

# The Smart Rookie's Guide to Distance Riding Competition Elizabeth Rusti Quinto, M.D. 

## What is Distance Riding?

Distance riding is an organized sport in which horses and their riders compete in planned and judged events that involve trail rides of 25-100 miles in a day or over several days. It is different from "pleasure" trail riding, in which groups gather to ride the trails with no special pace or distance set and no judging done. It is also different from "trail horse" classes at horse shows, in which horses and riders must travel a short course of trail obstacles. The two most common distance riding events are Competitive Trail Rides (CTR) and Endurance Rides (END ride).

What is a Competitive Trail Ride (CTR)?
An organized CTR may be 25 miles to 40 miles in one day, or 100 miles on a multi-day ride. These rides are not, strictly speaking, races. Riders travel over a specially marked trail, and aim to complete within the allotted time. The target time or "window" is usually $30-45$ minutes long. Riders who come in too early, as well as those who arrive too late, are given penalty points. The judging of the winner of the ride may be based completely upon the condition of the horse before the ride compared to the condition of the horse after the ride or the horse may receive a "fit to start" exam prior to the ride and be judged completely on its condition after the ride (see the score sheet in Appendix 3). In a CTR it is possible for any fit horse to come in and end up the winner. CTR riders also compete for horsemanship awards. How the rider manages the horse before, during, and after the ride is observed and scored by a Special Awards Judge (see Appendix 4). Rules and judging are very specific and are discussed in detail elsewhere in this booklet. The overall average speed of a horse on a CTR is usually 5.9 to 6.1 miles per hour. The usual gait speed of a horse on a CTR is a trot or comparable gait with a speed of 7.5-8.5 miles per hour. These are averages only since horses will spend some time at a canter and some time at a walk. Horses are examined before, during, and after the ride. Those having pulse and/or respiratory rates higher than the established parameters are either held for a longer time or are disqualified.


## What is an Endurance Ride?

END rides are generally considered races, although many riders choose to "complete" over to "win". The winner is the first horse to complete the course, meet a pulse parameter, and be judged "fit to continue". The horses are checked before, during, and after the ride and those horses having pulse or respiratory rates higher than established parameters are held for an additional time or disqualified (see Appendix 2). END horses must be in peak physical condition and those riders actively pursuing a win or top ten placement need to be experienced enough to know how hard to push and how fast to go and still meet parameter requirements. END rides generally start at 25 miles a day (limited distance) and some cover 100 miles a day. Multi-day rides are also common. The END ride prize even more highly coveted than the first
place prize is the "best condition" award, which is given to the horse completing the ride in the best health and still with plenty of willingness to continue more miles.


## Who Organizes These Events?

In the Southeastern United States, there are several organizations that sanction distance riding events. AERC (American Endurance Ride Conference), SERA (Southeastern Endurance Riders Association), GERA (Georgia Endurance Riders Association), and SEDRA (South Eastern Distance Riders Association) are all distance riding sanctioning bodies. These organizations, some national, some regional and some state-wide, set down the rules under which rides are run. Most of these organizations offer their members year-end high point awards as well as provide mileage programs for horses and riders.

## What Is SEDRA?

SEDRA is a regional organization made up of both endurance and competitive trail riders. This organization was founded to take into consideration the special climate conditions of Southeastern United States. Its rules borrow liberally from those of the East Coast Trail Riders Association (ECTRA). SEDRA sanctions most CTR and co-sanctions many AERC sanctioned END rides throughout the Southeastern United States. SEDRA members and their horses earn points by participating in SEDRA sanctioned events throughout the year. The more points earned and/or miles ridden, the better chance the horse and rider have to earn year end awards. SEDRA also tracks and recognizes lifetime mileage for all participating horses and riders.

## What is AERC?

The American Endurance Ride Conference is a large, national organization which has many informative publications on the organization, horse and rider management, and management of END riding events. AERC promotes numerous yearend high point awards given in many divisions, including mileage. All END rides sanctioned by SEDRA are AERC sanctioned rides.


## Is Distance Riding for Me?

Don't let the word "distance" scare you. Remember that in the days before automobiles, horses routinely traveled distances of 25 miles or more in a day. It was a necessity since it was the only way to travel other than walking on foot. Horses are not
fragile or wimpy creatures and any good horse, healthy and in good condition, should be able to go the 25 mile distance. The catch is that both the horse and rider must be property conditioned to do the job. A horse that is ridden only a few miles a couple times a week would be badly stressed and injured if it was pushed to go 25 miles in 4 hours, and an unconditioned rider attempting that distance would be so sore he would never want to see a saddle again! Preparing a horse and rider team for distance events requires an intelligent plan of action and a commitment to follow it through. A successful distance rider must be bright enough and sensitive enough to always be aware of how the horse is doing. Over the course of training, the rider gets to know the horse as well as he/she knows themselves. For horse lovers, this can be a very rich and rewarding experience.

Compared to other horse sports, distance riding is not expensive. Tack and equipment must be of good quality and in good condition, but nothing fancy is required. Distance riding does take time. Distance horses must be in superb condition and it takes a lot of hours and a lot of miles to reach this level of condition and to maintain it. Distance horses must be ridden consistently and at distances appropriate to the targeted length of ride in order to keep their athletic edge. Time and energy must also be allowed for the pre-ride tasks of stretching and warming up and for the post-ride tasks of cooling out, checking for soreness and lameness, and measuring pulse and respiratory rate recovery times, in addition to all the care routines that an average horse requires.

Distance riding has the additional challenge of finding someone with whom to train. Not all riders will be lucky enough to find another rider to train with them. It might be easy to find friends willing to ride for short pleasure rides, but unless they share a passion for distance riding, they might not want to ride very many miles. So training alone is often the reality. Safety becomes an important consideration in this case. Make sure someone knows where you plan to ride and when you plan to leave and to return.

A place to train is obviously a must. This is a good time to check out state parks and forests as well as areas in the neighborhood that would meet the need. If trailering has to be done every training session that will add to the time and effort required.

## What About the Type of Horse?

Once the rider decides to take the plunge, the next thing to think about is whether or not the horse is suitable. Can the horse do it? Distance horses need to be strong and healthy. They don't need to be beautiful, but they must have a conformation free from major faults that might lead to lameness or other injury. Since the sport is mentally and physically stressful, horses must be at least 4 years old to compete in $25-40$ mile rides and at least 5 years old to compete in 50 plus mile rides. Nursing mares are not allowed, and mares that are pregnant may be prohibited. Horses of all breeds can be successful in distance riding, as long as they are well conditioned and sound. Some breeds, however do seem to have a special "edge". They cool out faster and recover more quickly to resting pulse and respiration levels. For this reason, the top contenders in most distance rides, especially the longer ones, seem to be the Arabians and Half Arabians. But remember, in CTR, it is not speed that counts, and any breed can win. And AERC's motto is "To Finish is to Win" so don't discount gaited or other breeds'
 ability to participate.

There are other things to consider about the horse besides health and conditioning. The horse needs manners, the ability to behave and be effectively controlled around other horses. It must be able to stand quietly during vet checks and PR (pulse and respiration) stops, where it will be touched and examined by strangers. It must be able to be lead and move out well at a trot or comparable gait. If the horse is a rookie trail horse it might be a good idea to have it checked by the veterinarian versed in distance sports to see if it is suitable. It will also need to be up to date on vaccinations and worming and have a current Coggins Test. Dental work, if needed, should be done as well. And it goes without saying that good hooves are important. The decision as to shoe or not shoe will need to be made based upon the type of terrain to be ridden, the distance to be traveled, and the condition of the hooves.

## Conditioning, Where to Start?

Once you decide that you and your horse are willing and able to attempt distance trail riding, the next thing you need to do is set up a conditioning and training program that will have you both fit and ready by the day of the ride. The goal is to build strength, stamina, and alertness in the horse and rider. There are probably as many formulas for conditioning programs as there are recipes for chocolate cake. Any program will do as long as it works for both the horse and the rider. There are too many variables to consider for any one program to be the answer for every horse and rider. Is the horse already in good condition or rarely ridden? How old is the horse? How old are you? What is your time schedule like? How long until the first planned ride? How many miles will that ride be? What time of year will the ride be held? Will you train with others, or condition alone? How skilled a rider are you? How well trained is the horse? All of these are important considerations that will affect the conditioning program. The general principle of a conditioning program is to start out with light work and gradually increase both speed and distance. It helps to start the conditioning program 2 to 3 months before the first limited distance ride and to plan on riding 3-4 times a week. The less conditioned the horse (and rider), the longer the time needed to prepare. Much of the training should be done in terrain similar to that found on the ride itself, especially if the ride will be in deep sand or over hard ground with steep climbs and descents. As the horse's condition improves, more time should be spent at a trot or comparable gait. Trotting and galloping increase a horse's "wind", the adjustment the heart and lungs make to improve stamina and endurance. The gait that the horse will need to develop is a brisk, rhythmic, semi-collected one which can be continued for miles without undue fatigue. A hard-driving extended trot/gait puts much strain on the hocks and can over stretch the tendons and ligaments, so the pace should be easy going, free moving, and effortless. Conditioning should start early and advance slowly, with a very gradual increase in stress (distance and speed). Consistency is the key to success. That means you shouldn't ride hard for three days running and then not ride at all for the next week. Record keeping, such as a diary, of training done and how the horse responded, including pulse and respiration measurements (PRs), and any signs of lameness or fatigue is most helpful and highly recommended.

