

Pet Physicals – Small Animal Vet Science

by C. Kohn, Waterford Union High, Waterford Wisc. Based on Shojai's First Aid Companion

The owner sees their pet more so than anyone else. As such, they are the best option for recognizing what is normal and what is not in regards to their dog or cat. Keeping track of these vital signs can be highly valuable for times when your animal faces a health crisis.

When your pet is happy and healthy, complete a chart listing the following vital statistics:

- Temperature
- Color of skin and gums
- Capillary Refill Time
- Dehydration Test (skin tenting)
- