



Racing New South Wales

**RACING IN
HOT WEATHER
POLICY**

Approved and Endorsed by Racing NSW Board – December 2018

RACING NSW

RACING IN HOT WEATHER – OFFICIAL POLICY

HORSES AND RIDERS

This policy is in place to protect the welfare of and minimize the effects on race participants during hot summer days at all New South Wales race tracks.

HORSE POLICY

Exercise induced heat stress is occasionally seen after horses race in hot and/or humid weather. Most horses easily adjust to conditions of high heat and humidity. In general, thoroughbred races are conducted over relatively short distances, so maximal exertion in the heat only occurs for a short period. The amount of heat and generated body water lost is minimal compared to other endurance horse sports.

Heat stress after exercise is most likely to be seen on days when both the ambient temperature and relative humidity are high, and wind speeds are low or absent (conditions of high environmental thermal load).

Horses cool themselves efficiently by evaporative cooling. As sweat and water molecules evaporate from the skin these molecules absorb and remove body heat causing the horse to cool. If ambient temperature and humidity are both high this will slow the rate of transfer of heat from the horse's body into the environment and cooling will be delayed, increasing the risk of heat stress.

The Australian Bureau of Meteorology (BOM) is able to provide information on thermal comfort and heat stress indicators on a regional basis through its website, in the form of web bulb global temperature or WBGT. True WBGT takes into account temperature, humidity, wind speed and solar radiation. However, the Bureau can only provide a calculated WBGT measurement which does not take into account wind speed and solar radiation. Nevertheless, the Stewards, with the aid of the Veterinary Department, are able to access this information from the BOM website as it is updated during the day, and therefore able to monitor for the possibility of adverse conditions for racing in hot weather.

Heat stress is most likely to occur on days when the ambient temperature is 35°C or above, or when the "WBGT shade" is 26°C or above.

It is the responsibility of the Chairman of Stewards acting at any race meeting to obtain the forecast conditions and monitor the NSW Thermal Comfort Observations as provided on the Bureau of Meteorology website (<http://www.bom.gov.au/products/IDN65179.shtml>) during the meeting.

Signs of heat stress include:

- rapid shallow breathing (panting)
- flared nostrils
- staggering gait/weakness
- agitated and distressed appearance
- irrational behaviour such as lashing out with hind limbs
- occasionally collapse

NSW has a generally temperate climate where horses can easily become acclimatised to the heat and humidity of summer. There are occasionally a few days in summer that give rise to high environmental thermal loads, and the possibility of the occurrence of heat stress must be considered on these days. However, signs of heat stress can occasionally be seen during the cooler months, especially in spring when the days can be quite warm, but horses might still be carrying a winter coat, are trained in the cooler hours of the morning, and have not yet acclimatised to warmer daytime temperatures.

The susceptibility of an animal to heat stress does not solely seem to be influenced by temperature. Certain factors can adversely affect an individual horse's ability to withstand racing in hot weather including:

- travelling long distances prior to competition
- an excitable temperament
- younger horses may be less acclimatised to heat
- heavy sweating
- withholding drinking water on the day of racing (this is not a recommended practice in hot weather)

In the event a trainer being concerned at the manner in which any horse is coping with the prevailing conditions before its race (i.e. agitation, panting and/or excessive sweating) an approach should be made to the Stewards seeking to withdraw the horse whereby the Stewards may seek the opinion of the official veterinarian before considering such application.

MEASUREMENT OF RISK

Measurement in Degrees Celsius by a Dry Bulb thermometer

The measurement in degrees Celsius that we see in weather reports is simply air temperature, measured by a Dry Bulb thermometer. It does not provide a basis for assessing the potential risks from heat exposure.

Effective Temperature using a Wet Bulb thermometer

The combined effects of temperature, humidity and air movement can be described on a single scale. This is the Effective Temperature. Effective Temperature is calculated using a Wet Bulb thermometer (one whose bulb is cooled by evaporation).

Level 1 Policy:

This policy will apply on all race days where the forecast or current ambient temperature is 35°C or above, or the WBGT shade is 26°C or above.

- Where possible program distance races in the anticipated coolest part of the day
- Where possible horses should be stabled out of the sun and in areas that are breezy
- Ensure adequate wash bays and hoses are available to enable rapid post race cooling of horses
- Employing the use of ice water machines to aid recovery of horses
- Ensure adequate horse drinking water is available
- Race club officials should be informed to have ice, water, scrapers and extra hoses available. Race club staff should provide large bins at the hose bays and ensure these are continually stocked with bags of ice and water to assist in the cooling of horses
- Ensure the swabbing stall is as cool as possible - i.e. by hosing the roof, allowing adequate ventilation and providing fans/air-conditioning
- Consideration be given to employing an additional official veterinarian to patrol the stable area and monitor recovering horses
- Stewards will minimise the time that horses are required to parade or be held in mounting enclosures both pre- and post-race or behind the starting barriers
- Trainers should consider adjusting their arrival time to allow sufficient time to cool the horse, prior to the race.