For keeping the distance diary buy a sturdy notebook that will not be too easily destroyed if kept in the barn area. A small chalkboard or notepad is handy to jot down PRs and measurements that can be recopied into your diary at your convenience. Number the days and weeks backward from the time of the first ride you plan to enter so you can see at a glance just how much time you have left. Schedule worming, immunizations, and hoof trimming/shoeing 2-3 weeks prior to the ride as needed. Record the horse's weight by measuring with a weight tape. This is not very accurate so if a horse scale is available at the ride take a pre-ride weight, mid-ride if able, and end of ride weight. Record the PRs right after the workout and again after recovery time (generally the pulse should come down to 60 beats a minute or below in less than 10 minutes). Jot down the number of miles ridden and at what pace. Also note the time of day and any observations made during physical examination of the horse. It is a good idea to do the conditioning in a variety of settings. This has the advantages of lessening boredom as well as teaching the horse to accept change in setting and routine.


## How About Trail Training and Etiquette?

Whenever possible, ride with others. A horse that has always traveled alone can come unglued when asked to share the trail with other mounts. The horse needs to learn to pass other horses on the trail and to allow them to pass as well. The horse needs to learn to take its direction from the rider and not from other horses on the trail. Having a mount that frets or fights around other horses or one that bolts forward can take a lot of the joy out of training and competition. Try to do at least some conditioning during the same time of day and weather conditions in which the ride will be held. If you always train from 6 to 8 (AM or PM), the horse may not be able to adjust to a ride that is held from 9 until noon in the heat of the day.

Above and beyond building muscle and stamina, the horse must be responsive and have good manners. The horse must learn not to grab for bites of grass or trees along the trail unless given permission. He must learn to accept drinking water out of a variety of buckets and natural sources and to cross water. He must learn to stand quietly, even if there are other horses around, while he is cooling out or having his PRs taken. The horse, if a trotter, should be trained to allow posting on both diagonals. This will prevent the wear and tear of one-sidedness over the miles. The horse should be trained to walk forward briskly at about 4 miles an hour when asked. It should be taught to move sideways without losing forward impulsion when leg pressure is applied. The ability of the horse to do basic dressage movements can be a valuable tool on the trail. Encouraging the smoothest gait that the horse can manage will cause the least amount of wear and tear for both horse and rider. A balanced seat on the part of the rider is a must to prevent lameness and a sore back. The rider must learn to "read the horse". A rider will eventually be attuned to the feel of the horse and whether he is tired, lazy or developing problems with lameness or illness. There are subtle clues that the horse will give and it is the rider's responsibility to learn how to detect and interpret them. This means the rider absolutely needs to do their homework and learn enough about exercise physiology and abnormalities to prevent endangering themselves or the horse. There are a lot of places to get information, advice and assistance and ignorance is no excuse!

## What Are Exercise Physiology and Pathology?

Don't let the big words scare you. Physiology means, simply, the chemical and physical functions that exist in a living organism. Pathology means something is wrong with the organism such as illness or injury. It helps to understand at least a few of the technical words that the professionals use. When a body is stressed by exercise above and beyond what it is used to the entire body and its parts will react in some way. Some organs of the body turn out to be more important than others, and some systems of the body give better clues that are easier to locate, measure and interpret. A pulse rate is a measure of how fast the heart is beating. What a pulse rate means depends on the many things going on inside. The organ systems that important to know something about are the Cardio-Respiratory (the heart and lungs), Nervous System (reflexes and behavior), Skin and Kidneys (fluid balance, hydration), Digestive System (food management in the intestines, colic), and the Musculo-Skeletal System (bones, joints, muscles, tendons, ligaments).

When a body is exercised one of the first things to occur is that it runs up a bigger energy bill. The body will need to take in more fuel and it will begin to use some of the fuel it has stored. The early stages of conditioning, when the horse is walked a lot, will allow the animal to gradually use up its stored body fat, and will let the body slowly get used to the idea that it is an active animal rather than a sedentary one. As the horse's muscles are used more often they begin to fill out and tone-up. The whole purpose of the slow early phase of conditioning is to accomplish this: losing fat and building muscle. So far, the stresses on the system are not great, and the rest of the body's organ systems are still awaiting their turn for a tune-up. The pathology that a rider needs to be on the lookout for during this phase of training is early signs of lameness that might indicate a conformation problem or unsoundness which was not obvious when the horse was inactive. The other thing to watch is the horse's weight. The easiest way to measure this is with a weight tape and to measure him weekly around his girth. A horse that loses more than 20 pounds a week needs more food. Also watch the nature of the manure. If it is dry and hard the horse is not taking in enough water. If the stools become liquid it could be a sign that the system is over stressed or ill. Back off a bit and watch him. Actually, the amount of activity and work being asked of the horse so far should help to improve digestive tone. It is during the earliest and least strenuous phases of training that the rider needs to really look at the horse, sharpen observation skills, and begin to learn what it really looks like, feels like, and acts like. There is no magic in this. All it takes is to understand what to look for and to practice learning how to see it. Learn to write down observations in the training diary, even if not sure what they mean. Learn to follow a step-by-step routine when examining the horse after riding and cooling out. This not only reminds the rider not to overlook anything, it will also help the rider begin to notice how different things are related to each other. Veterinary students carry a card in their pockets with a list of what to check and in what order. It is a good system and its use as a memory aid may come in handy.


## How About a Quick Overview of Things to Look for on Physical Exam?

Head: Eyes - Clear or dull or red; Mucous Membranes - Healthy looking pink or dark; are they moist or dry; Capillary refill time should be 1-2 seconds; Mental Status- Alert or tired or agitated or out of it; Mouth- Any injury from the bit; Neck: Skin pinch for dehydration (within 3 sec.); Back- Swelling, sores, or blisters in saddle or girth area; Muscle tremors or spasms, especially in flank; Body-Sore spots, cuts or scratches anywhere on the body; Pattern and consistency of
sweat; Belly- Listen for gut sounds; Urinary- Has the horse been able to pee; is urine dark, bloody, or tea-colored; LegsPounding pulses, hot spots, swelling, sore spots, cuts, scrapes, or interference marks; Feet- Hoof walls, condition of shoes, condition of soles, stones, or bruises; Gait- Willingness to move, stiffness, lameness; Appetite and willingness to drink- Both should be present.

## What Should be Practiced Before a Ride?

Conducting an exam and taking vital signs both take practice. The rider may want to find an experienced mentor or veterinarian willing to help with learning the process to expedite things. The first step of the exam should be to measure the horse's pulse (heart) and respirations (breathing) rate. When a horse stops exercising his heart rate and breathing rate are high (fast), but both should rapidly drop back to normal levels. Judges use this "PR recovery" as a way of measuring how fit the horse is and how tired. PRs are checked at very specific time intervals in CTR, starting with the moment the horse stops and then again at 10 minutes, or as in the CRI (Cardiac Recovery Index) at the beginning of 60 seconds, and then at the end of 60 seconds after the horse has trotted/gaited out and back a prescribed distance. In END the pulse is checked within 30 minutes and a CRI may or may not be done at trot out (it usually is done, especially if the veterinarian has concerns about the horse, but not always). The change in the rate and the speed with which the PRs return to parameters is important. For this reason the rider should get used to checking the PRs as soon as they are out of the saddle. If riding with an onboard pulse monitor the rate will always be available. A watch with a second hand and a pen and paper to jot down numbers and a stethoscope are all helpful if no onboard monitor is being used. Some riders can pick up the horse's heart rate by touch in front of the girth on the horse's left side, but generally a stethoscope is required for this. There are other places on the horse's body where fingers can be placed over a large enough artery under the skin to feel the pulse. One of these places is on the underside of the jaw just in front of where the neck joins the head. Another place is down the ankle on the inside just above the hoof. Riders should practice taking pulses at these locations, but not be frustrated if
 unable to feel a pulse. A horse that has just been worked may be too fidgety to hold still for pulse checks in those areas. Most PR teams listen to the horse's heart directly with a stethoscope. The place to listen is on the horse's left side, (placing the stethoscope deep under the elbow may be necessary in larger horses) in the fold of skin just behind the elbow and in front of the saddle girth. It is easier to hear the pulse on a horse that has just been exercised since the heart is beating harder and faster than normal. It is much easier to use a stethoscope than to try a pulse check by touch. There are a few things to be aware of when listening for a pulse. Some horses that have been standing around and resting for awhile have resting pulses so slow (28-40 per minute) and quiet that they are difficult to hear. This is okay, just practice and be patient. Actually, it is often the fittest horses that have the lowest resting rates. If a rider has never used a stethoscope before it can help to try it on their heart first. Twist the earpieces of the scope so they are facing slightly forward, not backward, when fitting them into the ears. This will give a better seal and block out other noises. Pulse is measured in beats per minute, but most people do not count the actual pulse for a full minute, they count for 15 seconds using the second hand on a watch (or in END a hand held monitor may be used at the girth line) and then multiply the result by four. When measuring a pulse right after exercise the rate may steadily slow. This means that the pulse is on its way down to its resting state. This also demonstrates how important it can be to measure each horse in a competition at the same time (relative to that horse) since a wait of even a few seconds can give a horse a small, but definite, advantage over his competitors, as far as the numbers are concerned. This turns out to be not much of a
problem, however, because most times, the numbers that count are the ones taken after the horse has been rested and his pulse is not changing so drastically on a second by second basis.

