

# Endurance Basics

by Genie Stewart-Spears

Reprinted with permission from  
Arabian Horse World Magazine, [www.ahw.com](http://www.ahw.com)

The sport of endurance riding—governed by the American Endurance Ride Conference—is a great way to spend many hours with your equine partner. Equestrians of all ages, from all walks of life, participate and are consequently drawn together by the common thread of enjoying and safeguarding the welfare of their horses while traversing many miles of beautiful horse trails. Riders participate to test their ability as equestrians and to test their horses' athleticism. Some compete to win, and others ride just to complete.

The American Endurance Ride Conference (AERC), established in 1972, evolved when Wendell Robie and several friends challenged the 100-mile trail between Lake Tahoe and Auburn, California, and completed in less than 24 hours. That 1955 ride became the Western States Trail Ride, better known as the Tevis, and still exists today.

In the United States and Canada, AERC sanctions over 700 rides a year. The distances range from 25 to 100 miles in one-day and two-day events and pioneer rides of three or more days of competition. Distances less than 50 miles are considered limited distance, or LD for short.

While AERC-sanctioned events can be characterized as races, the mandated prizes are completion awards, and a much-coveted Best Condition (BC) award that is open to the first ten finishers. Horses and riders accumulate points toward year-end awards and as horse/rider teams in their respective weight divisions. Weight divisions are designated by rider's weight with tack: featherweight (up to 160 pounds); lightweight (161 to 185 pounds); middleweight (186 to 210 pounds); heavyweight (211 pounds and up); and junior division (less than 16 years old).

Whether you want to ride to complete or ride to win, the horse's welfare is paramount. It takes years to develop the horse's body—tendons and ligaments—before you can ask for the high performance required of a horse to win a 50-mile event or even complete a 100-miler. After six months of training, the heart, lungs, and spirit may say, "Yes!" but the rest of the body may not be ready for the demands of even a fast LD.

Learn all you can about the sport before you participate. Besides reading through the educational section and rider's handbook provided on AERC's [www.aerc.org](http://www.aerc.org) website, it is highly recommended that you attend a few rides to observe

and ask questions. Better yet, volunteer as a scribe for one of the veterinarians working the ride.

While at the ride, ask around to find out if any riders live near you and would help you learn. Endurance riders are a gregarious group of people and they like to share what they know about the sport. You may actually be doing the person a favor because endurance riders often enjoy company on the trail.

## The game

The horse (or mule) must be at least four years old to participate in an LD and five years old to enter a 50-mile or longer ride.

Although many different breeds participate, it is the Arabian, Half-Arabian, and Anglo-Arabian horses that are best suited for endurance riding. Their streamlined build and ability to recover quickly are paramount in advancing through a ride.

Each distance starts with all competitors leaving at the same time, usually at a trot. Your normally calm, gentle horse may suddenly become this wild animal you never knew before. So consider checking in with the timer prior to the start, but leaving your horse tacked but secured behind your trailer where he can't see the start. Once everyone, or most everyone, has left, mount up and ease down the trail.

One of the hardest things to do is not to get caught up in someone else's ride plan. You must ride your horse as you have ridden in training and conditioning. Just because your horse thinks he can race with the front-runners doesn't mean it is in his best interest to do so. Veteran riders call it "big brain, little brain." You have the big brain to make the right decisions for your horse that has the little brain and doesn't realize this ride is 25 or 30 or 50 miles long.

Throughout the course, there are vet checks, at which the horses must pass veterinary inspection. Sometimes all the checks are in base camp; at other times you have to put anything you or your horse might need in a truck or trailer to be hauled to the out-check (like buckets, feed, hay, your food and water, raincoat, electrolytes, sponge, etc.).

There is no minimum time limit, but a 50-mile ride must be completed in 12 hours and the 100-mile distance in 24 hours. This includes the mandatory holds and the time it takes to "pulse down" (your horse's heart rate drops to, for example, at least 64 beats per minute) before entering the vet exam area and starting the mandatory hold time.

*continued on reverse >*

The endurance ride winner is the first horse/rider to finish the prescribed, marked trail, with the horse judged “fit to continue” by the veterinarian or veterinary team.

The maximum time limit for the LD rides depends on the distance. And, the winner isn’t necessarily the first across the finish line, but rather the first horse to cross the finish line and recover to the required pulse rate (usually 64 bpm) and be judged “fit to continue.”

To get an idea of the times previous rides were completed at the venue you are considering, look up ride results on AERC’s website. (The ride time is the actual time from start to finish, less the mandatory holds.) Note the winning time as well as the time of the last rider to complete. There’s no shame in completing last, or not completing at all. The only instance when you should feel ashamed is if you over-ride your horse to satisfy your ego. AERC’s motto is “To Finish Is To Win.” The sport is all about enjoying time with your horse, accomplishing personal goals for you and your horse, and spending time with fellow riders, all of whom take their horses’ welfare seriously.