Evaporative cooling, particularly sweating, is the most important means of dissipation of body heat for the exercising horse. The liberal application of cold water in shaded, well ventilated places will greatly assist the processes which enables horses to lose excessive body heat on hot days.

Using the evaporation principle it is possible to assist horses to cool after racing in hot weather:

- **“Wet, Scrape and Walk”** – as water evaporates from the skin surface it removes body heat causing the horse to cool. The evaporation rate improves if horses are frequently hosed, excess water scraped from the coat and then walked in shaded, breezy areas
- Horses may need to be hosed and scraped several times in between walks
- Bucketing ice cold water over the horse may assist in the recovering of a heat affected horses but is not considered mandatory
- Horses should be allowed to drink as much fresh, clean water of ambient temperature as they require after racing
- Horses must be allowed sufficient time to adequately cool down before being floated back to their stables

The official race day veterinarians will scrutinise all horses –

- In the race day stall area prior to presentation in the mounting yard
- Presented in the enclosure pre-race

- On arrival at the barriers
- On return to the enclosure post-race
- While detained in the swabbing area (either pre or post-race)

If the official veterinarian is concerned about a horse's condition pre-race, they shall immediately report their concerns to the Stewards.

Any horse found to be exhibiting signs of heat stress will be given appropriate treatment.

Appropriate treatment shall include –

- Repeated application of cool water to the entire body of the horse, followed by scraping excess water from the horse,
- Positioning of the horse in a cool shaded location, preferably with access to breeze or air flow,
- Walking the horse slowly in a breezy area between bouts of hosing,
- Oral and/or intravenous fluid therapy if indicated,
- Corticosteroid anti-inflammatory treatment if considered indicated or if there is a slow response to physical cooling.

The official veterinarian should have an adequate supply of relevant treatments on hand for emergency use.

Race clubs must ensure adequate running water is immediately available to thoroughly and repeatedly wet affected animals in order to maximize conductive/evaporative cooling. An adequate number of hoses should be provided for this purpose in the mounting enclosure and the race day stalls by the Club conducting the meeting. They must ensure all relevant hoses are connected, have adequate water pressure, and are manned by experienced personnel in the mounting yard. Clubs should consider the use of fans in areas that may assist the recovery of the horses post race.

Level 2 Policy:

In the event that the forecast or current ambient temperature for a race day is 38°C or above, or the WBGT shade is 28°C or above, Stewards must take advice from the official veterinarian/s in considering whether to proceed or modify the program for that race meeting.

Modification of a race program might include the advancement or delay in a schedule if it appears likely the extreme conditions might ease or be avoided.

Should the **Stewards** determine to continue the racing program, in addition to the measures listed in the Level 1 policy, they may instruct that –

- An additional official veterinarian be provided
- Additional equipment be provided by the race club to assist the comfort of horses
- An official veterinarian be available post race at a position for riders to report concerns regarding a horse

- Riders, if they become concerned at the condition of their mount post-race, proceed to the official veterinarian position on the track
- A specific air-conditioned stall be set aside for recovery purposes
- Pre and post race parades be abandoned and the period horses are required behind the barrier minimised

The **official veterinarian/s** will, in addition to duties described in the Level 1 policy, scrutinise all horses –

- Upon arrival on course – in particular, horses identified as travelling in excess of one hour to attend the meeting. Any horse observed to be showing signs of discomfort pre-race as a result of the hot conditions should have its rectal temperature measured. If a horse is observed with an elevated rectal temperature pre-race (e.g. in excess of 38.5°C), or visibly distressed, should be monitored and consideration be given regarding its suitability to race.
- Detained in the swabbing area (either pre or post-race) to monitor horses that are sweating excessively or appearing distressed during the sampling procedure.
- Immediately post-race, in particular for any horse where its rider becomes concerned about its condition.
- Subsequent to the race, to ensure all horses have recovered appropriately to permit travel. No horse may leave the course without the approval of the official veterinarian.

RIDER POLICY

In any sporting activity, heat stress increases with increasing air temperature. This is most strongly reflected by increased discomfort, but also by increased sweating. Stress also increases with rising absolute humidity which impairs sweat evaporation.

Vigorous exercise in sport places participants at risk of heat illness which in hot and humid weather is greater because;

- During high intensity exercise in hot weather people may not be able to produce enough sweat for adequate cooling
- High humidity may prevent adequate evaporation of sweat

Extra caution also needs to be taken during unseasonal heat waves or unusually hot or humid weather whereby participants lack acclimatization.

MEASUREMENT OF RISK

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Effective Temperature using a Wet Bulb thermometer

The combined effects of temperature, humidity and air movement can be described on a single scale. This is the Effective Temperature. Effective Temperature is calculated using a Wet Bulb thermometer (one whose bulb is cooled by evaporation).

Level 1 Policy:

This policy will apply all days where the forecast temperature is 35°C (ambient temperature) or 26°C (WBGT) “shade” or above.

