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By Dr. Nancy S. Loving Photos by Anne M. Eberhardt

Transportation Tips

These days horses are part of an increasingly mobile population, traveling between barns and tracks, throughout the nation and internationally. Travel can be stressful to even the most seasoned competitor, and you, as the owner or trainer, can take steps to minimize the physiological impact of transport on your horse. With that in mind, let's examine some helpful guidance from those versed in the understanding and business of equine transport.

Dr. Des Leadon, the international director for the American Association of Equine Practitioners, is a leading authority on transport stress in horses. Leadon's work in Ireland has been instrumental in improving the health of horses in transit around the globe, particularly in regard to the respiratory tract. He reported, "The Irish Equine Centre has had an ongoing interest in transport research for the last 25 years. We have looked at stall design with air transport companies, aircraft manufac-

turers, and with aero engineers. We have studied airflow, temperature gradients, and environmental contamination within road transport vehicles and in aircraft carrying horses. It makes surprisingly little difference whether the vehicle has wings or wheels. We have looked at many possible modifications—these made little or no difference."

Leadon proposes that managing the transit environment and a horse's general health are key elements to delivering a horse to its destination in as good a condition as possible.

TRANSPORT-RELATED HEALTH PROBLEMS

Leadon notes three principal predisposing factors to transport-associated respiratory disease:

- Pre-existing respiratory disease;
- The "head held high position" innate to tethering or cross-tying; and
 - Stocking density (how many horses in

the transport space).

"One of life's few certainties is that transporting horses with pre-existing respiratory disease will increase the severity of the respiratory compromise: Sick horse on, sicker horse off," he stressed.

He explained that confining horses so they can't lower their heads to clear their airways compromises respiratory tract clearance. "Organisms normally present in the throat can then penetrate down into the respiratory system, ultimately causing pleurisy and pneumonia, or so-called 'shipping fever,' "he said. "The longer a horse's head is tied up, the greater the accumulation of bacteria and particulate debris that adversely affect the airways and a horse's immune response."

In addition to the dynamics of each horse's immune capability, the concentration of horses within a van or on a shipping pallet aboard a plane influences horse health. Leadon reported, "Stocking density also plays a role in the development of shipping fever. Reducing the stocking density to the minimum attainable and loosening horses in the transport stall when it is safe to do so, can almost, but not entirely, eliminate the risks of shipping fever."

Transportation stresses can keep your horse from performing at its peak level



Managing the transit environment is key to delivering a horse in good condition



These three variables are within an owner's control to various extents. You can ensure your horse is well or hasn't been sick prior to transport by monitoring him closely and having your veterinarian

perform a health exam just before a trip. If you are hauling the horse yourself, make opportunities en route to unload your horse and allow him 15-20 minutes to lower his head to clear his airways.

Soaking the hay keeps dust and debris to a minimum, but remember that a hanging

hay bag or net should break away easily in the event a horse gets a leg or his face tangled in it.

You can employ other strategies that make a difference in your horse's comfort and health. Opening air vents and windows improves circulation within the trailer and lessens heat and humidity. Window screens allow you to keep manger windows open in transit; if there are only bars and no screens, a fly mask helps protect your horse's eyes from debris. If you do not plan to unload your horse at rest stops, then at the very least park in the shade and open the doors and windows.

Having a thermometer within the trailer during warm weather will give you an idea of the conditions your horse is experiencing. Then you can make adjustments accordingly, such as frequency and length of rest stops or time of day you travel. Whenever possible, haul with a trailer that has an insulated roof, as this keeps the inside cooler.

OVERLAND TRAVEL

Leadon proposes some additional advice that can help minimize illness in your horse during transport: "Horses must be offered water every three to four hours during a journey. The vehicle does not need to be stationary for watering," he said.

You can hang a bucket that holds enough water for a horse to sip without the water sloshing all over the floor. At rest stops, offer a fresh bucket and give the horse several opportunities to drink before assuming he won't.

Leadon also remarked, "I discourage the administration of electrolytes to racing or competition horses traveling by road in temperate climates or in aircraft where the ambient temperature can be controlled. Horses need to drink while they are in transit, and failure to do so can be a valuable indicator of impending shipping fever. Anything that can impact their willingness to drink should be avoided."