Measuring a horse's respiratory rate is technically easier to do. The rider only needs to watch and count how many times per minute the horse breathes. Here again, the rate is usually measured for 15 seconds and then multiplied by four. Problems that arise in measuring respiratory rate come from the fact that the horse can voluntarily change his rate and that breathing is not always steady and regular like the pulse. Some horses may take a few short breaths, then stop for a while, then throw in a deep sigh; a horse that is restless may be huffing and snorting and have a high respiratory rate that is not necessarily a sign of anything wrong. The respiratory rate that is a sign of exhaustion however, is a pattern of rapid and fairly deep pants. If this breathing rate does not slow down to normal within a few minutes as the horse cools out, it is a sign that the horse is over stressed. The best way to measure breathing is to watch a horse's flank rather than his face since it is easier to count the in and out movements of the side behind and below the saddle. Taking respirations on CTR and END rides is less common than it used to be, but if the veterinarian is concerned about the horse's overall condition respirations may be taken into consideration.

Measuring temperature is important. Taking the horse's temperature is required in CTR, but not generally in END. But regardless of the type of competition, both rider and horse should be used to the procedure. A horse thermometer can be obtained from catalogues or feed stores. A human thermometer may be used as well. A digital rectal rather than a glass rectal thermometer is recommended. Some thermometers come with disposable plastic covers that can be placed over the end of the thermometer going into the rectum. Pull the horse's tail over to the side and insert the thermometer about 2 to 3 inches into the horse's rectum. Most horses will not fuss about this after a couple of practice sessions. Vaseline may be placed on the plastic once it's in place to make insertion easier. Read the instructions that come with the thermometer to see how to correctly use the device as they differ. If the horse shows excessive panting at one of the vet checks or PR stops during a race, the judges may use temperature measurement to help determine the amount of stress. When checking the horse's temperature at home it will be higher right after exercise. The body has produced a lot of heat. Thus the process of dissipating heat in a horse is called "cooling out". Just like people, some horses tend to normally run a higher temperature than average. Most horses run a temperature of 99-101 degrees Fahrenheit. The time to find out the average temperature of a horse at rest is at home, before a competition, and at home after exercise.

Looking at hair coat and skin is a must. A horse that is healthy and fit has a shiny coat and bright eyes. The skin feels
 elastic and is not thick with fat. The skin shows signs of hydration status. This can be ascertained by pinching up a fold of neck skin and releasing it; if the skin is still standing after 3 or more full seconds it is a sign that the horse has lost excessive body fluids. If it goes flat quickly then the horse is presumed to be sufficiently hydrated. The rider needs to look over the horse's body, especially in the saddle area, for bumps, swellings, and rubs that may be a sign of too much pressure in the area for too long. During training and conditioning watch the horse's back area carefully for tender, puffy, or abraded spots as well as white hairs at the withers. Often, these can be eliminated by changes in the padding used under the saddle or a new saddle may be needed. Last but not least is the sweat pattern and type on the skin. Healthy sweat is wet and watery. Sweat that is thick and sticky, foamy, or too little for the amount of work the horse has done, is a sign of excess water and electrolyte ("salt") loss, a lack of conditioning, or a mentally stressed horse. A horse that doesn't sweat after hard work can be in serious trouble. If it is also panting, and has a body temperature higher than $104^{\circ}$, it needs to be cooled
immediately using emergency measures such as hosing, iced water towels, and fans if available. While looking at the skin, take a minute to look at the eyes. Are they clear or glazed and sunken with droopy lids (signs of dehydration)? Lift the upper lip and press firmly on a spot just above an upper tooth. This will "blanch" (whiten) the spot. The spot should return to its normal pink color within 1 to 2 seconds after the finger is removed. This is "capillary refill" time and if it is delayed for more than 2 seconds, it is a sign that the horse has low blood volume (dehydration) or low blood pressure (shock). Note however, that some horses naturally have whiter gums than others. This is where knowing the horse is important!

Listening to gut sounds is another task for which the stethoscope can be used. It is placed on the horse's belly against the flanks and sides. Some riders can hear sounds by placing their ears against the horse's belly, but the stethoscope is superior for this. Normal intestines make noise. A totally quiet belly is a sign of gut slowing or stopping which means that the intestines have had to divert too much of a horse's blood to the muscles. This can lead to colic. The veterinarian interprets the number and quality of gut sounds heard. Gut sounds cannot be "timed" and there are no "normal" values. Hyperactive gut sounds can be a sign of colic, too. The veterinarian takes the gut sounds or lack thereof into consideration with the rest of the physical findings. Knowing what the horse's gut sounds are like normally on a day to day basis can help greatly at a ride when the veterinarian is trying to ascertain whether or not
 there is a problem.

The nervous system plays a big part in the overall functioning of the horse. The horse's behavior indicates a lot about its level of fatigue, anxiety, and boredom. A horse that is tired will have a slight droop to his eyelids and ears. He will look a bit less alert and will be reluctant to keep up a brisk pace on trail. The gait may become unsteady and he may stumble occasionally. All of these signs may be of little concern in a horse that has just completed a long ride but deterioration in condition can quickly lead to a crisis situation. A horse that is in trouble will be beyond tired. He may stand oblivious with a glazed expression. He won't pay attention to physical discomfort, annoying insects, or to his rider or handler. He may even act crazy, disoriented, or scared. He may stand with feet planted firmly and refuse to move. If he lies down, he may refuse to get back up. A horse in this condition needs immediate intervention. Fortunately common sense and intelligent care can prevent deterioration to this point. The anal sphincter tone is another indicator of fatigue. Normally the anal sphincter will close down snugly and promptly when it is touched. A tired horse has less of a response or no response. A male may also show relaxation of the penis. Loss of attentiveness is significant as is loss of appetite. Refusal to take water can be a very serious sign. A tired and dehydrated horse who refuses water may be suffering from serious metabolic and electrolyte abnormalities. Some horses, even tired and thirsty ones, have been known to refuse water because it is in an unfamiliar container (such as a stream) or has a different taste from the water they are used to. This is where riding the horse and watering him at a variety of different locations prior to competition can be of real benefit. Some riders use a particular flavoring in the horse's water at home and then add some of the same to the water away from home to encourage the horse to drink. If this is done, be sure that plain unflavored water is also available for drinking at the ride since some horses are "pickier" about what they eat and drink at this time than they are at home.

Evaluating the horse's gait can also provide information about his nervous system (fatigue, wandering, decreased coordination) and about his musculoskeletal system (muscle cramps or lameness). Practice the trot/gait out at home with a friend to do handle the horse. As the horse trots or gaits away from the person assessing it and then back toward the person, signs of limping, stumbling, or interference (hitting the front feet with the back ones during a stride) should be noted. Consistency in gait, whatever gait is done, is imperative. If the horse starts at a trot then a trot should be maintained throughout the movement exam. Mixing up the gaits may make it appear like the horse is lame when it

really isn't. Lameness may be easier to spot than to analyze. It takes a lot of knowledge and experience to pinpoint exactly where lameness originates. Interference can be caused by fatigue and if the back of either front foot is tender or bleeding or has skin rubbed off the horse should be rested to allow it to heal. Occasionally re-shoeing the horse will help correct interference. Bell boots can be used during conditioning work and on END rides, but are not allowed during a CTR. Lameness can be mild, moderate, or severe and is not always easy to interpret. A veterinary judge will grade lameness according to AAEP (American Association of Equine Practitioners) definition and grading (see below). Riders do not have to be able to do as thorough a job as a Vet does of course, but it helps to be able to spot lameness in the horse and have some idea of how serious it is. Lameness is defined as a deviation from normal gait or posture due to pain or mechanical dysfunction. There are six grades of lameness. Grade 0 is no lameness. Grade 1 is difficult to observe since it is not consistently apparent regardless of circumstances (i.e., weight carrying, circling, inclines, hard surface, etc.). Grade 2 is difficult to observe at a walk or trotting/gaiting a straight line, but is consistently apparent under certain circumstances (i.e., weight carrying, circling, inclines, hard surfaces, etc.). Grade 3 is consistently observable at a trot/gait under all circumstances. Grade 4 is obvious lameness with marked nodding of the head or a shortened stride. Grade 5 lameness allows for only minimal weight bearing in motion and/or at rest and sometimes prevents movement altogether.

Examining the musculoskeletal system is also required for overall assessment. Watching the horse in motion may give clues as to what parts of the body need to be checked more carefully. The rider should get used to feeling and touching the horse all over, head to toe. It is educational and the horse will usually appreciate the attention. While feeling around look for areas that are swollen or puffy, hotter or cooler than the rest of the skin, or especially tender when touched. A tired or cold horse may have muscle tremors. These are most easily noticed in the flank area. Muscle cramps may be caused by dehydration and loss of body salts (electrolytes) as well as cold weather. "Tying up" is an extreme form of muscle cramping of unknown cause although many theories as to cause do abound. The horse will stand still and will be unwilling to move due to severe pain. The muscles under the skin will feel rock-hard and the outlines of individual muscles may be easily visible. This will be most noticeable in the back, loins (flanks), and hindquarters. "Thumps" is a different kind of muscle spasm in which the diaphragm (breathing) muscle spasms with each heartbeat. It is the equine version of hiccups. It also is caused by fluid and electrolyte imbalance, particularly a lack of calcium. Swelling around the legs can be benign (such as windpuffs) or can be signs of serious inflammation or injury to the tendons, ligaments, joints, or bone. It is beyond the scope of this book to go into detail about the interpretation of all the different kinds of swelling. There are lots of articles and books available that go into this subject in more detail. For lameness issues not resolving on their own in a brief period of time, riders should consult their veterinarian for work up.

