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Heatstroke in Dogs

By Mona Miller, DVM



Mona Miller's one-year-old Labrador, Luca, stays cool in the pool on a hot day. Photo provided

Heatstroke, or hyperthermia, occurs when there is an increase in body temperature from the environment. Dogs and cats have a higher body temperature than humans, at 100.5 - 102.5 degrees Fahrenheit. An emergency arises when their body temperature reaches 105 degrees Fahrenheit. Prolonged hyperthermia can affect every organ system in the body, and consequences can be severe, even fatal. Initial symptoms include panting, acting distressed or restless, drooling or weakness. Progression of heatstroke will show as change in mucous membranes (gum color) to blue or bright red, collapse, then death.

The most common causes of environmental hyperthermia in dogs include exercise in hot and/or humid weather, being left outdoors without shade and water, and being confined to a car. Most everyone knows to not confine your dog in the car on a very hot day, even if the windows are left open a bit. Information from San Francisco State University Department of Geosciences shows that on an 80-degree day, it takes only 20 minutes for car temperature to reach 109 degrees. A related study from Stanford University Medical Center showed that car temperature raises 40 degrees within an hour, no matter what the outside

temperature is. It is inadequate to leave the windows open a few inches, especially for a full-coated large dog, overweight or older dogs, or a short nosed dog who is unable to pant enough heat off to maintain his/her internal temperature. This latter category includes breeds such as Pugs, Boston Terriers, Shih-Tzus, and Lhasa Apsos. A dog's cooling mechanisms are much less efficient than humans, relying primarily on respiratory increase and effort (panting) as opposed to sweating out the excess heat.

Since 2006, California Penal Code 597.7 PC makes it illegal to leave an animal in an unattended vehicle if by doing so, the health or well-being of the animal is endangered. This includes conditions such as weather, inadequate ventilation or any other circumstance that could reasonably be expected to cause suffering, disability or death to the animal. If a pet suffers great bodily injury, first-time offenders can be penalized \$500 and six months in jail.

If you suspect your dog is suffering from heatstroke, the best thing to do is seek immediate veterinary care. First aid at home can include getting a rectal temperature, draping your pet with luke-cold wet towels and/or directing a fan to cool those towel-draped areas. Contrary to initial inclination, using cold or ice water (or ice packs) is not advised. Cold will cause vasoconstriction of surface layer blood vessels, creating an insulated cold layer on the surface of the body, trapping the heat of internal organs inside. Veterinary care is recommended to address the issues of internal organ dysfunction.

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