



Feeling the heat

Dogs feel the heat too and access to water is crucial, especially for active hunting dogs, as veterinarian Dr Karen Davies explains.

Rising temperatures and longer days during summer are a risk for dogs, particularly active ones like hunting dogs.

When a pet's body temperature rises through activity, they release excessive body heat through panting and their paws. Unfortunately, in high environmental temperatures, the pet cannot easily lower their body temperature and heatstroke can develop. Heatstroke can be easily prevented if early signs of heat stress such as excessive panting and agitation are observed and managed early. A dog's normal temperature is around 38°C and when it rises to 40°C there is a problem.

Hyperthermia is defined as an elevation in body temperature above the generally accepted normal range of body temperatures; although published normal values for dogs and cats vary slightly, it usually is accepted that body temperatures above 39°C are abnormal.

Hyperthermia can be categorised into 'fever' and 'non-fever' hyperthermia: fever hyperthermia results from inflammation in the body (such as secondary to a bacterial infection); non-fever hyperthermia results from all other causes of increased body temperature.

Heat stroke is a form of non-fever hyperthermia that occurs when heat-dissipating mechanisms of the body cannot accommodate excessive heat; heat stroke can lead to multiple organ dysfunction, also termed heat exhaustion or heat prostration.

Temperatures of 41°C or higher, without signs of inflammation, are suggestive of 'non-fever' hyperthermia.

Malignant hyperthermia is an uncommon genetic non-fever hyperthermia that can occur. It is often seen in pigs (especially black ones) and deer, stressed prior to being dispatched. This effectively cooks the beast from the inside out and the meat will either go to jelly or be incredibly tough.

Other causes of non-fever hyperthermia include excessive exercise, excitation, stress and a number of underlying illnesses.

The following information primarily relates to non-fever hyperthermia.

Breeds

May occur in any breed but long-haired breeds, double coated breeds, and short-nosed, flat-faced (known as 'brachycephalic') breeds are at greater risk.

Mean Age and Range

All ages can be affected but susceptibility is greater with young and old dogs. Young dogs tend to over exert themselves while older dogs may have underlying disease.

Causes

Identifiable underlying causes include extreme weather, being locked in car or other confined area without adequate ventilation, excessive exercise and restricted access to water.

Signs

Signs are variable but the clues are there: panting, excessive drooling, increased body temperature (hyperthermia), reddish or pale gums and moist tissues of the body suck as the mucous membranes or a bluish discolouration of the skin and moist tissues, which is caused by inadequate oxygen levels in the red blood cells.

A rapid heart rate or irregular heartbeats, shock, breathing distress and vomiting or passing blood or black, tarry stools could also indicate non-fever hyperthermia.

Dogs can also suffer small pinpoint areas of bleeding, seizures, muscle tremors or appear wobbly and unco-ordinated, as if drunk.

 how hot is too hot?						
°C	°F					
15°	60°	1	1	1	① No evidence of risk: Have fun outside!	
18°	65°	1	1	2	② Risk is unlikely: Have fun outside, but be careful!	
21°	70°	2	2	3	③ Unsafe potential, depending on breed. Keep an eye on your pet outdoors.	
23°	75°	3	3	3	④ Dangerous weather developing. Use caution.	
26°	80°	3	3	4	⑤ Potentially life-threatening heat. Avoid prolonged outdoor activity.	
29°	85°	4	4	5		
32°	90°	5	5	5	+1 if obese	
35°	95°	5	5	5	+1 if brachycephalic breed	
37°	100°	5	5	5	+1 if less than 6 months old or elderly	
40°	105°	5	5	5	-1 if area is shaded from sun	
43°	110°	5	5	5	-1 if water is available	

source: adapted from The Tufts Animal Condition and Care (TACC)

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Risk factors

Risk factors for dogs include a previous history of heat-related disease, age, obesity, a thick coat of hair and dehydration.

Treatment

If you recognise symptoms of heat stress in your dog you should act immediately to correct its body temperature. Bath the dog in cool water (this should be easy for duck hunters in the field) and apply airflow, whether in front of a fan or the vent in the car. Do not use cold water or ice as this will cause blood flow to pull away from the skin, prevent cooling and make the hyperthermia worse. A shivering response also is undesirable, as it creates heat.

Stop cooling procedures when body temperature reaches 39°C to avoid dropping too low and seek veterinary care. Most affected pets will need intensive care for several days.

No specific drugs are required for treating increased body temperature or heat stroke; your vet will make choices based on what they see when they examine your pet.

Despite treatment there are possible complications that can prove fatal, some days after the event. It depends on the time lag between the cause of the hyperthermia and treatment, how high your dog's temperature was and how long it remained elevated.

One episode of hyperthermia or heat stroke increases the likelihood of future episodes, so the best medicine is prevention.

Prevention

Avoid working your dogs on hot days (see the chart) and ensure only short stints, with plenty of water, electrolyte replacement and time in the shade. Encourage them to take a dip in water even if they aren't retrieving.

If your dog must be crated, ensure good airflow and plenty of shade, even on the back of the truck, invest in cool mats for the crates and never leave your dog in the car. Remember to watch surface temperatures too, a dog can't run on burnt feet.

Veterinarian Dr Karen Davies owns and uses hunting dogs and has broadened her expertise to include animal rehabilitation, animal physiotherapy and animal hydrotherapy services. Readers of Field & Game Magazine can draw on her experience and expertise by submitting questions to editor@fieldandgame.com.au Karen can be consulted at Direct Vet Services, 8/22–30 Wallace Ave, Point Cook, VIC; Email: directvetservices@bigpond.com or Tel: (03) 9369 1822.