Finally, make sure the hooves are in good shape. There is a saying "No hoof, no horse" which is very true for distance horses. This exam should be part of the routine check before and after every ride. Look at the hooves for cracks or splits and if unshod, excessive wear. Check the sole for stone bruises and for pebbles lodged under the shoe or in the clefts. If the hooves are tender or worn get a farrier out to fix the situation. Don't let a small problem become a big one.

## Still More Physiology?

If you have read the last section, you now know something (quite a bit, actually) about the physical examination of a horse before and after it has been exercised strenuously. This section will use some of those exam observations to explain what is happening in the horse's body when it is stressed. The first part of any conditioning program is to build up muscle and burn off fat. At that point the horse should have a body score of 5-6 and look healthy and fit. Now the task is to start "aerobic" (oxygen based) conditioning. The purpose of aerobic exercise is to build heart and lung capacity. Big muscles alone won't do the job (picture a weightlifter trying to run a sprint). Aerobic conditioning (also called CR conditioning for Cardio-Respiratory) requires that the body be pushed to its limit and then just a little bit farther. Each push will raise the limit just a bit until the body is capable of sustaining much more exercise for a much longer time than it was when it started out. In CR conditioning the goal is to build the body's ability to endure fatigue. Therefore, to stop
 training at the first sign of fatigue is not the way to go. So how much is enough without overdoing it? This is where the PR measurements and physical exam come in. At any time a body (horse or human) has a certain set of limits on how much it can do and for how long. One that has been inactive has low limits compared to one that is in better shape. What causes these limits is the demand working muscles make for "more fuel, keep it coming." The way the body speeds up fuel delivery is by the heart pumping harder and faster. The blood carries the fuel so that means increased fuel supply requires increased blood supply. The heart has to work harder and faster and so do the lungs. Oxygen is the major fuel and the lungs have the job of supplying oxygen to meet the body's needs as well as getting rid of the toxic "fuel emissions", in this case carbon dioxide (CO2). When the heart and lungs reach their limits the muscles' needs can no longer be met and the body shuts down in exhaustion. Even when the muscles stop moving the heart and lungs continue pounding and puffing away, trying to catch up. Why do they have to "catch up" when the muscles have stopped? Well, before the muscles shut down due to not enough oxygen they switch for awhile to their "auxiliary" power supply. This power is called "anaerobic" metabolism (anaerobic means without oxygen). Anaerobic metabolism is a pretty good way for the body to keep going when the oxygen supply is running low, but it does have a few side effects. One of these is that lactic acid (a byproduct of the anaerobic process) tends to build up in the blood. The body is not especially fond of acidosis so it will quickly go into action to correct the condition. One way to fix it is to convert the excess lactic acid into carbon dioxide and let the lungs expel it. This is why a horse that has stopped work will have a rapid heart and breathing rate for awhile. The heart and lungs are working to dump the excess lactic acid by dumping CO2. At the same time the extra oxygen being brought in helps the muscles convert back to the oxygen burning pathway. The balance of the horse's body fluids and electrolytes are being affected as well when the body is stressed. The sweat that is lost contains large amounts of water as well as salts (sodium, chloride, and potassium). The better conditioned horses lose the least amount of salt in their sweat and the sweat is watery. Horses that are dehydrated or overworked have sticky or foamy
sweat which is a sign of too much salt loss (this is for humid climates only; dry climates are another matter for discussion in other areas of the US). It is beyond the scope of this booklet to go into full detail about the complex balance of body fluids and electrolytes (salts and minerals such as calcium, magnesium, bicarbonate, etc.) that take place in a hardworking horse. There are a few tips worth knowing, however. A horse should have unlimited access to clean clear water at all times including during the ride and at breaks. Unless the horse starts out with a genuine deficiency (which is not likely), giving supplements of calcium and potassium and magnesium before a ride is not likely to help him during the ride. As he works however, he will lose these minerals along with sodium chloride, and these may be supplemented by giving electrolyte preparations during the ride. How much depends on the length and circumstances of the ride. For a ride of twenty-five miles on a cool day a well conditioned horse probably needs little or no supplement whereas at a ride of 50 miles on a hot humid day it almost surely will. Electrolytes can be store bought or made at home using easy to obtain ingredients (see Appendix 1). The amount to be given varies too much to be able to specify an exact amount. The veterinarian should be able to advise the rider on this. It is important to remember that giving electrolytes can be HARMFUL if the horse is not given free access to water or is not drinking it. The horse should also have free access to plenty of plain white salt. The reason for this is that its feed will probably have plenty of potassium and other elements, but will be short on salt. Using the brown salt and mineral blocks may actually supply too much of some ingredients when all the horse actually needs is plain sodium chloride. This will be mentioned again in the section on feeding the distance horse. Now back to aerobics. Aerobic exercise (exercise that stresses the cardiovascular and respiratory systems) gradually allows the body to increase its heart and lung capacity. The heart itself becomes larger and more muscular and more capable of putting out more blood per beat. The lungs learn to take in and oxygenate this extra blood and send it on to the tissues where it is needed. During activity most of this blood is going to have to go to the muscles since that's where the action is. Less blood is therefore directed to other areas such as the brain and intestines. In the well-conditioned horse there is still plenty to go around, but in the poorly conditioned horse with less heart and lung capacity the brain and intestines will begin to suffer. This is when symptoms of silent gut and dazed brain become obvious. An athlete with a well-conditioned heart and lungs is prepared to expend lots of energy when the body asks for it. It makes sense then that such a body actually needs to expend very little energy to maintain itself at rest. The "supercharged' heart pumps strongly enough that it needs to pump less often and athletes often have resting pulse rates far below what is considered normal or average. Whatever a horse's resting pulse and breathing rates happen to be those are the rates to which the horse should recover within a short time after exercise. Watching PRs is the best way to judge when a horse is getting just enough to stretch its heart and lungs to get bigger and better and not enough to hurt it by overdoing. At the start of a workout the horse's pulse will probably be in the range of 36-48. Immediately after the workout the pulse may be as high as 120, but the exact rate is not as important as what the pulse does next. Ten minutes after the end of the workout the pulse should be coming down to normal. If the pulse is back to where it was to begin with either the horse is already very fit or the workout was not enough to really push its system. If the pulse rate is still 64 or higher after 10 minutes it's a sign that the horse has had a little more than enough and needs a rest. On a CTR horses with pulses over 64 at the 10 minute PR check will usually be held back for a while longer then checked again before being allowed to continue the ride. On an END ride the pulse needs to be at 60-64 within 30 minutes of the arrival time. A 10 minutes stop is usual about half way through a 25 mile CTR. On an END ride there is usually a 30-50 minute hold halfway or two thirds of the way into a 25 mile ride. Respiratory rate is measured along with pulse, but interpreting the respiratory rate is a little more complicated than determining pulse rate. The heart (pulse) has only one job to do and that is to pump blood. The respiratory system however, has several tasks, any one of which can affect how and how often the horse breathes. One task is bringing in oxygen and unloading carbon dioxide. Once the heart is beating as fast and hard as it reasonably can it is up to the lungs to help make up for any additional demands. A rapid and deep breathing rate will help the body pay off its "oxygen debt". But the respiratory system has another job as well and that is to help cool the body. There are several ways that the body can get rid of excess heat (muscle work produces
a lot of heat). As sweat is evaporated from the body it takes some heat with it. Water that is sponged or splashed over the horse's body can draw off heat in the same way, but must be scraped off immediately to remove heat otherwise it will act as an insulator and actually INCREASE body heat. A hot horse (provided it is not so tired that it is in shock) can increase the amount of blood circulation to the skin. This gives the blood a chance to cool off some as it passes close to the skin surface. Cool water on the skin will further cool the blood. But there are times when a horse can't be hosed and scraped continuously to keep it cool from the outside. When the ambient temperature and humidity are high, the horse's sweating mechanism becomes less and less efficient (if it's too muggy the sweat simply won't evaporate).This is the time when the body will call on its breathing rate to help handle the heat load. Air passing through the horse's breathing passages is cooled by the motion (like a fan) and blood that passes close to the surface in the lining of these passages can be cooled this way. When a horse uses his breathing to cool himself off he will take short rapid breaths since panting works best for cooling. Now a horse that is just coming off a demanding workout may very well be breathing fast for both reasons: to pay back oxygen and to cool itself off. This can lead to some degree of complication when trying to interpret respiratory rates. Judging and PR crews have to go by the numbers during any competitive event. The usual respiratory rate that is acceptable to allow a horse to continue on after a hold in CTR or END is 44 . This goes along with a 64 pulse. The term "inversion" refers to a breathing rate that is faster than the pulse rate and inverted horses, or ones with respiratory rates over 44 , are considered to be excessively tired in most cases especially if the inversion does not correct itself within a few minutes. The problem is that under excessively hot and humid conditions an inversion may actually be a healthy sign. If the pulse is dropping normally but the respiratory rate is still very rapid and the breaths are shallow it is a sign that the horse is fit enough to have already paid-off his oxygen debt (otherwise the pulse would still be fast and the breathing deeper) and he is now using his breathing to help cool himself off. If such a horse were cooled off externally his respiratory rate would immediately drop back to normal. Fortunately most Florida veterinarians/judges will take this phenomenon into consideration when they evaluate horses during an event.

