



## Office of the Equine Medical Director

### HEAT MANAGEMENT PROTOCOL

The following objective guidelines should be followed by racing officials to manage their racing schedule during periods of high ambient temperatures.

**Issue.** When should racing offices be concerned with the effects of heat and humidity on racehorses?

**Generally.** Horses are generally able to keep their core temperature within normal limits in most extreme weather conditions, however individual horse factors must be considered. Horses that are fit and well-conditioned are more capable of exercising in hot weather than those who are not well-conditioned or acclimated to hot weather.

High ambient temperatures and humidity make it more difficult for horses to avoid overheating. When horses exercise, their muscles generate heat and that heat must be dissipated in order to prevent potentially serious complications. Sweating and the evaporation of sweat, along with dilation of blood vessels in the skin are the primary mechanisms for horses to dissipate this heat. When the temperature and humidity are high, it is more difficult for the horse to dissipate heat through these normal cooling mechanisms. Failure to cool down after strenuous exercise in hot humid weather can cause horses to experience heat stress or even heat exhaustion.

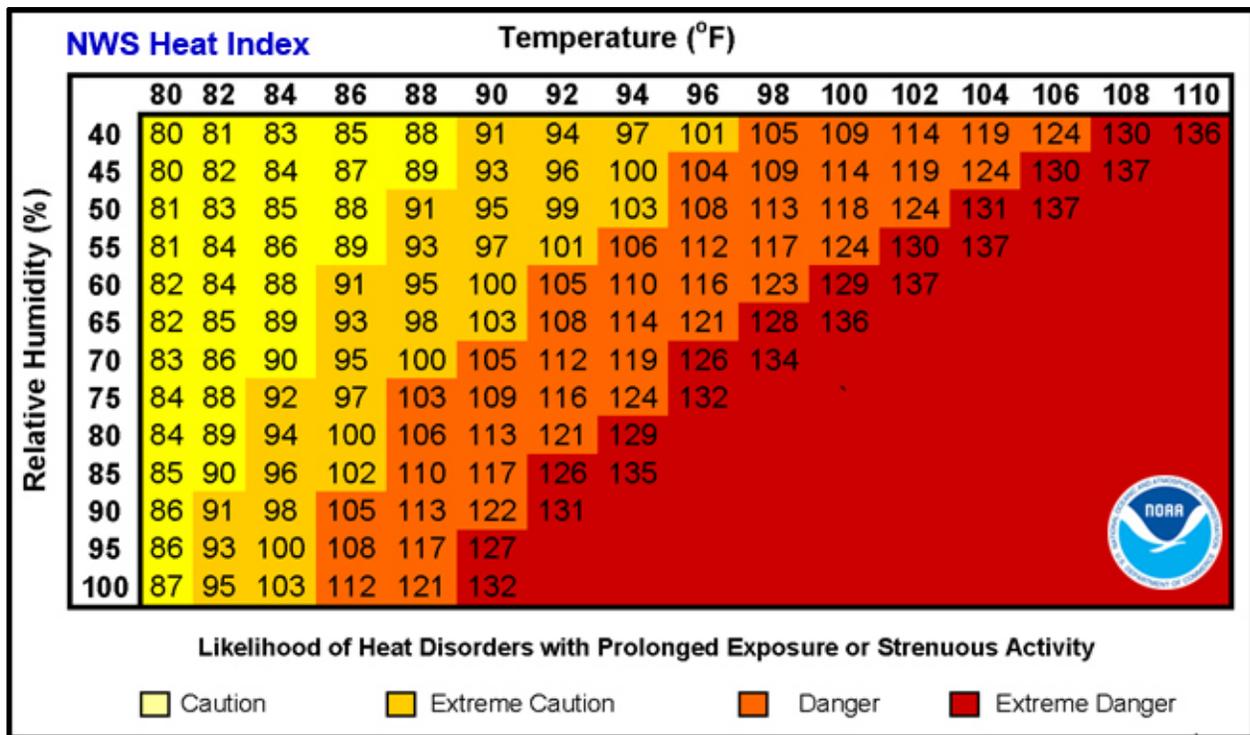
**Heat Index.** To make real-time assessment of the ability of horses to cope with high temperatures and humidity, racetracks should continually monitor the heat index and evaluate how horses come back after each race. The heat index is a calculation that takes into consideration the ambient temperature, humidity and wind speed. The heat index is available locally from your weather station<sup>1</sup> and is usually updated every 15 minutes.

If the National Oceanic and Atmospheric Administration heat index reaches **105** (see chart below), your racetrack veterinarian should contact the stewards or judges and track management to advise them of the presence of dangerous weather conditions.

The track veterinarian, stewards or judges, horseman's organizations and racetrack management should seek to cancel racing if local conditions are considered dangerous for horses and riders/drivers. Ideally, this decision should be made before the first race, whenever possible.

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<sup>1</sup> The National Weather Service provides local forecasts that include the Heat Index under Hourly Weather Forecast. The website can be accessed at <https://forecast.weather.gov>. Additionally, the NOAA provides weather information at <https://www.noaa.gov/weather-forecast-tools-and-resources>. The NOAA also maintains a page dedicated to Maximum Heat Index Forecasts at [https://www.wpc.ncep.noaa.gov/heat\\_index.shtml](https://www.wpc.ncep.noaa.gov/heat_index.shtml)



The Heat Index is a measure of how hot it really feels when relative humidity is factored in with the actual air temperature. To find the Heat Index temperature, look at the Heat Index Chart above. As an example, if the air temperature is 96°F and the relative humidity is 65%, the heat index - how hot it feels - is 121°F. The red area without numbers indicates extreme danger.

**Precautions.** If horses are allowed to race, certain precautions can minimize heat stress. Horses can be hosed and covered with light sheets soaked in ice water to keep them cool on their way to the paddock. Horses should be observed continually as they approach the paddock, while they are in the paddock, during the warm-up period, while racing and as they leave the racing surface. Buckets of ice and cold-water hoses should be made available all around the racing oval, in the paddock and at the winner’s circle for emergency use. Water accumulating on the body surface of a horse should be scraped off to help enhance evaporation.

Following the race, a horse should be cooled out with hosing, ice water and walking to help restore normal body temperature. Consideration should be given to placing horses in the shade or in front of fans, to enhance evaporation of sweat and water from the skin surface. The horse’s body temperature should be monitored until it returns to a normal level of 101F. Horses with a persistently elevated body temperature should receive veterinary attention.

If you have concerns with heat conditions, please contact me at (518) 441-7916 for further guidance or assistance.

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 Equine Medical Director