

Questions and Answers

BY STEPHEN DUREN, Ph.D.

I am just beginning to ride endurance horses. How are endurance horses trained to compete in 100-mile races?

Competitive 100-mile endurance horses are born, not trained. Every endurance horse must have a strong desire to cover the distance, so willingness is paramount. These horses and their riders must be properly prepared to withstand the journey.

Conditioning for a 100-mile ride is complicated and not easily explained in a couple of paragraphs. The conditioning process takes a minimum of two years. The first 12-18 months establishes base levels of fitness. This stage of conditioning gradually strengthens the heart, lungs, muscles, and bones. During this time, hundreds of short training rides (3-10 miles) and several 25-, 50- and 75-mile endurance rides are done. Horses are taught to pace themselves, negotiate all types of obstacles, and most importantly eat and drink throughout the ride. These horses will undergo changes in body condition and will have little fat cover over the body. Horses should not be allowed to become too thin or they will not have the energy reserves to complete a 100-mile ride.

For the six months leading up to a 100-mile ride, a horse's fitness must be maintained. Training mileage during this period is usually 30-40 miles per week but varies depending on the horse. This mileage is usually obtained with one long ride and one to two shorter rides. When not ridden, the horse should be turned out so it can move around and not become stiff. The goal in the six months preceding to the race is not to overcondition the horse, which could cause structural or metabolic problems. During the two weeks prior to competition, the horse should be well rested with several short rides and a general reduction in mileage. This allows the horse to recover completely from all previous exercise and ensures its body is loaded with fuel for the ride.

The old adage "You can lead a horse to water, but you can't make it drink" describes my endurance horse perfectly. How can I get my endurance horse to consume more water?

Encouraging horses to consume water during competition can be difficult. Several different strategies may be used with the degree of success dependent on the individual horse. To get horses to drink out of natural water sources including rivers, creeks, and ponds, horses must be previously exposed to them. Under the pressure of competition it is difficult for some horses to drink from a source of water they may have never seen. In other words, horses that drink from automatic waterers their entire lives may not

quickly understand that a creek is also a source of water. These horses would rather rush through the water and continue on the ride. Horses should be conditioned to rest when water is available. Many endurance riders will slow horses when approaching a water stop to allow the horse to relax, slow its heart rate, and to promote drinking.

Consumption of hay or grass stimulates horses to drink. In research studies, water intake is linked to the amount of dry feed consumed, with water ingestion increasing as more dry feed is eaten. Endurance riders often try to couple feed and water intake by wetting feed prior to feeding. Soaking hay in water and adding water to grain mixes does enhance water consumption. Finally, it is thought that feeding salt increases water intake. Horses that consume large amounts of salt will drink more water, but unfortunately feeding salt does not seem to stimulate horses to do it immediately. Further, giving electrolytes (salt) to horses that are dehydrated is not recommended.

What are the benefits of adding fat to the diet of a performance horse?

The main benefit of adding fat to the diet is increased energy intake. Dietary fat is energy dense, containing 2.25 times as many calories, on an equal weight basis, as carbohydrate or protein. Therefore, fat is an efficient way of adding calories to the diet without increasing grain intake. This is particularly helpful for performance horses that may have difficulty eating enough feed to maintain body weight.

Another advantage of dietary fat is that its digestion does not increase blood sugar. Many performance horses seem to have behavioral problems associated with high-carbohydrate (grain) diets. Because digestion and absorption of grain produce large amounts of blood glucose, many people believe these fluctuations in blood sugar may be responsible for the behavioral changes. Blood glucose does not change with the digestion of fat, yet the horses receive the calories required for exercise.

Dietary fat is a safe energy source. For example, if fed too much concentrate in a single meal or during the course of a day, a horse can suffer from grain overload. This occurs when a horse is not able to properly digest the large volume of grain in the small intestine and the grain is fermented by bacteria in the hindgut. Unfortunately, rapid fermentation of grain in the hindgut can lead to digestive upset (colic) and laminitis (founder). Replacing some of the calories that would normally come from grain with fat decreases the chances of grain overload and adds a margin of safety to high-calorie diets. ☺

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