## How About Some More Conditioning Pointers?

Horse and rider are a team and should condition together. A tired rider will not ride balanced and risks laming or otherwise damaging the horse because if it. Time the miles travelled on a conditioning ride by going over a known distance and checking a watch. If not using a GPS, the rider may want to refer to the following table. Time a mile at a fresh walk, a walk when the horse is a bit tired, at a jog and a trot or gait. To understand the sustained speeds in training the five mile segments are broken down as follows: 60 minutes $5 \mathrm{mph}=1$ mile in 12 minutes; 55 minutes $=5 \mathrm{mph} 1$ mile in 11 minutes; 50 minutes $6 \mathrm{mph}=1$ mile in 10 minutes; 45 minutes $6.6 \mathrm{mph}=1$ mile in 9 minutes; 40 minutes $7.5 \mathrm{mph}=$ 1 mile in 8 minutes; 35 minutes $8.5 \mathrm{mph}=1$ mile in 7 minutes; 30 minutes $10 \mathrm{mph}=1$ mile in 6 minutes. This should be noted in the training diary after each ride.

Riding an hour a day is better than riding hard only on weekends. Most horses will walk steadily at about 3-4 miles an hour so quite a bit of trotting or gaiting will be needed to expect to complete 25 miles in $4-5$ hours. The horse should stay in an easy trot or gait. Unnecessary energy is expended if a horse has to constantly be pushed back into a trot or gait from a walk. An easy trot or gait is more fuel efficient for a horse than a walk. For some horses the easiest gait (the one they prefer to do) is a canter. The heart rate may be lower at the canter. Learn what gait the horse likes best (other than a lazy walk) and let it use it most often. Learn to feel the horse's balance. If it always feels like it's going downhill and about to stumble it probably means that it is overbalanced on the forehand. By sitting further back in the saddle and supporting the horse's head with a firm rein a shift off the forehand onto the hind end might be facilitated. A horse that feels like it's always falling forward is at risk for stumbling and other injury and needs to be taught how to drive itself off the hind legs. Some riders utilize dressage moves to make a more athletic horse. The rider should also take into consideration the horse's disposition and physical ability. Boredom in both horse and rider should be avoided. Vary ride
settings and exercises often. Cross training in disciplines other than distance works well for many. As conditioning progresses the horse should send messages that it is ready to move to higher levels. Individual muscle groups under the skin will develop especially along the ribs, shoulders, and hind legs. It will be lean, but with some cushion of flesh. Too lean could mean a lack of reserve. During the last few days before the big event training should be tapered and the horse needs to be allowed to rest and relax. By this time its strength and fitness are at their peak and a little rest will help keep maintain fitness.

## What About Feeding?

Feeding and how it relates to metabolism is something to be considered during conditioning and competition. Horses vary from the classic "easy keeper" to thin, possibly finicky eaters. Therefore it is impossible to give a specific formula for feeding that will be useful to all horses. There are some general guidelines however, and information about how the body under stress handles fuel will help to plan an effective program. Most of a horse's diet is carbohydrate, those grains, sugars and starches that the body uses to provide blood sugar to its parts, although in recent years a higher fat diet has been advised for performance. It should be used prior to a ride, however, not during a ride since it is slower to be utilized as discussed below. Blood sugar is the fuel most efficiently burned for energy and some organs, such as the brain, absolutely cannot get by without it. Low levels of blood sugar, as well as of water and electrolytes, are factors that limit how well and how long a body can perform. Glycogen is a type of sugar that the body has saved from its feedings and has stored in the liver. When blood sugar starts to drop the liver converts its glycogen to glucose and releases it into the bloodstream, primarily for use by the all-important brain. Muscles also store some glycogen and when that runs low they use fatty acids that can be mobilized from the body's fat stores. Releasing fat for energy doesn't happen quickly however, but gradually. Thus, fat should be on board in good reserves long before the ride and a high fat diet should not be fed at the ride, rather at that time the fast burning carbohydrates are best. When the working muscles have used all their stored glycogen, and available fat has been tapped out the muscles start to compete with the brain for blood sugar. This pretty well halts work since, as the brain starts to fade, the body grinds to a halt. This can happen even when the body has lots of fat on board. A body that has used up its fat stores (or paradoxically, doesn't have enough energy from carbohydrate to "spend" to get the fat out of storage) will actually start to burn up its own protein and muscle mass as fuel. This is why people on starvation diets will become ketotic. Ketones are a waste product of burning protein for fuel when the body is actually using up its muscle along with its stores of fat. Protein is therefore, not a primary fuel. The body requires protein to build new muscles and tissues, but a body that is working hard needs far more energy fuel (carbohydrates) than protein. The system of a hard working horse can actually be overstressed by providing too much protein in the diet. It is not a situation where more is better. A major problem with a high protein diet is that the conversion of protein to useable energy results in large amounts of heat and expending the energy to reduce heat can further deplete the horse's ability to continue putting forth a large amount of work. The average adult horse should be maintained on $10 \%$ protein in the diet. Unfortunately there are some feed companies promoting feeds with as high as $25 \%$ protein! So the diet of a hard working horse must provide more energy in the form of carbohydrate. Sweet feeds and prepared feeds are fine, and usually have the added benefit of some mineral and vitamin supplementation. Increase the amount used, but don't go to a higher protein percentage unless specifically advised to do so by the veterinarian. If a rider feeds single grains or mix their own feed they need good professional advice to be sure important vitamins and minerals and not lacking. Even though most horse food is predominantly carbohydrate with some fat and roughage there is an important difference between grain and hay. Grain tends to be a "hot" feed. This means that more energy is needed to digest it and more heat is produced by its digestion. Hay is a "cold" feed and most of a horse's diet and dietary increases should consist of good quality hay. Grain can never be a substitute for the hay in a diet. Hay is needed for its roughage as well as for its regulating effect on the digestive process and for water storage. In hard working horses the quality of hay is much more important than it is for non-working animals. Pre-mixed grain should have most vitamins
and minerals in it. If such a feed is not utilized (some riders mix their own) there are many vitamin and mineral supplements out there, but it is important to use appropriate amounts. Too much of the fat soluble vitamins and some of the minerals can be toxic. Probably the B-vitamins are the only ones that will need supplementation since working horses have been shown to often be deficient in thiamine. Remember to provide free access to plain white salt blocks rather than salt and mineral blocks since a horse can take in toxic levels of the mineral blocks if that is all it has to provide its salt needs. Salt blocks with molasses in them should be avoided as the horse may consume excessive amounts of salt and minerals to get the sweet molasses taste. A horse can lose 3-4 ounces of salt a day and even more under certain extreme stress conditions. When the horse is into its conditioning routine cut back on grain on the days the horse is rested. Three feedings a day is better than two and never feed a full ration of grain sooner than two hours before or two hours after being worked. If a training session is done early in the morning or if a competition ride is early in the AM the horse should be fed only a small portion of its normal ration 3 to 4 hours before the ride and the rest reserved for after the horse has been cooled out. Too much feed can cause overheating or gastric upset due to blood shunting away from the gut during the ride, preventing normal digestion and possibly leading to colic. Remember that energy requirements will nearly double for the hard working horse while protein requirements will increase only slightly. Give lots of hay; the chewing stimulates saliva and digestion. Here in Florida it is often necessary to give electrolytes during training and conditioning and on actual rides. It's a good idea to keep electrolytes on hand to help make up for your horse's losses. Some riders mix their own electrolytes ( see Appendix 1) while others purchase an electrolyte mixture formulated for the long distance equine athlete. There is little danger in giving electrolytes as long as the horse has plenty of access to water. NEVER give electrolytes without water.


## What Other Things Should Be Considered when Conditioning for and Competing in Distance Rides?

In order to cool the horse during a ride the rider should have a sponge on a long leash available to dip into standing water. Wait until the horse has taken a drink then sponge around the head, neck, and jugular vein. Practice this at home prior to the ride so the horse doesn't fear the string and sponge combination. Remember to have a small scraper available with which to get rid of excess water. It's a good idea to have the mane braided out of the way on really hot rides. A clean horse will dry more quickly so a bath prior to traveling to the ride is a good idea. All the conditioning miles put on the horse will allow the rider to decide upon a ride strategy and pacing. It is a good idea to take the horse on some large trail rides and camp out with it prior to a competition ride to allow it to get used to other horses and riders in groups. Some horses are so "up" and excited at the start of competition they may use up half their day's energy level fretting and going too fast in the first 5 to 10 miles of the event. If this happens it may help to hold the horse back a little (or move up) so that he can ride alone and be less stimulated by all the other horses around. If the horse acts as though he wants to urinate but can't, it may have cramps. Stop for a few minutes then walk slowly until he's relaxed.

