

What Is Heat Stroke in a Dog, and How Can Pet Owners Prevent It?

Heat stroke occurs when a dog's temperature reaches 106 degrees, necessitating immediate emergency medical treatment to prevent organ damage and death. Here are some helpful tips to prevent such a tragedy.



Willow cools off at the Southwest City Dog Park. She is a rescued Doberman owned by Judi Nicoletti, board president of Southwest City Dog Park. Credit Courtesy of Judi Nicoletti

Answer: Each year thousands of dogs suffer from heat stroke, often with fatal results. In many cases, owners are not aware that their dogs are developing this condition until it is too late to reverse the damage. I have seen many heat-related tragedies that could have been easily prevented.

Heat stroke is actually a form of non-pyrogenic (non-fever) hyperthermia. Hyperthermia is the elevation of a dog's body temperature above the normal range of 101 to 102 degrees. When a dog (with no previous sign of fever or illness) has a body temperature that increases from 103 to 105 in response to excessive external heat, it is called "heat exhaustion."

When the dog's temperature reaches 106 degrees or above it is officially called a "heat stroke." Heat stroke occurs when a dog's heat-dissipating mechanism cannot release the extra heat that is absorbed. At that point, immediate emergency medical treatment is necessary to prevent organ damage and death. The critical temperature where multiple organ failure and impending death occurs is around 107 to 109 degrees.

It is important to remember that dogs cannot control their body temperature by sweating as humans do. Dogs have only a relatively small number of sweat glands that are located in the footpads and on the tip of their nose - their primary way of regulating body temperature is by panting. To make matters worse, dogs are not able to adjust clothing and take off their "coats" like humans.

Unfortunately, some dogs are at a higher risk for heat stroke even when the outside temperature and humidity are only moderately elevated. The list includes:

- Young and senior dogs;\Obese and poorly conditioned dogs;
- Dogs with thick and/or dark-colored fur;
- Dogs with heart or lung disease;
- [Brachycephalic breeds](#) with restricted airways like Pugs, Boxers, and Bulldogs;
- Dogs with a history of heat-related disease.

The symptoms of heat exhaustion and heat stroke in a dog are: excessive panting, thick saliva, hyperventilation, anxiety, glassy eyes, dark or bright red tongue and gums, staggering, stupor, seizures, vomiting, diarrhea, bleeding and coma.

When a dog becomes overheated, heat exhaustion can rapidly turn into heat stroke. A dog can die or suffer serious organ damage if not treated immediately. If your dog has any of the above symptoms, and you suspect heat stroke, call your veterinarian and get him or her to an animal hospital as quickly as possible. During transport, attempt to lower the dog's temperature by dousing him with cool (not cold) water or applying wet towels to his head, stomach, "armpits" and feet. Try to blow as much cool air as possible on your pet from the car's air conditioning vents.

Understanding what can cause a heat stroke and learning how to prevent problems is the key to avoiding a tragedy. Here are some important tips:

- **NEVER** leave an animal in a parked car! [It is illegal in some municipalities](#) and is one of the most common causes of heat stroke in pets. The heat inside of a parked car can increase to as much as 40 degrees above the outside temperature, especially on a humid, sunny day. For example, on an 80-degree day, the temperature inside the car can easily rise to 120 degrees in a few minutes. If you see a dog in a parked car on a warm day, contact the police and they will come and open the car. Animal control officers will also help, but they are often overworked and understaffed and may not make it in time. The [ASPCA](#) and the [Human Society](#) encourage animal-lovers to print their “Hot Car Warning Flyers” and distribute them in the community.
- Limit the amount of time your dog is outside on hot days. If your dog must be outside in hot weather for long periods of time, make sure there plenty of shade, cool drinking water and a wading pool if possible. Remember that shade moves during the day and a dog on a tie-out or chain may not be able to get out of the sun. Also, water bowls can tip over and empty with disastrous results. Consider an [automatic pet waterer, doggie drinking fountain, and/or spill proof bowl](#).
- Use caution when exercising your dog on warm days, or if the dog has not become acclimated to a new climate or season. I have seen dogs develop heat strokes after jogging with their owners during the first, warm 60-degree days of spring. Dogs don't recognize that their activities are causing them to overheat and need pet owners to intervene (Cats will rest when they feel overheated!). Try to limit outdoor exercise and play to the cooler, early morning or evening hours. Choose a dog park that has shade and a “cooling pool.”
- Make sure that your dog's crate and/or doghouse is well-ventilated. Some dog houses are just as dangerous as a hot car! Kennel your dog in a [wire crate](#) only. On warmer days do not leave your dog in a garage, shed or small room without air conditioning.
- Choose a groomer that has a cool, well ventilated grooming “parlor” and understands the causes of hyperthermia in dogs. Do not allow a muzzle on your dog while it is being dried with a dryer. Dogs wearing muzzles cannot breathe or pant efficiently on warm days – or while under a hair dryer.
- Brush your dog frequently and thoroughly to remove all loose hair that acts as extra insulation. The [FURminator](#) is an excellent deshedding tool and well worth the price. Consider clipping your dog in an extra short cut during the summer.
- On hot days offer your dog ice cubes and/or [dog-friendly frozen treats](#) to help them stay cool. Try some of the [“Keep Cool” products sold by Human Domain](#), the online store of The Human Society of the United States.

For more information, talk with your veterinarian and watch the Human Society's newest [Hot Weather Safety video](#).

Reprinted with the permission of Dr. Patrick Tate, chief of the veterinary staff and a general practitioner at [Webster Groves Animal Hospital](#). Question submitted by Sean Miller.