



Dehydration

Dehydration is a condition in the horse where there is an inadequate amount of fluid in the body and/or unbalanced or insufficient levels of electrolytes in the fluid. Clinical dehydration occurs when a horse has lost 5% of its body fluid through excessive sweating, acute diarrhoea, electrolyte losses or inadequate intake of drinking water. A deficit of 1% in body fluids can reduce performance.

Water is a critical nutrient for life and is needed by the body for normal functioning. The water content of a horse is between 68-72% of body weight on a fat free basis. A spelling horse in a mild climate requires 5 litres of water per 100kg BW per day. An adequate intake of clean water is needed for normal digestion and absorption of digested feed and in maintaining normal blood volume in the body. Water is also vital for the normal function of sweat glands and maintaining normal body temperature. Horses should always have access to clean, fresh water at all times so they can self adjust their intake according to need. Water is lost from the body in faeces, urine, sweat, exhaled breath and milk in the lactating mare.

Electrolytes are sodium, potassium and chloride ions that circulate in the blood to all the tissues of the body and are vital for normal cellular function. They are required as macro minerals and are required on a daily basis in the diet as they are not stored in the body.

Heat related dehydration

The main way a horse loses excessive body heat is through sweating. Horses have a high muscle to body weight ratio and a low skin surface area to body ratio compared to people. This means they build up heat more quickly during exercise or in hot weather and take longer to lose heat and cool themselves. Horse

sweat also contains significant amounts of electrolytes, they can lose up to twenty litres of fluid in one hour of sweating.

Water intake dehydration

Cold weather can interfere with a horse's thirst mechanism and can result in dehydration due to insufficient intake.

A high water intake with the absence of sufficient electrolytes will dilute the electrolytes still circulating and result in the kidneys excreting more water and taking more electrolytes with the water. Unless adequate amounts of electrolytes are supplied through food or water the horse will become severely ill or even die from the imbalance in its body of water and electrolytes.

Mild dehydration will result in reduced performance, weight loss, reduced feed consumption, colic and constipation. More severe dehydration can cause thumps, exhausted horse syndrome and tying up. While a skin pinch test will give a rough guide to a horse's status regarding dehydration, a blood test will give an accurate result of how dehydrated a horse is. Treatment is aimed at restoring normal fluid and electrolyte levels and should be done under veterinary supervision. A management protocol should then be put in place to prevent it occurring again.

Dehydration is not limited to hot weather and for horses in hard work, daily electrolyte supplementation is the best preventative measure and is recommended for all horses and ponies at all times. Equilibrium and Lexvet supplements are ideal for all equines and contain the macro and trace minerals required by horses as well as vitamins and electrolytes for good health and performance. The dose per day varies according to size, workload and whether a mare is pregnant or lactating.

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