Most rides and AERC sanctioning *per se* don’t offer any monetary awards. So, you achieve no monetary gain unless you are competing on a registered Arabian, Half-Arabian, or Anglo-Arabian that is Sweepstakes nominated, in an event also sanctioned by the Arabian Horse Association. Or if you compete in one of the rare rides offering cash rewards. Normally you will get a T-shirt or some token award for completing, but the real reward is in completing the prescribed course with a healthy, sound, and happy horse.

You don’t have to be a top contender to enjoy the sport, and you don’t have to ride a 100-mile course. The LD ride was designed to introduce young horses and/or new riders to the sport, but, it too has evolved. Because of time constraints, some riders can’t or don’t want to ride longer distances. So LD has its own year-end award program.

Once you have your horse conditioned well enough to compete—most horses that are trail ridden or worked frequently, are capable of completing a non-demanding 25-mile ride—you can check with the AERC office or on their website for rides nearby. You might be surprised to find one within a few hours’ drive.

### **Conditioning your horse**

Learning to take your horse’s pulse, temperature, and respiration, and checking for dehydration, is the first step. The progress of the conditioning is based on these and other factors.

What is your horse’s resting pulse (standing quietly in his stall)? Typically the heart rate is 28 to 40 beats per minute (bpm). When you stop working the horse, how quickly does the heart rate drop?

In an endurance ride, before beginning your mandatory hold and entering a vet check during a ride, the pulse must be, for example, 64 bpm or less. It shouldn’t take more than 8 to 12 minutes for your horse to drop to 64 after you halt the work. If it takes longer to drop, you need to find out why. Is your horse not in shape for the distance and speed you are asking or is he in pain/discomfort?

Endurance rider Tom Swift suggests, “Ride with a heart rate monitor and pay attention to how fast the horse recovers. If the horse’s pulse rate doesn’t drop to 64 beats per minute within 10 to 15 minutes of ceasing work, you are overriding him.”

Heart rate monitors are a wonderful tool because you can see on a watch-type band that you wear on your wrist what your horse’s heart rate is at all times. But, if the battery goes dead or you forget to put the device on, you need to know how to take the pulse. Using a stethoscope placed on the lower, left side, just in front of the girth, count the beats (lub-dub is one beat) for 15 seconds and multiply that by four. For example, 20 beats in 15 seconds would mean the horse’s heart rate is 80 bpm.

Checking your horse’s temperature isn’t necessary unless you suspect a problem. Normal temperature for a horse is 99.0°F plus or minus 2 degrees. With work, the temperature will rise, but anything over 103°F is cause to be concerned.

Respiration, or rather the number of breaths the horse takes in a minute, is used as one of many tools to assess the horse’s condition. Resting respiration can vary depending on if the weather is hot or humid, but generally the resting rate is 8 to 12 breaths per minute.

More important is the heart rate. Resting heart rate is 30 to 40 beats per minute. Trotting heart rate can range from 90 to 120 beats per minute. At a canter the rate is typically 110 to 150 beats per minute and up to 200 to 240 at a gallop. Working the horse over 140 to 160 for other than short sprints could be detrimental to his well-being. No matter what rate you are pacing at, the horse’s heart rate should drop quickly (within 10 minutes) to 64 beats per minute after a workout, otherwise you are over-riding him. Rapid breathing and heart rate suggest pain, if the horse doesn’t recover as described above.

Dehydration can cause metabolic problems that will cut short your horse's performance. Years ago, the conventional wisdom said not to let a hot horse drink. Now we know to let your horse drink at every opportunity. Don't wait until he is depleted and he gulps down several buckets of water after you finish your ride. That may cause problems. However, allowing him to drink all day at every opportunity is important.

Conditioning depends on many factors. How old is the horse? How much "base" (conditioning) does he already have? What is his body condition—is he fat, skinny, or lean and fit?

Tom Swift prefers to start with a five-year-old or older horse that has some base. He recommends, "Start with three or four days a week riding at a walk and trot. A distance of five miles is all you need to cover each day for the first few weeks. I like to mix it up, walk and then trot, walk and trot. If you do the five miles, pacing at a mix of walk for 500 yards and trot for 500 yards, it should take an hour to an hour and a half, if it isn't real hot weather."

Get in the habit of doing a mini-vet check after every ride. What is your horse's pulse? Is he dehydrated? How does he look at the trot out? Are his legs firm and cold? Are there any new cuts, interference marks or rubbing from the tack? Is his back sore?