Ride or lunge the horse the evening before the ride, after you arrive. This will help limber him up after traveling. On the morning of the ride, feed as early as possible to allow at least 3 hours for digestion before ride start. Don't over feed grain since it is a "hot" fuel and too much in the belly at the start of a ride can contribute to problems. Longing to warm up and stretching the horse's legs gently prior to ride start is recommended. While on trail keep an eye on the trail markings. Don't blindly follow everyone else and don't let time pressures lead to carelessness. Change diagonals or sit the trot to balance the horse when there is a change of direction. Change diagonals even on the straight if trotting a long way. Change pace when entering onto different footing and with a sharp change of direction. Use extra care around an obstruction, up or down hill, and while passing or being passed by other horses and riders. Allow the horse to travel at the gait most comfortable and energy-sparing for it as much as possible. Ride your own ride, not the ride of someone else. Allow the horse to rest and catch its breath while walking on good, level footing. Always be aware of how the horse is moving and feeling. At every opportunity check the saddle, girth, and pads. The hardest work a horse does is to carry an uneven load or an off balance or tired rider and many lameness issues
 arise due to this. A fresh horse will rarely hurt itself unless it spooks continuously or acts like a fool on the trail. Injuries generally occur with a tired horse. Lameness is an important consideration with respect to training. Very few horses will get to the higher mileages without becoming lame to some extent at some time. The difficulty associated with the horse being "off" is to pinpoint the problem area. At home rider and veterinarian can work together on any lameness issues. At a ride the rider must find the area of distress and remedy it if able. Note that there is a difference between muscle soreness and true lameness. The horse can suffer from muscle soreness at the beginning of training, after a hard day of riding, or after a forty mile competition. Preparations for starting the first morning may not be as concerning as following mornings if on a multi-day ride. A cooler thrown over the horse after it is saddled can help keep it warm and limber on a cool day. Rub its legs from the knees and hocks down. If the horse happens to be sore, lame, or stiff from the
 previous day's ride it needs to be as warm as possible when it hits the trotting strip. Jog slowly to warm up on the trail. If the horse is a bit stiff careful work to keep him from getting worse is indicated. Sitting the jog or trot won't aggravate the problem as much as posting with weight coming down on the sore diagonal will. If the problem is in a hind limb a canter may be his easiest way of going. A horse that is going lame may keep breaking into a canter for relief. One that paces or single-foots may trot as he begins to tire or go lame. A horse that is getting into serious trouble will take tiny steps, seem to be going downhill, and when pushed, if it normally trots, will go into a pace or single-foot. Diagonal lameness can be caused by the rider posting on one diagonal more than the other. It can be from fatigue and it can be progressive. A horse sore on one leg can be worked off balance so long that the diagonal leg will also go lame. Pain from severe skin chafings can cause the horse to tighten and go "off" as the rider rises to the trot. Taking a leg pulse every day should be as ingrained as cleaning feet. Heat and swelling ("stocking up") should be noted and engorged blood vessels inside, below, and/or behind the knee or inside below the hock can indicate soreness. Stocked ankles behind, if there is no obvious injury, may be due to too much work, lack of exercise, or too much feed for the work being done. On a long ride nearly every horse will stock to some degree. The danger of a leg stocking up is the possibility of tissue damage from retained fluid. Being stalled or kept in a small pen cuts down on movement or tied to a trailer overnight can contribute to stocking up and to muscle tightness so getting the horse out and riding it a bit and hand walking while in
ride camp should be considered to help prevent any issues. Hand rubbing a stocked leg will increase circulation and help dispel the fluid. Hand rubbing and soaking an injury increases circulation and brings relief from heat and pain.

## What is "Cooling Out"?

Cooling out is such an important part of the conditioning and competition routine that it deserves special mention. During conditioning rides it can begin when the horse is allowed to walk in for the last couple of miles. This strategy is not always used in competitive events. In CTR a trot or gait must be performed from a quarter of a mile out and in END those competing to win may race in at a full gallop. At the end of the ride dismount, walk the horse easily, allow a few swallows of water, check his PR recovery, and let him rest. Loosen the girth. The horse may sigh or urinate at this time. Check his eyes and skin for signs of dehydration; this give an indication of the level of stress. Use coolers and blankets when necessary. Remember his body needs to be cooled gradually to prevent cramps and spasms. Leave the horse with a little hay and take care of yourself. The horse may have been dry on arrival but gets wet with sweat at this time. This is a sign that most of the sweat was evaporating as it was moving. This is not the same as a horse that has been cooled and then breaks out in patchy areas of sweat which can indicate a problem. By this time washing and sponging using cool water can commence. In cold weather it is best to sponge off only the legs to get sand and dirt off as well as to cool the tendons. On warmer days it is important to cool the head and neck as well as the flanks, belly, and hindquarters. Rinse the sweat from between and down the legs. CTR does not allow the use of hoses, but one leg at a time may be placed into a bucket and splashed to cool. Look for areas that seem to be really sensitive. Check the pulses in each leg. If one is stronger or hotter than the others, extra time cooling and gently massaging that leg may be indicated. The massage should not be deep, rather a gentle squeeze and release around the tendons and a pumping action at the ankle. Hot spots on the back can be caused by saddle pressure, friction from the rider's legs, a rider who constantly fidgets in the saddle, and/or sand, sweat, and loose hair under the saddle pads. Saddle and girth swellings can be a major problem. They may be very sore and may be signs of actual damage to the skin. They may resemble burns. Cool water is the best treatment. Gentle massage may help, but veterinary attention may be needed if the problem is severe. If the horse stands "hunched up" from muscle spasms, cramps, or trembling cover it with coolers or blankets to keep it warm and start gentle massage. If the problem is new and appears serious get assistance. Below is a list of treatments for common after-ride conditions. It is tragic when a horse who has had a good, but stressful, ride is allowed to develop problems during the cooling out phase. A horse that is genuinely cooled out is a horse that has returned to normal. He will have normal pulse and respiration, normal temperature inside and out, will be dry, comfortable, and able to eat and drink normally. On CTR riders competing for horsemanship awards must care for the horse entirely by themselves. Remember to watch the time since most CTR will require presentation of the horse in hand to the vet judge one to one and a half hours after completion of the ride. On END rides presentation for the final check can be done within minutes to up to one hour of completion, depending upon whether it is a limited distance or a ride of 50 or more miles. A horse standing for best condition ( BC ) on an END ride will present for the $B C$ check one hour after crossing the finish line.

## What Are Some Treatments for Common Problems?

For girth scald, bruises, abrasions, sore legs use cool water. For swollen or filled legs or heat welts use gentle hand rubbing and cold water. For sand or dust in eyes use sterile normal saline. For "Charlie horses" (muscle knots) apply a cooler or blanket to warm and a gentle massage. Give some oral calcium. For cramps due to exhaustion apply coolers or blankets, walk the horse slowly to prevent stiffness, and allow frequent rest stops. For symptoms of colic apply coolers or blankets, walk the horse, and have a veterinarian examine the horse. For "tying up" (azotemia) apply coolers or blankets, rest, and call a veterinarian. For symptoms of founder call a veterinarian.

> The veterinarian judges on a ride treat an animal only in an emergency. Local or trail ride practitioners are usually available or on call for emergencies. Removing a horse from competition is indicated when the following signs are present: Obvious fatigue, disinterest in food, no awareness of surroundings, extreme reluctance or total inability to move out at the walk or trot/gait, most lameness, sore back, severely cramped muscles, "thumps", or any vital signs in the critical range.

