

CALIFORNIA HORSE RACING BOARD



M e m o r a n d u m

Date : August 18, 2020

To : Horsemen, Track Management, Safety Stewards, Track Veterinarians, and Official Veterinarians

From : Rick M Arthur DVM, Equine Medical Director

Subject : HEAT STRESS INDEX

In light of the current heat wave, I want to remind track management, safety stewards, track veterinarians, and Official Veterinarians of the Heat Stress Index (HSI) to estimate heat risk to equine athletes.

Horses generate a tremendous amount of heat even during relatively short episodes of intense exercise, such as racing. Horses, as humans, dissipate heat by sweat. HSI is a simple way to estimate the ability of a horse to dissipate heat naturally. Horses start losing their natural ability to dissipate heat at HSI 130; they cannot dissipate heat at or above HSI 180.

HSI is calculated from readily available online weather data: Temperature (°Fahrenheit) plus humidity (%) minus wind (mph). I advise using only temperature and humidity, as wind velocity is too variable from race to race.

As an example, here are HSIs using the current forecast for Saturday, August 22nd .

Track	Temperature	Humidity	Wind	Heat Stress Index
Del Mar	84	66	(-9)	150 (141)
Golden Gate Field	80	63	(-15)	143 (128)
Los Alamitos	72	71	(-8)	143 (135)

While everyone should be prepared when HSI is over 130, heat mitigation precautions should be in place whenever HSI is near 150. That includes strategically placed hoses for both before and after the race, ice buckets with sponges in the unsaddling area, ice in ambulances/ track veterinarian vehicles, and carefully monitoring horses post-race for heat-related problems. There are a number of websites explaining heat management for

1010 Hurley Way, Suite 300, Sacramento, CA 95825

Phone: (916) 263-6000 FAX: (916) 263-6042

www.chrb.ca.gov

equine events. The one below is from University of Minnesota where they often have high heat and high humidity during the summer: <https://extension.umn.edu/horse-care-and-management/caring-horses-during-hot-weather>. Unlike high humidity areas like the Midwest and East, horses in California get relief from the heat during the night, so we do not see chronic heat-related conditions, such as anhidrosis.

HSI 150 is uncomfortable, HSI 160 is very uncomfortable, HSI over 170 is potentially dangerous for horses, and HSI 180 is dangerous. With extensive preparation, we have successfully managed the few times we have seen HSI in the 160s. California has relatively low humidity. I can recall racing just once with a HSI over 170 once in the 14 years that I have been Equine Medical Director. Nevertheless, I advise serious consideration be given to cancelling racing with HSI over 170, and no one should consider racing anywhere close to HSI 180.