

RACECOURSE GUIDANCE DOCUMENTS

VETERINARY ADVICE NOTE

**PREVENTION AND TREATMENT OF HEAT RELATED
PROBLEMS IN HORSES**

1. Background

Horses can be seriously affected by extremes of heat and humidity after significant exertion. This guidance is intended to explain steps which racecourses and others can take to prevent and treat heat related problems in horses.

Heat related problems in horses arise mainly during the Summer period, although it is not restricted to these meetings as problems can arise when temperatures rise unseasonably. The recommendations in this document include those identified as part of the Summer Jumping Review, from experience from racing and other equine sports in Great Britain and elsewhere as methods which could be employed to prevent racehorses suffering heat stroke or heat exhaustion.

2. Ambient Temperature Monitoring

Full details of horse physiology, risk factors and legal considerations are included in Annex A to this document for information.

The key issue which racecourses should be aware of is that the normal body temperature for a horse is 37.5-38°C. Once ambient temperatures begin to approach this level, especially when humidity is also high, horses become more susceptible to heat related problems. Therefore, it is recommended that once ambient temperatures move towards 30°C racecourses take action to put preventive and treatment measures in place, and that if temperatures exceed 35°C a review is held to determine whether, for horse welfare reasons, the race meeting should proceed. The procedures outlined in BHA Officials Procedure 2.4 could be used to facilitate this review, during which the following factors should be assessed:

- Time of Day
- Race Programme
- Temperature on the racecourse
- Temperature in the parade ring
- Temperature in the racecourse stables
- Level of wind/breeze and its effect on the temperature
- Humidity

3. Prevention - Racecourses

Outlined below are a number of actions which can be taken by racecourses with the aim of preventing heat related problems in racehorses where racing takes place during hot or unseasonably warm weather conditions.

- Where possible (fixture list allowing) courses should work together with the BHA regarding Race Planning issues, particularly the avoidance of long distance races during hottest time of day, limiting races to shorter distances and where possible holding Summer Jumping meetings in the evening during July and August
- Reduction of the maximum weight range.
- Measure ambient temperatures regularly in the stables, pre-parade ring, parade ring and winners enclosure.
- Include extreme temperatures in Going Reports to promote trainer awareness, to help them consider dehydration and rehydration issues
- Make access to the stables available earlier in the day or the night before to allow trainers to travel horses at cooler times of the day and advertise this.
- Provide facilities for horses to be washed down on arrival and before the start during very hot weather
- If possible, provide shaded areas for cooling off before and after racing. If no natural shade is available consider erecting a 'tented' roof with no sides.
- Identify key locations where water may need to be available for cooling horses – these may include, but are not limited to:
 - ❖ Stables
 - ❖ The pull up area
 - ❖ Where the horses leave the track
 - ❖ The unsaddling enclosure/area
 - ❖ The Winners Enclosure
 - ❖ Parade Ring
- Provide easy access to copious amounts of water in large troughs, with buckets, sponges and scrapers adjacent, and ability to rapidly refill, in all horse areas. Consider use of ice (place in troughs) and fans to assist cooling.
- A mobile bulk supply of water should be available for use or top up where needed.

Racecourses should consider that where temperatures may be hot enough to cause heat related problems for horses, they may also be causing difficulties for members of stable staff. Therefore, they may wish to make drinking water available to stable staff whilst in the stables, pre-parade and parade rings.

4. Prevention – Other Bodies/Persons

In addition to action taken by the racecourses with the aim of preventing heat related problems in racehorses, there are also actions which others within the Industry can take, as are outline below. The Clerk of the Course, their Racecourse Veterinary

Surgeons, the BHA Veterinary Officers and the Stewards should be aware of risk factors, monitor for their occurrence, and take preventative action. If required they should work together to ensure all participants as below, are briefed verbally using the guidance below and by using and adapting the notice in Annex B.

BHA Actions

- Veterinary Officers should review their raceday data for horses whom have suffered previous problems with heat.
- The Veterinary Officer should work with the Clerk of the Course to closely observe horses in the winners enclosure and the flexibility with the official “horses away” announcement should be utilised

Trainer and Trainer Staff Actions

- Have drinking water available at all times on transport and at the course before racing.
- Consider earlier travel, and thus earlier arrival at the course, or travel the evening before.
- Take the temperature of the horse on arrival.
- Hold horses in the shade outside the boxes.
- Cool horses on arrival, before and after racing to help reduce the impact of heat
- Ensure enough staff are available to provide extra help.
- Do not withdraw water before racing. Dehydrated horses are more prone to heat stress.
- Horses lose large quantities of electrolytes when sweating. A reservoir of electrolytes is not stored in the body but these are available from a balanced diet. It is not necessary to administer extra electrolytes before racing. Post race, replacement electrolyte therapy may be applicable to heavily sweating horses. This should not be administered in water. Inform Veterinary Staff if the horse has had previous problems with heat.
- Apply plentiful amounts of water in unsaddling/winners enclosures.
- Remove/scrape off any excess water after each application after allowing the water to absorb heat for around 30 seconds.
- After applying water walk the horse in a breezy, shaded area
- Keep the horse standing to facilitate cooling.
- Ensure the horse has access to water to satisfy its thirst after the race
- Do not apply any sheets or rugs
- Do not use chemical cooling rugs.
- Ensure Veterinary Staff are informed as soon as possible of concerns that the horse is not normal. Speed is vital to treatment of heat related problems in horses.
- Signs to watch out for include increased temperature (40°C – beware rectal temperature may not reflect core temperature), a shallow, panting respiration, congested appearance of the gums, an anxious look, a rhythmic beating of the diaphragm (the "thumps"), extreme exhaustion and sometimes staggering and weakness.

