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Stress: A mentally or emotionally disruptive or upsetting condition occurring in response to adverse external influences and capable of affecting physical health.

Most people do not realize how stressful transportation can be for even the most seasoned traveling equine. The possible affects of stress on horses during transport include colic, diarrhea, laminitis, shipping fever, injury, performance impediment, weight loss, dehydration, disease or even death. Through awareness of the key transport stressors, horse owners and caregivers can alleviate stress levels and the adverse affects.

Transport stressors include:

Changes in temperature, humidity, air quality



Mixing with unfamiliar animals
Confinement in unfamiliar places
Unfamiliar movement underfoot
Climbing and descending
Physical demands
Disrupted feed patterns
Restricted movement
Isolation
Noise
Vibration
Inhalants

Minimizing stress during transport

There are many ways that transporters can minimize stress for their equine travel partner during transport. One of the most critical areas is the environment within the trailer, which when not managed properly contributes greatly to the risk of an animal becoming sick during transport. Shipping fever, a common respiratory disease, is the biggest health issue related to transport. This risk can be managed through proper control of the environment within the trailer and ensuring your horse is in good health before loading them onto the trailer.

The environment within a trailer includes temperature, air quality and humidity levels. Ventilation is the most critical part of the environment and includes the intake and exhaust of air. Fresh air is required to circulate out mold spores, urine / manure fumes and dust. The ventilation must also be designed to prevent exhaust fumes from the towing vehicle from entering the trailer. Poor ventilation will result in poor air quality and overheating. Trailers can heat up quite quickly, even in the winter from the horses' body heat. Keeping airflow moving through the trailer will keep your horses at a comfortable temperature.

The best ventilation is passive and does not result in a gale force draft directly on the horse. The ventilation source should not allow rain into the trailer. It should be located in an area where the vehicle exhaust will not directly enter the trailer. As the number of horses in the trailer increases, the ventilation decreases and ventilation is worse when the trailer is stationary.

Two-way vents are best for airflow. When you want air to flow in, such as during hot weather, the vent directs air in through the opening from the front. Air can also be released to allow for circulation through vents. There has been no research on exactly how much require air inflow is ideal for horses. As a guide, stop after a half hour of travel and see if your horse is sweating and adjust accordingly.

Inside a trailer, a horse will breathe in dust from hay and bedding, vehicle exhaust, road dirt and fumes from their own urine and feces. Noxious gases including ammonia from waste and gases from the fumes of the tow vehicle can also insult the respiratory system. Ventilation must allow for the circulation of air through exhaust of stagnant air and the intake of fresh air.

Climate

Heat or cold stress can affect the welfare of horses during transit. The optimal temperature range for horses is between -10°C to 24°C in the trailer in still air. Within this temperature range, the horse maintains body temperature. As the air temperature falls below -10°C the

horse must divert food energy from production, performance or growth to produce additional heat and maintain body temperature. When the air temperature is approximately 24°C to 32°C it becomes more difficult for the horse to release heat. Maintaining a comfortable air temperature for your horses during transport is not only one of the biggest challenges for transporters, but an area where very little information is available.

Hot Weather Transport

Heat stress is more of a threat to a horse than cold stress. As the temperature in the trailer increases the air quality decreases and the horse begins to overheat – both of these are stressors. A horse that is stressed is more susceptible to heat stress. Temperature inside a trailer is usually 5 – 8 °C greater than outside temperature. Installing a thermometer inside the trailer will allow you to monitor the temperature.

A horse releases heat through respiration and sweating mechanisms. Sweat, respiration and urine will increase the amount of humidity inside a trailer. Before loading, open all doors and vents to air the trailer out and cool it down. If your trailer has fans, turn them on. Avoid travel during the hottest part of the day. If possible travel early in the morning or during the evening. It is highly recommended that you DO NOT blanket a horse during warm weather trips. If you are going to blanket your horse ensure it is light and allows for exhaust from the horse.

If your trailer has screens on the windows, open the windows for the horses. If you only have bars on your window, make sure your horse has a fly mask or something to protect their eyes. If your trailer does not have bars or screens, do not open the window during transport as you do not want your horse to be able to stick their head out the window. If you only open the window partially, ensure your horse cannot get the window open the rest of the way.

Carry ample water for your horse during transport. Hot weather transport will increase the water needs of your horse. Water should be offered every four to five hours. Do not keep the trailer stationary for any extended period of time and try to park in the shade or where a cross breeze can blow into the trailer if you have to park.

Cold Weather Transport

The most important thing you need to remember is that a horse and a human have two different comfort zones. Just because you may be cold, does not mean your horse is. They are equipped to adapt to a variety of climate conditions without putting on or taking off clothes. Their bodies are also equipped to help heat and cool themselves.

Blanket a horse according to their needs. A horse that has a heavy winter coat and lives outside will probably not need a blanket. A horse that has a light hair coat and spends most of the winter inside will need to be blanketed. The more horses in the trailer, the warmer the trailer is going to be. Blanket accordingly. Do not transport a wet horse in cold conditions. The horse should be cooled and dried off before loading as a wet coat will make the horse very susceptible to cold stress. Horses can overheat and sweat in the winter if the trailer is too warm. A sweaty horse is a wet horse.

Check under the horses blanket when you stop to water or inspect the horses during transport. Make sure they are not sweating. Do not close up vents and windows in the winter. Horses still need the circulation of fresh air in the winter. If traveling from a cold climate to a warm climate or vice versa, you will need to adjust blanketing accordingly. If transporting in an open stock trailer with slatted openings, you will want to block off most of the open slats. Ventilation should not blow cold air directly on the horses face. Any open ventilations should not allow rain or snow into the trailer.

[Download a PDF of the Livestock Weather Safety Index.](#)

Contact Jennifer Woods at 403-684-3008 for information on The Horse Hauling Course offered through the Horse Welfare Alliance of Canada www.horsewelfare.ca .