



Heat Stress Injury Prevention + Care



Heatstroke/Heat Exhaustion

Normal body temp in dogs and cats: 100.5 - 102.5 F

Heat Exhaustion is the condition caused by exposure of the body to excessive heat, especially when an animal is exercising in warm temperatures. Clinical signs that your dog is suffering from heat exhaustion include:

- **Excessive panting**
- **Drinking large amounts of water**

Heat Stroke: When a dog is unable to dissipate excess heat, heat exhaustion can proceed to heat stroke. Heat stroke occurs when a dog's body temperature reaches 105 degrees F or greater.

Clinical signs of heat stroke include:

- **Restlessness/Agitation**
- **Heavy drooling with thick saliva**
- **Bright red tongue/gums**
- **Weakness**
- **Vomiting**
- **Diarrhea**
- **Racing pulse**
- **Limbs that are warm/hot to the touch**
- **Disorientation**
- **High body temperature (>105)**

Dogs are more susceptible to rapid changes in climate conditions and overheating than humans: they are unable to sweat (except through glands in their feet) and must cool themselves by panting. Specific conditions or situations that put an animal at risk for overheating include:

- Dogs with shorter faces and noses (i.e. Boxers, Mastiffs, Pugs, Bulldogs) have shorter airways and are more inefficient at cooling themselves.
- Dogs with thick hair coats (i.e. the Akita, Siberian Husky, German Shepherd) and dark hair coats (i.e. Black Labrador, Doberman) absorb and retain heat easily; therefore, have a more difficult time dissipating heat.

- Dogs that have recently moved to a warmer climate or are being exposed to a dramatic change in weather.
- Dogs who are dehydrated, who are overexerted, or who are untrained.
- Dogs with underlying medical conditions such as heart disease or obese dogs.
- Dogs that have had a prior episode of heat stroke.
- Cats are rarely affected by heat stress injury.

First Aid Measures for Heat Stroke:

Options for cooling measures:

- Gently spray or apply cool or tepid water to the affected dog. DO NOT use ice water, ice baths or apply ice to an overheated dog. The application of extremely cold substances to an overheated animal's body causes the blood vessels to constrict, the blood to flow more slowly and limits overall cooling.
- Apply wet, cool towels along the dog's chest, abdomen, between its legs and around the neck. Encourage an overheated dog to drink but DO NOT force an overheated dog to drink water.
- Keep animals w/ heat stress calm and remove them from direct sun. Transport an overheated dog to an air-conditioned building or vehicle. If available, fans are very effective in decreasing the temperature of an overheated dog. It is essential that animals are closely monitored when electrical devices are in use.

Once cooling measures are initiated, monitor a dog's rectal temperature every 2-3 minutes. Once the temperature has decreased to 103-104 degrees F, discontinue active cooling measures. An animal that has suffered from heat stroke has difficulty maintaining a normal temperature due to damage that has been done to their "internal thermometer" and they can easily become hypothermic. Transport the dog to a veterinary hospital ASAP: excessive heat can create widespread damage to a dog's internal organs and the earlier supportive care is started, the better chance there is for full recovery. Dogs who have suffered heat stroke can have complications hours to days after the event; these dogs are also more susceptible to variations in temperature for the remainder of their lives.

Brachycephalic Airway Syndrome:

- Dogs such as Pugs, Boston Terriers, French Bulldogs, Pekingese, Boxers, English Bulldogs, and Shih Tzu's are described as "brachycephalic". The word means "short head". Brachycephalic breeds are characterized by brachycephalic respiratory syndrome. This syndrome consists of 4 anatomical changes that can affect their breathing. **These dogs often pant very inefficiently, thus inefficiently cool themselves.**
- The most susceptible breed to these changes is the **English Bulldog**. These dogs should not exercise or be active at all in the heat. Heat stress can lead to heat stroke and this can be fatal.
- Brachycephalics are often more susceptible to the effects of anesthesia and are higher anesthetic risks. Surgery can be performed to correct these anatomical changes in dogs that are clinically affected. Not all dogs require or would benefit from this surgery.

Prevention of Heat Stress Injury:

- Exercise your dog before 8 am and after 7 pm on warmer days.
- Avoid ever leaving your pet in the car in warm weather.
- **Brachycephalic breeds should not exercise (or spend time) in warm weather.**
- Ensure that pets have access to water at all times.
- Use fans, air conditioning units, etc. to keep pets indoor environment cool during warmer days.
- Slowly introduce dogs to exercise when the weather abruptly changes from mild to warmer temperatures.
- Provide shelter/shade and water for all dogs that live outside.
- Keep your dog in a good body condition - overweight dogs are more prone to heat stress injury.
- During exercise, give your dog frequent breaks and free access to water.

For questions or guidance if you are worried that your pet may have suffered from heat stress injury please call the Emergency staff at:

**VCA Northwest Veterinary Specialists & Emergency
(503) 656-3999**