Race-clubs:

1. Jockeys room should be air-conditioned or at least have good ventilation and fans which provide evaporative cooling through air flow
2. An ample supply of fluids including ice, cool water and sports drinks be available in jockeys room
3. Cool water to be available to riders behind the barriers
4. Whenever possible a Medical Doctor or trained medical/first-aid person on-course be available to monitor the condition of riders
5. Ensure ample water is available in the jockeys room showers
6. Turn off heating elements in spas

Stewards:

1. Obtain the forecast conditions and monitor Thermal Comfort Observation as provided on the Bureau of Meteorology (<http://www.bom.gov.au/products/idnb5179.shtml>) during the race meeting
2. Ensure that the protocols for racing in the hot weather as required of the race-clubs are in place before the commencement of racing
3. Minimize the time that the riders are required to be away from the jockeys room and in the direct sun light by shortening the pre and post race parades of horses and the period horses are behind the starting barriers
4. Discretionary checking of jockeys who have riding engagements at low weights looking for general symptoms of fatigue, nausea, dizziness and irritability. Alert medical attendants to review any jockey where there is a concern

Riders:

1. Ensure that riding engagements agreed to do not extend to weights below the jockey's minimum riding weight
2. Proper weight management in the days leading up to a race meeting with the avoidance of using home saunas or spas on the day of racing
3. Do not take extreme “last minute” measures which will result in the rider being unduly dehydrated or whereby use of the raceday spa is needed to meet weight requirements
4. If feeling unwell or experiencing dizziness or undue dehydration advise the Stewards who will arrange medical attention
5. Between rides reduce their core temperature by sponging with cold water or cold showering. There are a number of cooling garments and cold packs that are commercially available for jockeys that can be applied between races
6. Maintain a regular fluid intake during the race meeting to replace fluid losses from excessive sweating. Appropriate fluids include water, and sports drink preparations with electrolyte additive. The partaking of soft drinks containing sugar or caffeine based energy drinks are to be avoided as they will further add to dehydration through their natural diuretic effects.

Level 2 Policy:

This policy will apply to all days that the forecast temperature is 38°C (ambient temperature) or 28°C (WBGT shade) or above and are in addition to the measures listed in Level 1 of this policy.

Stewards:

1. Will consider at this point whether abandonment or modification of a race meeting is advisable and will continue to closely monitor conditions throughout the course of the day. Modifications of a race program might include the postponement, advancement or delay in a schedule if it appears likely the extreme conditions might ease or be avoided
2. Contact the race-club at the earliest appropriate time prior to the race meeting to ascertain whether a doctor or suitably trained medical/first-aid person is available to monitor the welfare of riders with such person to be stationed in or close to the jockeys room
3. Take all measures to restrict to a minimum the time a rider is required to be out of the jockeys room and in the direct sunlight by abandoning pre and post-race parades of horses and restrict to a minimum the period horses are held behind the starting barrier
4. If a rider is dehydrated during the course of a raceday and particularly if medical advice indicates it is advisable for a rider to rehydrate, that a sympathetic view be taken to any application to ride ½ kg overweight
5. Adopt a sympathetic approach to an application for a rider on medical grounds to be permitted to forgo any or all riding engagement on that day

Riders:

1. Riders should endeavor to regulate riding engagements so as not to over commit themselves with regard to the overall number and spacing of race rides
2. Report to the Stewards and/or the Club's Medical Officer any symptoms which might indicate heat illness.
3. Report to the official veterinarian position on track as designated if the rider is concerned with the condition of a horse post race on return to the mounting yard.
4. Due to extra weight loss caused by sweating during the course of strenuous race riding jockeys can afford to increase their fluid intake without increasing their weight
5. Symptoms of heat illness which may not appear obvious may include:

- light headedness, dizziness	- confusion
- aggression or irrational behavior	- nausea
- fatigue	

Later symptoms indicating more profound dehydration include:

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| - cessation of sweating | - collapse |
| - ashen grey pale skin | - altered consciousness |
| - obvious loss of skill and coordination/clumsiness or unsteadiness | |

(These symptoms may indicate heat stroke which requires immediate medical treatment. Heat stroke must be treated as a medical emergency)

Factors that increase the risk of heat illness may include:

- high exercise intensity
- lack of fitness
- previous history of heat illness or heat intolerance
- high air temperature
- low air movement
- heavy clothing and protective equipment
- lack of acclimatization
- dehydration
- illness (including virus, flu, gastro)
- medical conditions (including asthma, diabetes etc)

Measures to minimize the risk of heat illness during rest period include:

- reducing clothing and resting
- assisting evaporating cooling with fans and water spray
- wetting/sponging of the skin
- applying ice packs to groin and armpits
- drinking cool water or sports drinks or taking ice

If in the opinion of a rider the conditions are becoming extreme to the point that it is detrimental to their health and safety immediately approach the Stewards.

Further information on workplace health and safety in hot weather is available on the following websites:

http://www.workcover.nsw.gov.au/Documents/Publications/LawandPolicy/CodesOfPractice/cop_hotcoldinv_309.pdf

http://www.health.nsw.gov.au/factsheets/environmental/heat_stroke.html

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