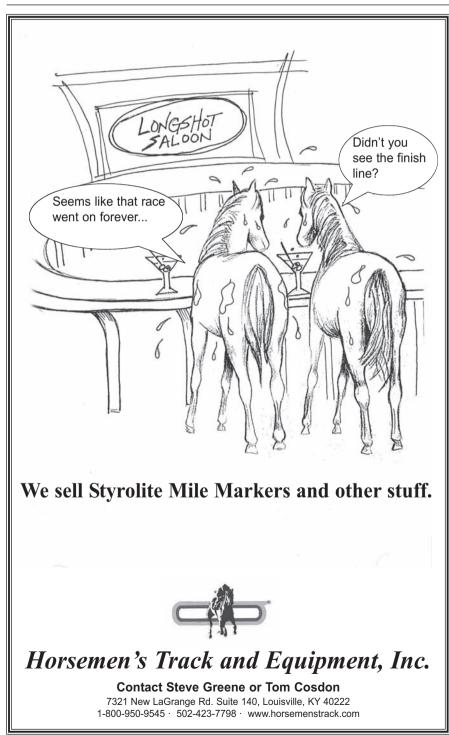
Some horses resist even having electrolytes syringed into their mouths, while others willingly drink from an electrolytelaced bucket of water or happily eat salt added to a bran or feed mash. Moderate- to short-duration journeys in reasonable heat and in humid conditions do not necessitate electrolyte supplementation, particularly if a horse is eating hay along the way.

"Access to hay is of little consequence on short journeys (4-8 hours) for most horses; however, eating can help calm those with temperament issues," he said. "On medium-to-long journeys, upward of eight hours, horses will lose body weight, so they need to eat."

Stopping the vehicle for 15-30 minutes every four to six hours when fueling the truck or making necessary human rest stops also allows the horse's muscles to relax and gives him a respite from the constant balancing act in the trailer. Leadon emphasized, however, "Horses need overnight rest (at least six to eight hours) so they should be taken off the road transport vehicle after each segment of eight to 12 hours of travel."

Even with regular 30-minute rest breaks, a horse does not receive sufficient recovery time if traveling more than eight to 12 hours without a lengthy rest period. This rest can be in the form of an overnight stay or an extended stop during the hottest day-time hours in summer.

Leadon also points out, "It takes eight to 12 hours of untied rest for the horse's



respiratory system to clear inhaled debris and microorganisms." To accomplish this efficiently, it is necessary for a horse to assume a head-down position. In addition, Leadon stressed, "Horses should be monitored with objective observations for three days after a journey, especially if hauled for 12 hours or more."

Objective data include twice daily rectal temperature recordings, and an assessment of appetite, water consumption, urine and manure output, and attitude.

To ensure a proactive approach in the prevention of shipping fever, keep your horse up-to-date on appropriate respiratory viral immunizations and make certain he is healthy before loading him onto a transport vehicle. Have your horse's immunizations done at least two weeks in advance of travel to maximize his immune protection.

PHYSICAL COMFORTS

Horses are often fitted with shipping boots and/or rugs (blankets) while in transit. Leadon has observed, "Horses can get bored or just simply begin to resent the transport environment, especially if the environmental temperature begins to rise. They can then actively resent traveling boots, which can cause bigger problems than the one he is trying to avoid."

Travel in hot weather can be problematic with boots, blankets, or sheets, as any kind of skin covering has the potential to amplify heat stress in a trailer. The best tip is to know your horse, be aware of how he might react in shipping boots, and weigh his behavioral tendencies and travel stability to the duration of the trip, the presence of adjacent horses, and the risk of leaving his legs unwrapped. When possible, place compatible horses next to each other in any travel situation as this is calming for each horse and also helps avoid injuries related to bickering.

"One of the best ways of assessing the comfort, heat, or vibration of any vehicle," Leadon suggested, "is for an owner to travel in its transport compartment with horses on board." Care must be taken to consider the legal statutes in your state as human travel in a trailer is not always permitted.

"Some horses will opt for rear facing if the space allows—not all chose to do so," he stated. "Given that respiratory disease is the principal issue associated with transport, it is difficult to envision that the direction chosen to face makes very much real difference."

That said, it might take less muscular effort for a horse to travel in one direction or the other, and this option to select a preferred direction could lessen overall fatigue and travel stress.

AIR TRAVEL

Traveling by air can introduce many new stimuli to horses all at once. Good horse handlers are critical to maintain a calm environment. In addition, the horses need to be receptive to human handlers. This human-horse interaction should be developed from a young age and reinforced throughout a horse's life. Respect for human handlers makes for smooth loading and unloading, which translates to horse safety.

One well-known transport carrier specializing in equine air travel within North America is H.E. Sutton Forwarding Co., based in Kentucky. Greg Otteson, sales manager for H.E. Sutton, remarked, "When horses are first loaded, they can be apprehensive when exposed to new surroundings. Professional attendants take their time to allow each horse to survey the new

surroundings and to reassure the horse so he feels safe."

