

NO. QRIC/2017/3830 v1.01  
LAST UPDATED – 26.08.19

## Preventing and Treating Heat Stress in Horses

### What is Heat Stress?

Horses possess an effective cooling mechanism, which relies to a large extent on the evaporation of sweat from the skin. As sweat and water molecules evaporate from the skin these molecules absorb and remove body heat causing the horse to cool.

Occasionally, when there is an imbalance in the amount of body heat generated and heat able to be lost to the environment, a small proportion of horses show signs of heat stress or metabolic heat syndrome. Heat stress after exercise is most likely to be seen on days when both ambient temperature and relative humidity are high, and wind speed is low. These conditions favour build-up of body heat and reduce shedding of body heat to the environment.

A horse's susceptibility to heat stress is not influenced solely by prevailing weather conditions. Other risk factors for horses include:

- Travelling long distances prior to competition
- Withholding drinking water prior to racing (this is not a recommended practice in hot weather)
- Horses with an excitable temperament
- Horses not acclimatised to local weather conditions
- Horses that are first starters, resuming from a spell, or early in their training program
- Horses that sweat excessively, or do not sweat adequately ("dry-coated")

### Signs of Heat Stress

Signs of heat stress include:

- Rapid shallow breathing (panting) with flared nostrils
- Staggering gait / weakness
- Agitated and distressed appearance
- Impulsive kicking with hind limbs or striking out with front limbs
- Occasionally collapse

### Health Implications

If heat stress is not recognised and treated early, and aggressively, horses can become aggressive and present a hazard to themselves and the people around them. Prolonged episodes of heat stress can lead to permanent tissue damage, however following appropriate cooling treatment, horses generally return to full health and successful training and racing.

## Preventing Heat Stress

Recognising and preventing the aforementioned risk factors and appropriate conditioning of race horses can minimise the risk of heat stress occurring. Pre-emptive action including cooling horses before and after exercise is recommended.

## Treating Heat Stress

Appropriate treatment for heat stress includes:

- Repeated application of cool water to the entire body of the horse, followed by scraping of excess water from the horse. The use of 'chiller bins' has proven to be an effective method to apply large volume of cooled water to a hot horse and reduce its body temperature rapidly.
- Walking the horse in a breezy, shaded area between bouts of hosing.
- Use of ice-water soaked towels applied to the horse's body and changed frequently as towels heat up.
- Use of air-conditioned stall if available
- Use of forced ventilation if available
- Oral and/or intravenous fluid therapy if indicated
- Corticosteroid anti-inflammatory treatment if indicated
- Sedative drugs if indicated

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