



Veterinary care for horse transportation by air

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Horses are transported worldwide for breeding, competition and trade. Whereas this used to be done by land and sea, more and more horses are transported by air these days. Horse veterinarian and equine flight attendant Anja Dijkstra explains what it entails.

Transport is stressful for horses because they are required to make adjustments in their physiology and behavior to cope with the adverse effects of their environment and management during the journey. These effects are changes in environmental temperature and relative humidity, exposure to environmental contaminants, coping with unfamiliar travelling companions, unfamiliar people, being confined in a small space as well as coping with movements they are not accustomed to including climbing, descending and turbulence. The shifting of their weight to counteract the plane's movement as well as disrupted feeding and drinking patterns and stress make travelling by air exhausting for the horse, even more so if the horse had a long truck ride to get to the airport.

Jet stalls

Horses are mostly transported in jet stalls. A container with partitions to fit 3 horses, with room in front of the horses for grooms to access the horses' heads and for storing water and hay. All the partitions can be adjusted or taken out to enable different compartment sizes, e.g. when travelling two horses instead of three or when more room is necessary for a mare with foal at foot. The horses are loaded through the backdoor and unloaded through the front. There are ventilation rosters on the sides and canvas flaps above the back and front doors can be folded up to improve ventilation.

Grooms

The people looking after the horses on board are equine flight attendants (grooms). Trained in flight safety and in handling (medical) emergencies, they are responsible for the well being of the horses from the moment they are loaded until they are handed over to the veterinary officials at

the destination. The grooms need to be confident to deal with different horses and keep them as calm and comfortable as possible.

Before loading, the driver that delivered the horses to the airport is questioned about the time the horses spent on the truck, if they've had water and if there was any trouble or need for sedation. During loading the horses are assessed and loaded according to a loading plan that can be based on e.g. the sex of the horses or their positions on the truck. Horses that are nervous during loading are watched closely and if necessary, sedation is administered. Usually a small amount (35 – 140 mg = 1-4 doses) of acepromazine (Sedalin™) is enough to take the edge off. Sports horses and stallions get detomidine (Domosedan™), as acepromazine is on the doping list and is contraindicated in stallions.

Sedation

Sedating the horse before the jet stalls go to the platform, gives the sedation time to kick in and the horse some time to settle before being moved again. After being loaded the horses are taken to the platform. The jet stall is rolled onto a high loader, lifted up, pushed on board and fixed in position in the airplane. The lift with the high loader is very noisy and shaky, so the grooms go up in the jet stall with the horses to keep them settled. The grooms stay with the horses during takeoff and landing as well subject to the captain's permission. Most horses take the noise and movement surprisingly well. They adjust their weight and take on a bracing stance, the partitions giving them some support sideways. Nervous horses can be stea`ied if they have someone at their head to distract them and calm them down. For obvious reasons it is better to try and prevent the horse from getting (more) anxious than to have to deal with a fractious horse with the additional risk of the other horses becoming upset.

After takeoff the horses are given a while to adjust to their situation. Usually when the plane reaches cruising altitude and there is no turbulence the horses keep themselves occupied with eating. Every two –three hours (or more often if needed) the grooms check the horses, give them water and refill the hay nets when empty.

Dehydration

Dehydration is a problem for horses just as it is for people when flying, so water must be offered regularly. Not all horses will drink, some are not used to drinking from a bucket, but also strange tasting water or just being stressed because of all the goings on can cause this. Offering water often and long enough and dipping hay in water will sometimes change their minds. If not, a note is made for handover at the destination, so staff can make sure the horse drinks at the quarantine stables or take measures to prevent or treat dehydration.

Medication on board

The grooms have a medkit, they are allowed to perform intramuscular injections and if necessary contact with a veterinarian on the ground can be made for advice and instructions. Most common problem is varying degrees of anxiety. These horses can be sedated with oral acepromazine (Sedalin™), oral detomidine (Domosedan gel™) or intramuscular detomidine (Domosedan injectable). Domosedan™ is also used in horses with colic, in combination with a spasmolytic (Buscopan™), the goal being to keep the horse as calm and pain free as possible until they can be unloaded for examination and further treatment by a veterinarian. Besides Sedalin™,

Domosedan™ and Buscopan™ the medkit also contains some basic wound care products, a thermometer (can be used before loading if horse is suspected to be sick), a penlight and vicks vaporub™ (applied to stallion's nose to distract him and keep him from smelling mares).

Watch the signs

The horses can only be accessed at the head, so taking the horse's temperature is not an option in the jet stall. Evaluating respiration, pulse and mucous membranes is possible and these parameters in combination with the horse's behavior and other signs like excessive sweating, can give a decent indication of how the horse is doing. Elevated respiration rate and pulse as well as sweating can also be due to the horse's circumstance, therefore knowledge, experience and common sense of the groom are extremely important to assess and ensure the horse's wellbeing.

Shipping fever symptoms

Anxiety, colic and wounds are conditions that can happen in any situation. Shipping fever however is a much feared syndrome associated with long distance transport. It is a combination of pneumonia and pleurisy, caused by the stress of travel and the less than ideal circumstances during transport. These circumstances include increased numbers of pathogens in the air due to impaired ventilation, elevated environmental temperature and extreme variations in relative humidity. Combined with the fact that the horses' heads are tied up for a prolonged time and stress in general, this causes increased infection pressure, decreased respiratory clearance and an impaired immune system, which can result in shipping fever. Clinical signs of shipping fever include depression, reluctance to drink, elevated body temperature, increased respiration rate, nasal discharge and other symptoms of respiratory disease. It is important that the grooms recognize the problem and act promptly by allowing the horse to keep his head low and to encourage water uptake. The hay net should be taken out to prevent further respiratory irritation and ventilation should be optimized.

During handover veterinary officials at the destination are informed of any problems and medication use that may have occurred, so they can take appropriate measures. In case of severe problems the captain can radio the information ahead of landing so the affected horse can be taken off the plane and treated as quickly as possible.