

Heatstroke

- Heatstroke is a life-threatening condition that occurs when body temperature reaches 106°F to 109°F.
- Being left in a hot car and exercising in hot weather are the most common causes of heatstroke in pets.
- “Cracking” car windows **does not** keep a car cool.
- Organ failure, seizures, and death are likely if treatment for heatstroke is not started immediately.
- Starting the cooling process at home is key to the pet’s chances for survival.

What Is Heatstroke?

The word *stroke* comes from “strike,” and heatstroke means “to be struck down by heat.” Heatstroke is a life-threatening condition suffered when a pet is unable to lower its body temperature. Cells in the body become damaged when the core body temperature is between 106°F and 109°F.

Heatstroke is most common in dogs but can happen to cats. Heatstroke may occur when a pet is left in an overheated, enclosed space, like a car, or is exercised in hot, humid weather. Outdoor pets may become overheated if they do not have access to fresh water or shade.

Factors that may make some animals particularly at risk for heatstroke include obesity and a decreased ability to circulate air through the lungs. Animals with narrow airways, such as those with laryngeal paralysis, or a brachycephalic (short-nosed) head, such as bulldogs and pugs, are less able to cool themselves efficiently.

The most common cause of heatstroke in dogs is being left in a parked car. One test performed on a partly cloudy, 93°F day found that cars can heat up to 120°F in just 15 minutes. Cooler days can also be deadly. In another test, conducted on a 71°F day, the temperature inside a car parked in the sun with the windows open a crack went up to 116°F in 1 hour.

Exercising your pet in hot weather can also lead to heatstroke. In hot weather, it is best to exercise pets during the coolest part of the day (early morning and evening) and always provide plenty of fresh water

and rest. It is also helpful to cool your pet with a hose or a swim after exercising.

Signs of Heatstroke

Heatstroke affects almost every system in the body. In normal conditions, as the body heats up, a dog pants to cool down. Another way to cool down is to send more blood to dilated blood vessels near the skin. Heat radiates off the body, and cooler blood returns to the body’s core. If a hot environment prevents cooling, blood is diverted away from important organs such as the brain, kidneys, gastrointestinal tract, and liver. When these organs do not receive enough blood, they begin to fail.

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Signs of heatstroke include:

- Panting
- Lethargy
- Vomiting/diarrhea
- Disorientation
- Seizures
- Coma
- Death

Treatment

Immediate action must be taken when a pet is found to be suffering from heatstroke. Death occurs within minutes of the body’s core temperature reaching 110°F. In a study of 54 dogs with heatstroke, 50% of the dogs died. However, 100% of the dogs that were given first aid at home and arrived at the veterinary hospital within 90 minutes of being found survived.

If your pet is suffering from heatstroke, before heading to the veterinarian, you should start the

Common Conditions

cooling at home by using a cool bath or the garden hose. Never immerse a pet in cold water, as this can cause life-threatening complications!

As soon as a pet with heatstroke arrives at the veterinary hospital, a rectal temperature will be taken and further cooling will begin. If at-home cooling was successful, measures will be taken to reverse the effects of heat, dehydration, and low blood pressure. An IV catheter will be placed, and fluids will be given to help get blood flowing to major organs again. Treatment is aimed at supporting these organs in the hope that the damage is not permanent. Sometimes, it can take days to know which organs have been

affected. Specific treatments may include antibiotics, blood pressure medications, and blood transfusions.

Prevention

Heatstroke can be prevented by taking extra care to avoid putting animals in dangerous situations. No pet should be left in a car, even if the windows are cracked open. Pets that are outside on hot days should have free access to fresh water, shade, and rest. And because they already have trouble cooling themselves, special care must be taken to avoid overheating in animals that are obese, have airway disease, or have a short-nosed head.