Jockey Actions

- Jockeys are very aware of the condition of their horses. If they have any concerns that all is not normal before, during or after a race they must take immediate action.
- They may be advised before the race, or instructed after the race to dismount and may also be asked to remove the saddle.
- Ensure Veterinary Staff are informed as soon as possible of concerns that the horse is not normal. Speed is vital to treatment of heat related problems in horses.

5. Treatment

Where horses do suffer heat related problems, the Clerk of the Course and their Racecourse Veterinary Surgeons should ensure horses are treated as follows:

- A plentiful supply of iced or cold water must be available at key locations along with mobile water supplies to be deployed around the course as required (as identified in Section 3 above). These supplies should be used immediately when heat related problems are suspected. Racecourses should provide mobile water supplies to be deployed around the course as required during racing.
- Alternate pouring water onto the horse, especially over shoulders and quarters, and scraping this off after 30 seconds, with periods of walking in the shade. Cool for 30 seconds and then walk for 30 seconds before repeating the process.
- Keep the horse standing to facilitate cooling.
- Offer cool water to drink
- If screens are deployed, these should not block or restrict the movement of air around the horse. Screens may be used to funnel air towards the horse.
- Cold water or iced water soaked cooling rugs may be useful.
- DO NOT use chemical cooling rugs.
- *DO NOT* place wet towels on head, neck/quarters.
- *DO NOT* hold ice packs on head/neck etc. but ice packs applied to the jugular vein may be beneficial.
- *DO NOT* apply any sheets, including sponsors sheets, until it is clear the horse is not at risk.
- If the Racecourse Veterinary Surgeons administer any drugs to horses to help combat heat related problems, they must inform the BHA Veterinary Officer as soon as possible, in case it is being tested, as well as complete a Veterinary Treatment Form.

HORSE PHYSIOLOGY – FURTHER INFORMATION

Horse Physiology

The normal body temperature for a horse is approximately 37.5-38°C. Increases in a horse's temperature are usually as a result of exercise rather than ambient temperature – therefore, in hot weather horses may not experience problems with the heat until they have exercised. In addition, horses have relatively little surface area through which they can lose heat.

The most important way horses lose heat is through evaporation (sweating) or breathing, but this process can be affected by external temperature and humidity.

A horse's sweat or pouring cold water on a hot horse are beneficial as they assist in the evaporation process, but these benefits can be lost if they are scraped off too quickly. Therefore it is recommended that water should be poured onto the horse and then allowed to heat for around 30 seconds before being scraped off. Wind and fans can also help to increase evaporative heat loss.

When the ambient temperature exceeds skin temperature (greater than 37-38°C) horses gain heat from the environment. If humidity is also high (greater than 70%) horses cannot also lose heat easily from evaporative cooling. Fitter horses have a greater ability to tolerate extremes of heat and humidity than less fit horses. During warmer weather horses start to acclimatise within 3-5 days, and will be fully acclimatised in around two weeks, if exercised during this period. Once temperatures fall, their acclimatisation diminishes rapidly.

Risk Factors

Risk factors which may cause a horse to be affected by heat related problems can include the race distance and type as well as the geographical location of racecourse – heat problems are less common in those courses to the extreme north or south or those near sea breezes.

Heat related problems are more common in summer months, but can occur at any time of year. Dehydration can impair heat loss and is magnified by exercise which in turn could impair performance. Factors that can adversely affect the hydration status of a horse and therefore its ability to withstand the rigours of racing in hot weather include travelling long distances to the racecourse, an excitable temperament, heavy sweating, and the withholding of water prior to racing on the day of the race

Legal Considerations

Section 9 of the Animal Welfare Act states that those responsible for animals (individuals and corporate bodies: trainers, racecourses, jockeys, the BHA) have a duty of care to take reasonable steps to avoid unnecessary suffering by meeting the needs of the horse including for a suitable environment, water, and be protected from pain, suffering, injury and disease.



Annex B

PREVENTION AND TREATMENT OF OVER-HEATING IN HORSES

The British Horseracing Authority (BHA) advises trainers their staff and jockeys that tack blinkers, and the use of rugs or sheets in the immediate post-race period significantly reduce the horse's ability to cool, and can contribute to over-heating and more serious heat stress.

In addition prevention before racing is important in very hot weather.

For these reasons:

**IN WARM, HOT, HUMID OR STILL CONDITIONS OR, IF REQUESTED BY A
RACECOURSE VETERINARY SURGEON OR BHA VETERINARY STAFF,
PLEASE:**

**ENSURE DRINKING WATER IS AVAILABLE AT ALL TIMES; CONSIDER
COOLING WITH WATER ON ARRIVAL, BEFORE AND AFTER RACING;
DISMOUNT AND REMOVE SADDLES AS SOON AS POSSIBLE AFTER THE
RACE;**

**REMOVE BLINKERS ETC IMMEDIATELY AFTER THE RACE;
DO NOT USE RUGS OR SHEETS WHEN WALKING BACK TO, OR WITHIN,
THE UNSADDLING AREA;**

APPLY LARGE AMOUNTS OF COLD WATER AS SOON AS POSSIBLE.

**IF YOU ARE CONCERNED ALERT VETERINARY STAFF AS
SOON AS POSSIBLE**

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For further information please contact the Equine Science & Welfare Department: 020 7 152 0090

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