Swift continues, "Evaluate the horse every day and the following day, too. Sometimes problems don't become obvious until the next day. Check the back, hip, and entire body for soreness, heat, or swelling. If there is a problem starting, you need to find it early to avoid further injury."

To check the back, gently work your fingers into his muscles. Swift suggests trying it on yourself or your spouse, to make sure you are not doing it too hard. "I have to be careful because I tend to have heavy hands and can make a horse flinch when he is not truly sore," he explains.

If the horse is doing fine, recovering well after each conditioning ride, and no problems surface, Swift says he would increase the miles but continue just walking and trotting. Gradually he adds cantering work, taking several months to build the horse up to a full 10 miles done at a canter.

"When the horse can canter approximately 10 miles an hour," Swift says, "I start increasing the distance to 12 miles and then 15, 18, and up to 25 miles on a training ride. But I ask that he give me more distance only one day a week. The ultimate goal is 10 to 12 miles two days a week and 25 miles one day a week.

"But with a green horse," he adds, "I wouldn't ask him to go more than 10 miles at most for a few months." If you are using a heart rate monitor, the working heart rate is often 90 to 130 beats per minute. "There are some horses that run 130 bpm all the time, but yet they pulse down in two minutes," Swift says.

Tom acknowledges the same finding that Valerie Kanavy, two-time World Endurance Champion, has had—that there are some "freak" horses, as they call them, that recover faster and lower than the fitter horses. You have to be very careful not to be fooled about their state of fitness.

Recognize that each trainer will approach conditioning a horse a bit differently, based on the trainer's personality and the conditions (weather and terrain) under which they work. Furthermore, while trail conditioning is essential, other factors can make the difference between front finishes and back-of-the-pack finishes: equitation work for rider and horse; training for different situations (sponging, passing and being passed, water crossings, etc.); proper nutrition (horse and rider); shoeing—to name just a few.

You should also recognize that each horse is an individual, and will react to stress (conditioning, competition, and so forth) in his own way. You really must know your horse!

Dr. Jamie Kerr, DVM, an endurance rider and veterinarian who is passionate about the sport of endurance, says, "We have to be constantly diligent about learning and opening our minds to be more aware of our horses' behavior and well-being and act accordingly. A rider that has to poke and prod the horse down the trail is missing something vitally important. Even though the horse is meeting the veterinarian criteria, such a rider is still overriding the horse."

Kerr continues, "Pay attention to your horse's MFEDPP. MF—is your horse moving freely or maybe too freely? If your horse is 'pulling your arms out of their sockets,' then maybe he is going too fast and you need to take measures to rate him at a slower pace.

"EDPP—how well is your horse eating, drinking, peeing and pooping?" Kerr asks. "The significance is, if your horse is eating and drinking, then it is replacing energy, electrolytes and fluid deficits that occur throughout the ride and even after the ride.

"If the horse is peeing, then they are at least taking in enough water that they are producing urine," he explains. "You must monitor the color and quantity of the urine to determine if they may be beginning to tie up (azoturia). Is the urine dark?

*continued on reverse >*

Does the horse strain or perhaps only dribble urine? These are indications of a metabolic problem starting. And, if they aren't peeing, then they aren't taking in enough water.

"Another indication of dehydration is hard, dry, or nonexistent manure. If the horse is taking in sufficient water and food, the gut can work properly and the horse will produce moist manure," he says.

"Water is incredibly important," Kerr emphasizes. "Horses can lose up to 15 quarts per hour sweating. That is a 10-gallon deficit in a 50-mile ride. They need to be drinking a lot of water all day to keep up with the loss.

"Think about the natural horsemanship trainers all over the country," Kerr says. "They teach us how subtle changes in our body language send significant messages to our horses. Now reverse this thought and apply it to endurance riding. Subtle changes in the horse send significant messages to the rider. Learn to recognize these subtle messages and do something about them.

"Each horse's welfare is ultimately the rider's responsibility," says Kerr.

## **Endurance is a partnership**

Through endurance, you'll gain a partnership with your horse that you never imagined. From traveling and camping with him, and riding and caring for his every need, you can learn his subtle language. Just by a twitch of his ear or a nod of his head, you will recognize when he is thirsty. Or when he slows down on a trail, you'll know whether he is getting tired or wants to stop to urinate.

You'll be surprised at how fast your horse learns to read you, too. If you are thinking about slowing to a walk or picking up the pace to a trot or canter, he's doing it before you think you've asked!

The one thing to remember is, never force your horse to go. Always aim to send the message that you are helping him through the miles, rather than making him go the miles. It can be a rewarding partnership filled with many good miles and memories, if you take the time to understand the subtle language of your horse.