

Beat the heat

by Nate Baxter, D.V.M.

How to avoid heat-stress-related injuries in dogs.

The first thing that needs to be understood is that dogs and people are different enough that most of the info cannot cross lines. I do not profess to know the appropriate procedures for people other than what I learned in first aid.

Dogs do not lose enough electrolytes through exercise to make a difference, but if the dog gets truly into heat stroke, the physiology changes will make them necessary. However, oral replacement at that point is futile; they need intravenous fluids and electrolytes and lots of it.

Cooling

Evaporative cooling is the most efficient means of cooling. However, in a muggy environment, the moisture will not evaporate so cooling does not happen well. I cool with the coldest water I can find and will use ice depending on the situation. The best way is to run water over the dog, so there is always fresh water in contact with the skin. When you immerse a dog in a tub, the water trapped in the hair coat will get warm next to the dog, and act as an insulator against the cool water and cooling stops. If you can run water over the dog and place it in front of a fan that is the best. Misting the dog with water will only help if you are in a dry environment or in front of a fan. Just getting the dog wet is not the point, you want the water to be cool itself, or to evaporate.

For *most* situations all you will need to do is get the dog in a cooler environment – i.e., shade, or in the cab of the truck with the air-conditioning on (driving around so the truck does not overheat and the AC is more efficient). Up to a couple of years ago, I was very concerned about my dogs getting too hot in the back of my black pickup with a black cap. New white truck fixed a lot of that problem. When I had one dog I just pulled the wire crate out of the car and put it in some shade and hopefully a breeze. But having two dogs and running from one stake to another, that was not feasible. So I built a platform to put the wire crates on, this raises the dog up in the truck box where the air flow is better. Then I placed a three-speed box fan in front blowing on the dogs with a foot of space to allow better airflow. I purchased a power inverter that connects to the battery and allows the three-speed fan to run from the truck power. It has an automatic feature that prevents it from draining the battery. When I turned the fan on medium I would find that the dogs

Water cools a dog quickly, but do not place a hot, wet dog in an enclosed crate.

where asleep, breathing slowly and appeared very relaxed and comfortable in a matter of 20 minutes or less, even on very hot muggy days. I also bought a pair of battery-operated fans but found them pretty useless. Spend your money on the power inverter and get a real fan.

Alcohol: I do carry alcohol for emergencies. It is very effective at cooling due to the rapid evaporation. It should be used when other methods are not working. You should be on your way to the veterinarian before you get to this point. We recommend using rubbing alcohol, which is propylene alcohol, not ethyl, for those of you not aware. So do not try to drink it. Alcohol should be used on the pads and lower feet area where there is little more than skin and blood vessels over the bones. Use a little bit and let it evaporate; you can use too much as some is absorbed through the skin. There are concerns about toxicity, but you have to get the temperature down.

I purchased those cooling pads that you soak in cold water, but found that the dogs would not lay on them. I would hold them on the back of a dog that just worked to get a quick cool, but have not used them for years.

Watching temperature: If you feel your dog is in danger of heat injury, check its temp and write it down. Keep checking the temp every three minutes. I recommend getting a rectal glass thermometer. I have found the digital ones from the drugstore very unreliable. Don't forget to shake it down completely each



PHOTOS: JENNIFER PITE (LEFT) | MARIE ANTI (RIGHT)

time, sounds silly, but when you are worried about your companion, things tend to get mixed up. This is *very important* – once your dog's temperature starts to drop, *stop all cooling efforts*. The cooling process will continue even though you have stopped. If the temperature starts at 106.5°, and then next time it drops to 105.5°, stop cooling the dog, dry it off, and continue monitoring. You will be amazed how it continues to go down. If you do not stop until the temp is 102°, the temp will drop way too low. I cannot emphasize this point enough.

Shade can be your best bet. An open crate or ex-pen in the shade will help keep your dog cool.

Rehydrating

When the dog is so heated that it is panting severely, only let it have a few laps of water. Water in the stomach does not cool the dog, you just need to keep the mouth wet so the panting is more effective.