## Tack and Clothing, What Works Best?

The best kind of saddle for distance riding is the one that is most comfortable for both horse and rider. Some riders prefer English saddles and may even spend most of the ride perched with their weight in the stirrups, spending relatively little time actually sitting down on the horse's back. Some riders prefer to sit firmly and comfortably on the horse. The second method is recommended because putting all the rider's weight into the feet and onto the wither area of the horse can cause issues with pressure leading to soreness and even breakdown of skin and supporting structures or both. A western saddle can be more comfortable for a deep-seat ride and also has the advantage of distributing the rider's weight over a larger area of the horse's back. However, this type is generally a lot heavier than English or endurance type saddles. It also has a horn which can be dangerous in falls. The endurance saddle looks like a western saddle, but it is much lighter in weight and has a rounded front pommel without a horn. It is usually loaded with clips and rings to which gear can be attached and it is also available with a short girth that has low rigging at the bottom of the skirt to keep bulky straps and buckles out from under the rider's legs. There is also a type of Australian saddle that looks like a cross between English and western saddles that may be suitable for distance riding. Heavy riders should look for a lightweight saddle, but one that will still have enough substance to it to distribute the weight over the largest area of the horse's back. Saddle pads should be absorbent and clean. Pads should not be utilized to correct a poorly fitting saddle. Rather, the saddle should fit correctly or nearly so without a pad and the pad used for increased comfort for the horse and only very minor correction of saddle fit as needed. By carefully checking the saddle and girth areas each ride, potential problem areas can be identified early. The type of bridle and bit used is a matter of personal choice and what works best for the horse. What might work fine for the show ring may not be good for a distance ride. Many riders today prefer biothane halter bridles with hackamores or simple, comfortable bits for ease of care and ease of taking off and putting on during a competition. The type of rein should be considered for comfort over the long haul. Split reins may help prevent a horse from running away if the rider falls off and can manage to hold onto one rein. Some riders wear gloves to keep their hands more comfortable. The well-dressed distance horse will also need some trailer wraps (for traveling to and from the ride), several towels (all sizes) for cooling, rubdowns, etc., and a cooler of some sort (a very large towel can do the job as well). Shoeing should be done about a week before the competition (if set too close to the time of the ride the horse may be a bit sore). Pads in the shoes are allowed on rides and are recommended for rides with lots or gravel and stone, although no other type of leg boot or wrap or bandage can be used in CTR. Remember that even lightweight boots or shoes add significantly to the weight of each foot which translates into more energy needed to lift and set down. The horse should be conditioned with the footwear to be utilized in the competition in order to prevent stress injuries. The rider's attire should include an ASTM protective helmet of some sort and a sturdy, comfortable pair of shoes or boots with heels to prevent them from getting caught in the stirrups. Many riders wear torso protecting vests, too. Socks made out of absorbent cotton or Coolmax material will be most comfortable. How much clothing is worn and the type of clothing is entirely up to the rider. There is no standard "uniform" for distance trail riding events so riders should use common sense. The layer of clothing closest to the body should be absorbent, but wick moisture. Clothes should not be overly tight or pinch anywhere. Underwear makes a big difference when you are in the saddle for 25 miles or more. Most riders wear comfortable riding tights or riding breeches (the tights have the benefit of lots of stretch and no seam along the inside surface of the leg). Most rides start early, just after sunup when
the air is still cool, and end near noon, at the hottest part of the day. For this reason, it is sometimes a good idea to wear light layers of clothing that can be removed as needed. A lightweight windbreaker over a cool cotton blend shirt can be a good combination. The jacket can be removed after the rider warms up and is small and light enough to stash in a pouch without difficulty. Sunglasses are recommended to protect the eyes both from sunlight and from stray branches and flying dust or sand. If the weather is really hot and sticky or cold and rainy the rider might want to bring along a change of clothes or two. The whole purpose of the wardrobe selected for rider and horse is comfort and protection and if choices are made with that in mind there should be no issues. Remember that if the rider is competing for horsemanship awards in a CTR the judge will look very carefully at what rider and horse are wearing and how serviceable and appropriate it is. Everything should be clean, presentable, and in good repair.

Besides tack, clothing and camping gear, the rider will need to bring along all the tools required for grooming as well as for emergency repairs. Some items which should be included on the checklist to bring to a ride are feed, feed tub, loose salt, water buckets, electrolyte mixture, hay, hay bag, halter, lead ropes, clear plastic sheets (for rain protection),assorted snaps and hooks, towels, grooming kit, fly repellant, cooler or sweat sheet, liniment (can only be used after the final vetting/judging in both CTR and END), bandages, spurs and crop if necessary, helmet, safety vest, watch, gloves, alarm clock, folding chair, pen and paper, money (it helps if the farrier on call has to replace a shoe) sunscreen, sunglasses, spare tack (leathers, pads, bridle, girth), analgesic or allergy medicine for the rider, documents packet with Coggins and registration papers, and so on. If on arrival at a ride the rider has forgotten something asking around may produce someone willing to lend the item. Be sure to go over the rules and regulations for the event carefully long before the ride to find out what is and is not allowed. For specific questions a call to ride management will usually produce the answers. Some issues may have to await the judges'/veterinarians' decision and this will be announced at the ride briefing. It is very important to attend the pre ride briefing for both types of competitions. It is also important to remember that drug rules are very strict and any horse can be checked for drugs at the time of the event. If the horse is getting any medication of any kind the rider should ask the vet at home about how long before the ride it needs to be discontinued in order for the horse to test out "clean". If the vet is not particularly well informed about the regulations governing distance riding (and many of them won't be unless they are involved with the sport) a call to the ride management can usually get the rider in touch with the ride vet judge who will be able to answer the question.

## What About Grooming?

Good grooming is important. The horse should be well groomed for his appearance in a competitive event, especially CTR. The grooming needs to be started well before check in day. Working horses can have much sand and sweat in the coat, especially in the saddle and girth areas. They must be kept clean to prevent chaffing and sores. The horse may benefit from being clipped since this usually gives it a sleeker appearance as well as making it easier to keep him clean. It will be easier for you to notice swellings or injury on legs that are clipped. The winter coat is very heavy on most horses. If it is not clipped, at least in a few key areas, overheating may be a problem on rides. When cleaning the horse don't overlook the cracks and crevices. Check the nostrils and ears for ticks. Wash under the tail and between the legs. Clean the penis under the foreskin on males and the area between the udder nipples on females. Whisk or lvory dish detergent will help remove the yellow tinge from white manes, tails, blazes and stockings. A little cream rinse or Mane and Tail Conditioner can make manes and tails easier to comb. Scabs on the coat can be softened and loosened with a little mineral oil. Many riders will hose off the sweat and dirt after every ride, but will do soapy washings once a week or so to help preserve the natural oils in the skin.

## What About Rules and Regulations?

These vary from ride to ride, on the type of ride, on the distance, on the terrain, and on weather conditions. Rules are different for CTR and for END. Every sanctioning organization has a rule book on line and in print. Look them over well and check with the ride management if there are any questions. And don't forget to attend the ride briefing/meeting!


## What Should the Rookie Rider Expect When Attending Their First Ride?

When pulling into ride camp the rider may be asked to show a current Coggins and health certificate if coming from out of state. If all is in order the rider will be directed to the parking and camping area. Many rides do not check these papers until the rider goes to check in, pay, and get the ride packet. Most rides require the rider to provide their own camping accommodations (tent, camper) and the horse's accommodations. Many veteran riders have a portable pen that can be set up alongside a trailer to allow the horse a little more freedom than a tie-out permits. Others tie directly to the trailer, use a Hi -Tie, or picket if trees are available. If there are stalls this will be noted in the entry packet. After unloading and settling the horse and setting up camp it will be time to check in. Remember to take the Coggins, health certificate, AERC card if applicable, and a check or cash if not already paid up. Then it should be about time to go over to the vet area for the pre-ride exam. Note that on a CTR each rider is issued a pinny vest which must be in view on the rider at all times from check in until the last vet check of the ride. The exam will be thorough. The horse should be well trained to lead and to trot or gait out at the vet's request. Practice this at home and include figure eights and circles for CTR and for standing for BC on END rides. Declaration of the horse's condition, including old scars or minor cuts or skinned areas or other abnormalities should be written down on the CTR ride form before going to the vet area. The declarations will be noted by the vet and the areas examined. At the completion of the CTR points may be taken off if new blemishes or other issues are noted. Remember that if the rider is going for CTR horsemanship awards the judging starts at this time and grooming and attitude, both of the horse and rider, count. After the vet check the rider is free until the ride briefing which is usually held after the vet has finished examining all entries. This time can be used to complete set up of the campsite and to limber the horse a bit. If there is a posted trail map this is also a good time to look it over and to review all the ride rules. At the ride briefing everyone will be given instructions about the ride. Make notes and ask questions during the meeting. If a staggered start is used the riders will also be told in what position they will start the ride based on the number on their pinny if it is a CTR. Some rides allow the riders to choose where they will start, but this must be clarified at the ride meeting. The evening before the ride is a time to socialize with other riders. Tips from some of the veterans may be heard as well as tales of past rides. In all the fun, though, don't forget to tend to the horse and calm him if the break in routine upsets him. Get a good night's sleep. Alcohol is not a very good idea, even if it seems sociable. Riding 25 or more miles with a hangover (even a little one) is not something to look forward to. And alcohol is dehydrating as is any drink with caffeine in it. Water is best until after the ride. In the morning the horse should be fed 2-3 hours prior to the start of the ride if feed will be given. Many riders do not feed at all prior to the ride
unless it's a beet pulp mash. Never feed dry beet pulp. Fresh hay free choice during the entire weekend is advised. How much the rider eats and drinks is up to them. A light breakfast of fresh fruit and whole grain cereal is a good choice and make sure a nutritious snack and plenty of fluids are available for breaks during the ride. Be tacked up and in the saddle at least 15 minutes prior to the start of the ride.

## Who Wins and Why?

The best conditioned horses and riders have the best chance of winning. The physical exam that looks for signs of exhaustion and recovery has been explained thoroughly in the previous sections. On an END ride of 50 miles or more the first horse in wins provided that horse is able to pass his physical and is judged "fit to continue". On a limited distance END ride (2535 miles) the winner is the one that reaches the required pulse before any other horse in the pulse box and is judged fit to continue. The
 best condition ( BC ) award at END rides and the placing for prizes in CTR are decided by a system of points being deducted by the judges/veterinarians for every abnormality noted at the post-ride exam. The winner is the horse with the fewest points deducted. In the back of this booklet is a copy of a SEDRA vet judge's score card which is used in CTR. The completed score cards are returned to each rider at the end of the event. Horsemanship awards are different since what is judged is the behavior, attitude, and skill of the rider. A copy of the score card used for this can also be found in the back of this booklet. The judging in this category may depend to some extent on the ideas and opinions of the person doing the judging (the Special Awards Judge). At the end of the ride CTR awards are given out from 1st through 6th place in all divisions (usually heavyweight, middleweight, lightweight, and Junior (riders under 18). A rookie is a rider (or horse) that has not competed in any ride of any kind before or a rider who has never competed at this particular mileage before. A novice is a horse or rider that has less than 250 miles of competition recorded at the beginning of the ride season. High point awards are given to the highest scoring horse in each of several breed categories (these awards depend on how many horses of each breed are represented). Awards are also given for horsemanship and possibly for several other special awards as well. END rides present awards to the first place finisher and to those in the top nine spots following the winner, commonly called the "top ten". There is only one best condition award. All riders who complete in CTR and END Rides will also usually receive some sort of completion award.

