



John Wehe, DVM **Downtown Greensboro** **Animal Hospital**

Dr. John Wehe is a Greensboro native. He is the owner and veterinarian of Downtown Greensboro Animal Hospital, a new animal hospital in downtown Greensboro that opened in March 2013.

Dr. Wehe attended North Carolina State University College of Veterinary Medicine and received his Doctorate of Veterinary Medicine in 2007. His professional interests include small animal medicine, surgery and ultrasonography. He values serving his patients and educating his clients, as well as getting to spend time downtown. Dr. Wehe shares his life with his amazing wife and four children.

HEAT STROKE

Summer is a great time to get together with family and friends. As the weather warms, who can resist the temptation to be outdoors? We all want our pets to be a part of the fun! After all, they are your best friend and they always want to be with you. Exercise, playing at the park and cookouts are all great activities to enjoy this time of year. Even a nice car ride on the weekend sounds like fun. With a little fore-thought and precaution, these activities can all be enjoyed safely by you and your pet. As the heat and

humidity increase during the summer months, so does the risk factors for heat related illnesses.



Your dog or cat's body temperature is regulated by a part of the brain called the hypothalamus. It maintains the normal body temperature.

There are many highly sensitive receptors located throughout the body that act in coordination with the hypothalamus to conserve or release body

heat as needed to maintain that normal temperature. In a healthy pet, when a rise in internal body temperature is detected by the brain, an elaborate cooling effort occurs to increase heat loss. This includes panting (evaporation), increased blood flow to skin to release heat externally by air movement over the skin (convection) and contact with cool surface (conduction), relaxed body position and decreased

production of body heat. This would be similar to the thermostat in your home detecting a rise in temperature above the set point and then signaling the AC unit to begin cooling. Without the thermostat, during hot weather, the temperature in your house could increase abnormally, resulting in the temperature being too high. This is exactly what happens to your pet in heat stroke. The ability to auto regulate the internal body temperature is lost and an elevated body temperature (hyperthermia) occurs.

Heat stroke is a life threatening emergency, characterized by a non-fever induced, rapid elevation in body temperature. The disease has severe consequences including multi-organ failure, seizures and a high mortality rate. Two types of heat stroke are recognized in pets. They include exertional and classic heat stroke. Classic heat stroke occurs with exposure to high heat and humidity and lack of shade, ventilation, and access to water. Exertional heat stroke occurs during strenuous exercise in hot temperatures and/or high humidity without acclimating to the temperatures. Acclimating your pet to changes in the environmental temperature takes 60 days to fully occur.

The classic example of heat stroke occurs to a pet trapped in a hot car. The car can quickly gain heat from the environment and cause an acute rise in the pet's temperature. In a hot, parked car, the pet is unable to access two key abilities to cool, convection and conduction. Once their core body temperature rises above 104°F, the thermostat in the brain stops working, the body temperature continues to increase and cooling mechanisms fail. Your pet may experience excessive panting, anxiousness, disorientation, collapse, or convulsions. This disease can progress rapidly and, if unrecognized, can lead to death, even with appropriate treatment.

Certain dog breeds such as small muzzle breeds (Boxers, bull dogs, Boston terriers, Shih Tzus), sporting breeds such as Labrador and Golden Retrievers (due to popularity and tendency to expose these dogs to strenuous exercise), overweight animals, puppies and senior dogs, and dogs with heart/lung disorders can be at higher risk for development of heat related illnesses. It is recommended to avoid the temptation to take your pet on errands in the car on hot days, acclimate your pets slowly to exercise, and exercise in early morning or late evening during cooler temperatures. If your pet shows symptoms of heat stroke, soak them with cool water or apply a cool, wet towel and get them to your local veterinarian or an emergency veterinary clinic immediately. Avoid ice and cold water as a method of cooling.

So this summer, have fun with your pets, but please be safe. Realize the dangers that exist for your pet in the activities you do and take precautions to ensure you and your pet's safety. Helpful links to refer to, during the summer months, before heading outdoors include: www.weather.gov heat index chart and the Hot Weather Tips by aspca.org.



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