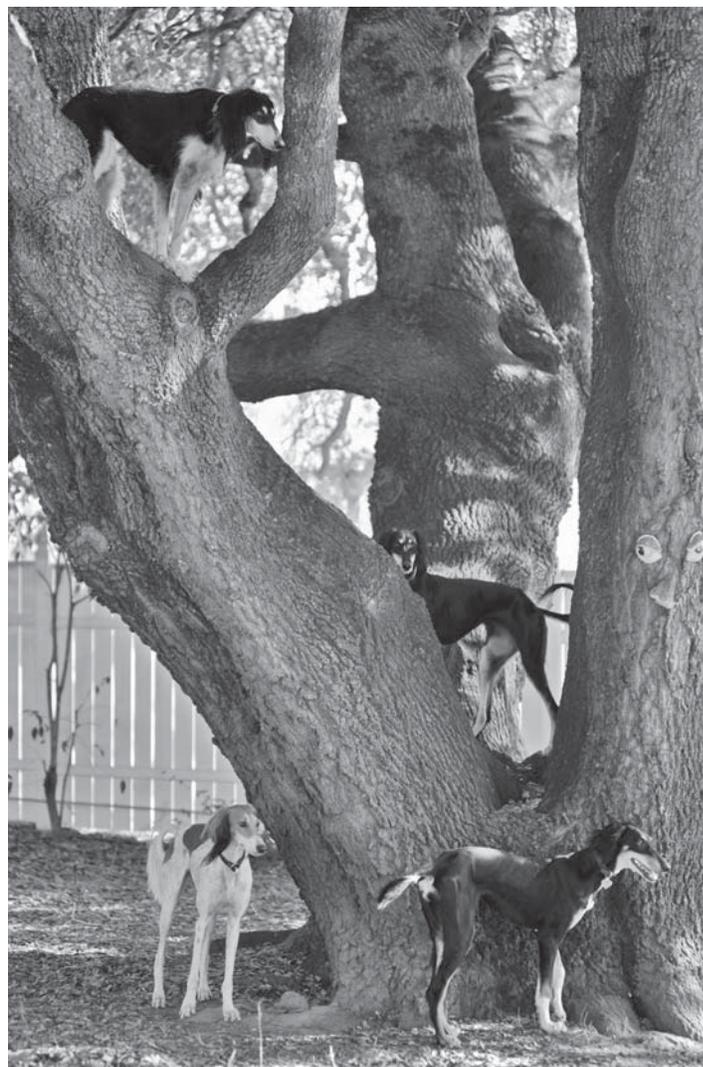
Do not worry about hydration until the temperature has started to go down. A dog panting heavily, taking in large amounts of water, in addition to swallowing air, is at risk of bloat.

Once the temperature is going down and panting has slowed to more normal panting then allow water. The dog will rehydrate itself after its temperature is normal. If the dog has a serious problem and even though you have brought the temperature back to normal, get the dog to a vet, as it can still need IV fluids and some medication. Also, a case of hemorrhagic gastroenteritis (not parvo), with a ton of very bloody diarrhea and a lot of fluid and electrolyte loss. These cases need aggressive treatment.

Prevention

The best method of treatment is prevention. Learn to watch your dog, and see the changes in the size of the tongue, and how quickly it goes down. Learn your dog's response to the different environments – the difference in temperature and humidity can effect your dogs – and be careful when you head to a trial. Try different things in training to help the dog cool and learn what works better. Another very important point: Do not soak your hot dog to cool it and then put it in a box/tight crate. Remember, evaporation cannot take place in a tight space, and the box will turn into a sauna and you will cook your dog.

Use an ex-pen, and let the dog cool and dry before crating it. I demonstrated this lesson with my 10-month-old pup. After do-



ing a 15-minute session in yard drill on a warm 70+ degree day, she was panting hard and was pretty hot. She was okay, but it was time to stop. Just for the heck of it I took her temperature. She was 103.6°; above normal but too bad for a dog that had just finished working. In my backyard I have a 300-gallon Rubbermaid tub filled with water. I took her to it and she jumped in and out three to four times. She appeared totally improved, tongue was much smaller, and eyes brighter and her full spring was back in her step. So I re-took her temp and it was 104.2°, so even though she looked better she was hotter. This is a perfect lesson to show why you should not get a hot dog wet and then put them in a box. The water on her skin caused the blood vessels to constrict, decreasing blood flow to the skin. Therefore the hot blood was shunted back to the dog's core and retained the heat. You may have felt the same thing, after exercising but still being very warm, take a shower and get cooled off but as soon as you turn the shower off you start sweating again.

Remember: Prevention, learn your dog. It is worth the time and effort. ♦