## The Last Word

Whether winning or completing or almost-but-not-quite making it, distance trail riding events should be a fun and rewarding experience for horse and rider. It provides the joy of lots and lots of riding and knowing that rider and horse as a team are fit can do more than they thought possible.

## More on Packing for the Ride

A checklist done prior to packing for each ride can help prevent the rider from forgetting important items. The list may be written or kept on a computer and printed out prior to packing. The following items are suggestions only and are by no means comprehensive. Repair items: Extra girth; extra headstall; extra reins, stirrup leathers, breast collar, leather strips. To take on trail: Syringe, electrolytes, hoof pick, pocket knife, chap stick, sponge on a rope, miscellaneous ties for saddle, thin handkerchief or bandana, gloves, heart monitor, water bottle and holder, high energy snacks and high
protein snacks such as string cheese or jerky, stopwatch or sports watch, time card, and rain gear. Rig items and paperwork: Map and directions to the ride, horse registration papers, health certificate if required, current negative Coggins test, ride rules and regulations, US Rider or other road service card, cell phone with important numbers (ICE). Horse camping items: Feed, feed tub, salt, water buckets, electrolyte mixture, hay, hay bag, halter, lead rope(s), clear plastic sheets (for rain protection), muck bucket, rake and manure fork, extra buckets for cooling and cleaning buckets for water stops on trail, assorted snaps and hooks, towels, grooming kit, fly spray, cooler, sweat sheet, horse blanket, shipping boots, leg wraps, tail wrap. Basic camping items: Helmet, vest, boots, clothes for ride day, leggings, jacket, raincoat or poncho, watch, gloves, alarm clock, folding chair, sleeping bag, tent, pillow, sheets, cooler and ice, pain medication such as ibuprofen or aspirin, pen, paper, money, personal medications, sunscreen, sunglasses, rubber boots, personal grooming kit, clothes to change into after ride. Horse Containment: Electric fence paddock, electric fence charger (battery operated), electric fencing, step-in fence posts, gate closure handle, grounding post (metal) ; pen made of plastic or metal or, for tying out, a Hi-Tie, tie directly to trailer with a rope, or picket line equipment. More advanced camping items: Camp stove, one burner stove, folding table, pots, pans, dishes, plastic utensils, sponge, dish soap, garbage bags, zip-locks, favorite foods (prepared at home), snacks, bottled water, lanterns, flashlights, snake lights, porta-potty for trailer or tent, mounting block.

## About This Booklet.

In the 1980's a very forward-thinking physician who had an interest in distance riding wrote a definitive explanation of the sport for rookie riders. Elizabeth Rusti Quinto, M.D. was a member of the Treasure Coast Saddle Club, a South Florida riding organization that held Competitive Trail Rides (CTR) and Endurance Rides (END). The club also put on educational clinics to help start rookie distance riders in this new and exciting sport. Many veteran riders in this sport got their start on Treasure Coast Saddle Club rides. One such rider was Deena Meyer, former SEDRA President. In October 1998 Deena came across her copy of the Smart Rookie's Guide to Distance Riding Competition and called Rusti Quinto on the phone. She told Rusti how much that little booklet meant to her when she was starting her distance riding career. Rusti and Deena talked for awhile and the result was that Dr. Quinto gave the rights to her booklet to SEDRA. The booklet was retyped and laid out for its second edition. This required a bit of updating and a small amount of editing. Below is the message from Rusti Quinto to Deena Meyer conferring the rights to the booklet to SEDRA:
"Hi- I found your e-mail address in HAP (Horse and Pony Magazine). This message is to confirm that I hereby bestow to SEDRA the copyright and all reproduction rights to my little book "The Smart Rookie's Guide to Distance Riding Competition". As I mentioned on the phone there are parts of it that ought to be updated. I'm glad you feel it is a worthwhile book. I did it originally because I thought there was a desperate need for basic info in simple clear language that would help a green rider get started in the sport. There are lots of new books on the market now on distance riding, but I think there is still a place for our little hand book-it's short and sweet and to the point. SEDRA is welcome to reprint it and sell copies at a modest profit. I don't want any money for this (it's my donation to SEDRA) but I do want my name kept on it as author. Thanks, Rusti Quinto."

In 2003 the booklet was reprinted yet again and either given or sold for a small fee to new and more experienced riders alike. In the spring of 2013 the SEDRA Board of Directors decided, before reprinting the booklet yet again, to do the editing and changes needed to update the content of the booklet.

To Deena Meyer and Dr. Quinto: Thanks for helping to carry on the tradition of veteran distance riders educating rookie riders and to SEDRA Education Committee members Lindsay Campbell, Kathy Adams, and Stephanie Sutch for the extensive editing and updating done in summer and fall 2013 to bring the booklet current with riding in the $21^{\text {st }}$ century. Finally, a special thanks is given to 2013-2014 SEDRA President Leah Greenleaf, SEDRA Awards Secretary Carol

Thompson, and SEDRA Treasurer and web site coordinator Caren Stauffer for assisting with editing and formatting. Also to SEDRA Member Megan Savory-Davis, D.V.M for her veterinary expertise and input.

Thank you to the following photographers, Shots by Susan, Becky Pearman, Photos Daniel Took.com.
Appendix 1 Homemade Electrolyte Formula: 2 parts non-iodized table salt, 2 parts lite salt, 1 part dolomite (a natural source of calcium and magnesium) or generic (cheaper than name brand) Tums. Most riders mix 1 cup of the table salt, 1 cup of the lite salt, and $1 / 2$ cup of the dolomite or crushed Tums, generic or brand, in a syringe with water or watered down applesauce or other easy to mix good tasting food. Using Tums also helps keep the stomach acid and esophageal reflux controlled.

Appendix 2 AERC Rider Veterinary Card:

| RIDE NAME: <br> Rider Name |  |  |  |  |  |  | DISTANCE |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Weight Division |  | Breed __ Rider Number |  |  |  |
| Junior Rider $\qquad$ Sponsor's Name <br> Horse Name $\qquad$ EMERGENCY \# |  |  |  |  |  |  |  |  |  |
|  |  |  |  | Age | Sex |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| VET CHECK | PRE RIDE VET IN | VET CHECK 1 | VET CHECK 2 | VET CHECK 3 | VET CHECK 4 | VET CHECK 5 | VET CHECK 6 | OST RIDE VET OU |  |
| ARRIVAL TIME |  |  |  |  |  |  |  |  |  |
| PULSE |  |  |  |  |  |  |  |  |  |
| PULSE TIME |  |  |  |  |  |  |  |  |  |
| HOLD TIME |  |  |  |  |  |  |  |  |  |
| OUT TIME |  |  |  |  |  |  |  |  |  |
| Mucus Mernbranes |  |  |  |  |  |  |  |  |  |
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| Skin Tenting $\quad$ 年 |  |  |  |  |  |  |  |  |  |
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| Comments |  |  |  |  |  |  |  |  |  |
| Cardiac Rec. Index |  |  |  |  |  |  |  |  |  |
| Examiner |  |  |  |  |  |  |  |  |  |
| Elimination Cause <br> Codes: L-Lame; M-Metabolic; ROL - Rlder Option Lame ROM - RIder Option Metabolic DQ - Disqualification OT - Overtime |  |  |  |  |  |  |  |  |  |

## South Eastern Distance Riders' Association

VETERINARY / TRAIL JUDGE'S SCORECARD


## POST RIDE - METABOLIC RECOVERY



## Appendix 4 SEDRA Special Awards Scorecard:

## SEDRA SPECIAL AWARDS SCORECARD <br> WWW.DISTANCERIDING_ORG.

| Riders Name: <br> Name of Ride: <br> Horse's Name: | Rider \# ROOKIE RIDER( ) ROOKIE HORSE ( ) |  |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |
| Breed: |  |  |
| Please note: Special Awards are optional at Riders' Discretion. I wish to participate in the Special Awards. |  |  |
| Initial Presentation- (Ability to present horse safely, response to commands, overall presentation, etc.) Comments: | Rider | Horse |
| On the Trail - (Starting Line, equitation, watering, sponging, etc.) |  |  |
| Comments: | Rider | Horse |
| Stabling - (Feed/water containers, horse safely secured, stall or tie area clean, blanketing, etc.) Comments: |  |  |
|  | Rider | Horse |
| Final Exam - (Ability to present horse safely, response to commands, grooming, overall presentation, etc.) Comments: | Rider | Horse |
| Overall Comments: |  |  |
| Rider Award(s) |  |  |
| Horse Award(s) |  |  |
| Judges Signature |  |  |

- Third Edition Published by SEDRA 2013. Web site: www.distanceriding.org.

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