TOWNSVILLE VETERINARY CLINIC AND NORTH QUEENSLAND SPECIALIST EQUINE SERVICE



## Dehydration and successful rehydration of your horse.



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With summer upon us the importance of preventing dehydration of your horse cannot be over emphasized. Increasing ambient temperatures results in increased body temperature, increased water and electrolyte loss and reduced performance. Fluid losses of as little as 1% body weight can reduce performance. Sweat contains water and electrolytes, especially sodium, chloride, calcium and potassium. Electrolyte loss can lead to metabolic disturbances such as 'thumps', 'exhausted horse syndrome' and 'tying up'. In endurance type events, studies have shown horses that have been allowed access to water right up to competition perform better that those denied free access to water. Fluid loading (e.g. 6 litres via stomach tube) prior to exercise doesn't appear to improve performance but it may improve post exercise recovery. Dosing with concentrated electrolyte or salt pastes prior to or during exercise is of little benefit and may result in abnormally high levels of electrolytes in the blood. So concentrated pastes should be avoided unless given in conjunction with water. Horses are less likely to drink water containing electrolytes before exercise unless accustomed to it, but they are more likely to drink electrolyte-glucose water after exercise than plain water. So, encourage your horse to drink electrolyte-water by offering it prior to the event. In some horses administration by stomach tube may be the only way to replace fluid losses quickly and efficiently. Voluntary fluid intake after exercise is higher if offered isotonic or slightly hypotonic water at 20-30 degrees Celsius. A common misconception is not to let horses drink water immediately after exercise for fear of colic. Once a horse has re-gained its breath it will generally drink no more than its stomach capacity will allow, meaning the feeling of fullness will ultimately limit fluid intake. Offering cold water < 10-15 degrees Celsius is more likely to result in discomfort, reduced water intake and prolonged recovery. In most horses a stomach full of fluid will empty within 15-30 minutes. This means you can safely offer the average horse repeated volumes of 5-10 litres soon after exercise without a problem. Isotonic fluid means fluid with the same levels of electrolytes as that in blood, hypotonic fluid has slightly less electrolyte levels while hypertonic fluid contains more electrolytes than blood. Horses prefer isotonic or slightly hypotonic fluid over hypertonic fluids. Rehydration or fluid absorption from the gut into the blood and tissues is more rapid with isotonic and hypotonic fluids. The addition of glucose does not improve fluid uptake in horses (unlike humans) but it does improve palatability and provides a source of energy. A simple oral rehydration fluid can be made for your horse by adding 1 heaped table spoon each of salt (sodium chloride) and potassium chloride and 4 table spoons of sugar per 5 litres of water. A horse may lose up to 5-10 % of its body weight during intense exercise meaning a 500 kg horse may require 50 litres just to replace fluid lost during exercise in addition to approximately 20 litres it would normally drink in a 12 hour period. If you have access to scales then it is useful to know your horse's body weight before and after exercise. The weight loss after exercise is an estimate of the fluid lost during activity and therefore the volume of fluid required to rehydrate your horse - it may be more than you realise!