worth one to 10 points each, are:

- recovery
- hydration factors
- lesions producing pain and discomfort
- soundness
- quality of movement.

A horse that is the epitome of fitness and condition in all five categories at the time of the BC evaluation would score a maximum of 50 points. A horse that scores the minimum of one point in all categories is not a horse that is dead or nearly dead, but rather a horse that is barely fit to continue in all categories.

A horse that is unfit to continue is ineligible to be judged for BC. Therefore a horse that is deemed to be unfit to continue when presented for the one hour or next day BC examination is to be excused from judging and is not scored.

Several years ago I developed a system to assist me in improving my consistency when assessing horses for BC, and to ensure that I use the full range of points in each category when assessing the horse (see chart).

#### Recovery score.

The recovery score is based upon the heart rate and the CRI, usually at 10 to 15 minutes after finishing, and the heart rate at the BC examination. When I score this category I assign:

- four of the 10 points (40%) based upon the heart rate at 10 minutes
- three of the 10 points (30%) based upon the CRI
- three of the 10 points (30%) based upon the heart rate at the BC examination.

If a horse is just at or above the heart rate parameter, i.e., 64 bpm at 10 minutes, it would be scored as 0 for the 10 minute heart

rate. If the heart rate was 48 bpm or less at 10 minutes it would be scored 4 points. Heart rates of 60 bpm, 56 bpm and 52 bpm are scored 3, 2 or 1 points, respectively.

If the second pulse reading of the CRI is high compared to the first pulse reading, the CRI would be scored from 0 to 2 points depending upon the increase in the second pulse reading. If the second pulse reading of the CRI was the same or lower than the first, the CRI would be scored as 3 points.

One would expect the heart rate to be lower at the one hour or next day BC examination than at 10 minutes after the ride. If the heart rate at the BC examination is at or above 60 bpm the horse would be scored as 0 out of three points. If the heart rate was 48 bpm or less at one hour it would be scored as a 3. Heart rates of 56 bpm and 52 bpm at one hour are scored as 2 and 1, respectively.

Adding the scores for 10-minute pulse, CRI and one-hour pulse gives the recovery score out of 10 points.

**Hydration.** The hydration factors are scored as A, B, or C for horses that are fit to

continue during the ride. At the BC examination I assign a numeric value to these scores. Any horse with any parameter scored as a D is not fit to continue and therefore ineligible for BC scoring.

There are five parameters in the hydration category:

- mucous membranes
- capillary refill time
- skin tent
- jugular refill
- gut sounds.

A score of A is 2 points, B is 1 point and C is 0 points. The maximum score would be A in each of the five categories, i.e., 2 points times five for a total of 10. Half points could be used where a score was + or -. For example if gut sounds were B+ the score could be 1.5 for the gut sounds parameter. A horse with a C rating in all categories would be scored as five times 0, adjusted to 1, since a score of 0 is not permitted in a category.

**Lesions.** The category for lesions causing pain and discomfort at the BC examination is 10 points. I assign five points for tack related problems such as sore backs, girth galls, and other tack related rubs and scalds. The remaining five points are for non-tack-

related lesions causing pain such as wounds, interference marks, pain or heat in joints or legs, etc. The lesions are graded on a scale of 1 to 10 where 1 means that if the wounds or pain were any worse the horse would be eliminated and 10 means that there were no painful lesions detected.

**Soundness.** Soundness or gait is scored during the ride as A, B or C for sound, grade I or grade II respectively. For the BC examination, these are scored as 10 to 6.6 for A or sound, 6.6 to 3.3 for B or Grade I, and 3.3 to 1 for C or grade II. Remember that any horse that is scored as grade III is unfit to continue and therefore ineligible for BC.

**Quality of movement.** The movement evaluation is performed at the BC examination, preferably at a location that:

- provides firm and even footing
- has few distractions for the horse, if possible
- is well-lit if the judging is being done after sunset
- has sufficient space to trot the horse in a straight line for at least 40 to 50 feet and in a circle at least 20 feet in diameter.

The horse is trotted in hand in a straight line away from and toward the judge(s) and either trotted in hand or longed in a full circle in both a clockwise and counter clockwise direction.

Quality of movement or impulsion at the BC examination is scored using the range from 10 to 1 points. If a horse is scored as 1 for impulsion it does not mean that the horse had no impulsion, i.e., would not move, but rather that the horse moved slowly, reluctantly or unwillingly, not animated and is presumed to be quite tired, and therefore barely fit to continue.

Ideally the horse should move freely and willingly, in stride with the handler and on a loose lead. Horses that move less willingly and freely, that are being dragged or pulled by the handler, or moving slowly on a tight lead, would receive a low score.

The final equine score is the sum of the scores in each of the five categories multiplied by 10. Some rides present an award to recognize the horse with the highest equine score or high vet score. The best condition award is won by the horse with the highest sum of the equine score plus the ride management score, i.e., weight and time. ■

For more information, view the AERC rule book, control judges handbook and best condition evaluation form. All are available online at [www.aerc.org](http://www.aerc.org) or by mail from the AERC office.

#### Best condition recovery score

10 minute		1 hour	
Rate	Score	Rate	Score
64	0	64	0
60	1	60	0
56	2	56	1
52	3	52	2
48	4	48	3



**AERC Veterinary Certification Program**

We welcome the following veterinarians to the list of AERC-certified head vets. (See [www.aerc.org/CertifiedHeadVets.asp](http://www.aerc.org/CertifiedHeadVets.asp) for a complete listing.) **George P. Marble, DVM (MT), Kathy L. Murphy, DVM (NE, SE), Alina Vale, DVM (SE).**

## **Appendix 4**

### **List of Equipment and Medications for Treatment Veterinarians**

- Stethoscope
- Watch with second hand
- Thermometer
- Twitch and/or lip chain
- Nasogastric tube
- Stomach pump
- Bucket
- IV catheters: 12 gauge and/or 10 gauge for large volume fluids
- Pressure pump or hand bulb to accelerate IV fluid administration
- IV lines: Large bore for high volume fluids
- Flashlight and extra batteries
- Hoof knife and hoof tester
- Scrub preparations
- Sterile surgical pack and suture material or stapler
- Bandaging materials
- Needles and syringes
- Various types of vacutainers
- Formalin jars
- Post mortem knife
- Rectal sleeves and lube
- Towels
- Splinting material
- Portable IV pole
- ISTAT would be of great benefit
- IV fluids: 3- or 5-liter bags of physiologic saline or Ringer's with a minimum total of 40-100 liters. Sodium bicarbonate solutions are almost uniformly contraindicated for the metabolic problems of endurance horses.
- Oral electrolytes with no bicarbonate
- CMPK to serve as a source for Ca, K, Mg, etc.
- Potassium chloride, 20-40 mEq/L is given to horses with significant potassium deficiencies
- 50% Dextrose solutions for IV or oral use
- DMSO liquid for IV, oral or topical use
- Antacid and laxative
- NSAID's (flunixin or phenylbutazone)
- Sedatives, Tranquilizers, Narcotics – xylazine, detomidine, butorphanol, etc.
- Ophthalmic medications
- Antibiotics
- Buscopan
- Local anesthetic
- Wound ointments
- Euthanasia solution