Drinkwater

Luthersson et al., 2009: The current study demonstrated that horses without access to water in the paddock were more likely to have both EGUS (equine gastric ulceration syndrome) ≥2 and NG (nonglandular) ≥2. In the study population, 26% of the horses did not have water available in the paddock demonstrating that a simple intervention to make water available could have had a significant impact on the total number of horses with EGUS in this group.

Binnen 1 uur na training toegang tot drinkwater
Caanitz et al., 1991: The effect of short periods of strenuous exertion, in this case treadmill exercise, on the subsequent behavior of Standardbred horses was examined. The time spent drinking increased significantly immediately after exercise, presumably in order to compensate for fluid loss in sweat. One of the physiological changes accompanying exercise is hypovolemia as reflected in an increase in plasma protein (Carlson, 1987). Horses have already been shown to drink in response to hypovolemia whether caused by simple water deprivation or by administration of the diuretic furosemide (Sufit et al., 1985), so it is not surprising that they drink in response to exercise-induced hypovolemia. In conclusion, exercise affects the behavior of horses, particularly in the first hour or two after exercise. The horses spend more time drinking and less time resting. These changes in behavior are probably responses to the fluid loss and catecholamine release, respectively, that occur during exercise.

Davidson & Harris, 2002: There are large fluid movements associated with food digestion. Chewing and consequent salivation result in fluid being drawn from the circulating blood. In horses that chew slowly this fluid can easily be compensated for but in the avaricious feeders the changes in the circulating plasma can be fairly marked and equivalent to those found with dehydration. Restoration may take up to a few hours. This is one of the reasons why encouraging a moderate intake rate is desirable and also why exercising horses soon after a large meal may not be ideal. More than 100 litres of fluid may be secreted into the pre-caecal section of the gastrointestinal tract per day in a typical 500 kg horse. In addition, in discrete meal-fed horses large volumes of fluid are initially secreted into the hind gut as the chyme from the small intestine reaches there, followed by a period of resorption. In horses fed in a more natural way, *i.e.* as trickle feeders, the fluid shifts are much less marked in the hindgut and there are also far less marked fluctuations in the hind gut microflora. The horse relies heavily on sweating for thermoregulation in high temperatures and during exercise and unwanted nitrogen has to be removed as urea in the urine, which also requires water. These together with the large fluid secretions into the gastrointestinal tract help to explain why a constant supply of clean water is essential for the horse.

Evans, 2002: Unless the losses of water and electrolytes are replaced, horses will become dehydrated and develop electrolyte imbalances. These responses decrease performance, and depress the horse's thirst. Dehydrated horses are also less able to efficiently regulate their body temperature and are more likely to develop severe, life threatening hyperthermia (Geor & McCutcheon, 1998). Electrolyte losses contribute to development of 'thumps' (synchronous diaphragmatic flutter), muscle cramping, and 'tying-up' (exertional myopathy). Severe dehydration and electrolyte losses cause exhausted horse syndrome.

Minimum elke 4 uur toegang tot water

Luthersson et al., 2009: The current study demonstrated that horses without access to water in the paddock were more likely to have both EGUS ≥2 and NG ≥2. Interestingly, the number of hours spent without water in the paddock was not a significant factor. This may be because this study did not have sufficient statistical power to detect subtle differences between groups that were without water for differing periods. However, it may also be the case that the likelihood of EGUS is increased when a horse is deprived of water for a relatively short period (approximately 4 h) and that the risk does not increase as the period without water increases past this initial short period.

Marshall, 2004: *not a peer-reviewed paper*: A horse's stomach is small, holding just 2 to 3 gallons of food or water. Horses need 8 to 10 gallons of water per day—a need that increases with exercise, heat or lactation to as much as 18 to 24 gallons per day. You don't have to be a math whiz—a working horse, a lactating mare or a horse living in a hot environment cannot fit enough water into its stomach at one or two drinking opportunities. Horses can only drink less times a day if they are trained to do so (feral horses).

Sweeting and Houpt, 1987: Shetland ponies drank 3 (+-1) times per hour.

Bij ruwvoer altijd toegang tot water
Norris et al., 2012: (24 hour deprivation methods) The most dramatic effect of the different deprivation conditions was the marked rise of plasma osmolality when food was consumed during the water deprivation period. This indicates that the primary stimulus to drinking during water deprivation with food available was the rise in osmolality. The changes in these experiments approximate the rise of plasma osmolality needed to stimulate drinking, as has been reported for the pony (Sufit et al., 1985). (Effectiveness as a thirst stimulus of cellular dehydration due to the rise of osmolality).

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