Other than the few minutes of takeoff and landing when attendants must be fastened in their seats, Ryan Starley, flight supervisor for H.E. Sutton, commented, "Our experienced handlers tend to each horse as needed for the duration of the flight. We pet the horses and talk to them, which has a calming effect on the nervous ones."

To prepare a horse for air travel, Otteson noted, "It is a good idea to expose a horse to ground shipping prior to the first trip by air."

A fractious horse puts all horses on a plane in danger, so the handlers are acutely aware of a rapid need to defuse the situation. Otteson said, "Patience is usually the







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key. If given time to adapt to their surroundings, most horses will relax, although we do sedate them when necessary." Starley added, "We recommend a veterinarian give a mild sedative before a fractious

horse leaves the stable, before the horse has a chance to get upset; preventive measures are always best. Horses that are too unmanageable will not fly. This is a rare situation, especially with racehorses, as they usually have done more traveling than most people."

An important tip: Know your horse and advise handlers of what to expect so they can take precautions in advance.

To ease individual horse dynamics within the shipping crates, Otteson said staff members separate horses by gender. Starley explained "Stallions are always segregated and completely blocked off from each other. Mares ride with each other in rows of three. When we have mares heavy in foal, we split the stalls into rows of two to give them more space. Mares with foals fly in box stalls or open stalls with their foals."

As with overland travel, air quality during a plane trip is critical to respiratory health. Otteson and Starley say their planes have special air circulation units that constantly move air from the front to the rear, similar to the cabin of a passenger plane. Starley noted, "We try to keep the temperature at or about 55 degrees F. This keeps the horses comfortable and the bacteria count down."

Otteson says some trainers have their veterinarians treat the horses with immune stimulants prior to shipping by air. An important tip: Just as with overland travel, up-to-date viral respiratory immunizations are important to maximize a horse's immune response.

Eating is a good, calming influence on horses at any time. Otteson said horses have access to haynets throughout the flight. "They do not need nutrition on flights, but hay in front of them gives them something to pick at and keeps them occupied," he said.

Handlers offer horses water from each animal's individual bucket throughout the flight, although Otteson reports that most horses won't drink for the first two to three hours. It is recommended that caretakers give a horse anti-ulcer medication while in transit, and supplement electrolytes following a good drink if on lengthy flights.

An important tip: It is always best to maintain a horse's regular routine and diet; make as few changes as possible, especially when traveling.

The duration of most flights within the United States varies by routing, but Otteson reports the popular flight between Cali-

fornia and Kentucky takes 3½ hours, with barn-to-barn travel taking a total of six hours. Starley emphasizes the company's strategy is to synchronize the van trips to and from the airport so the horses arrive at the plane and board right away, then deplane into the van as quickly as possible on the other end.

It's important to pay close attention to horses in the period immediately following transport—this is key to identifying impending problems. Otteson encourages careful monitoring for any changes in appetite or rectal temperature. He also noted, "Bowel movements occur 99% of the time on flights, but when a horse has no droppings in his stall, we alert the trainer to keep a close eye out for colic."

According to Starley, a main health issue following a flight is related to dehydration. "I recommend an electrolyte of some kind be administered after arrival," he said. "The air in the plane is very dry and sometimes a horse won't drink during the flight. Transcontinental flights within the USA are not particularly lengthy, so this is not a major concern.

"We stay with each horse the whole time, so if one appears sick, it is treated according to its situation with a call ahead to a veterinarian to meet us at the airport."

A final important tip: Once your horse has arrived at his destination, it is critical that you observe his demeanor, behavior, and vital signs in the first several days.

TAKE-HOME MESSAGE

To maximize efficiency of equine air transport, Otteson urges owners and trainers to find a professional company with a good reputation and allow them to handle all the details. Question the carrier carefully about detailed protocol of managing your horse en route from pick up to delivery. Advise the professional shipping company about any individual quirks your horse might have or any medical conditions.

Whether by land or by air, have all travel paperwork (Coggins test, health certificate, equine passport, insurance papers, and medical alerts) up-to-date and available with the horse.

When you are hauling your horse yourself, it pays to do your homework in advance—have your truck, trailer, and hitch in tiptop mechanical shape; map out your route and rest stops; identify veterinary clinics en route in case of trouble; bring as much familiar hay and water from home as possible; and know your horse's quirks, anxieties, and compatibility with other horses.

Leadon offered sage advice when transporting horses either by land or by air: "As with all else with horses, each is an individual and needs to be respected and treated as such. Intelligent judgment calls are as important in transport as they are in every other situation with horses."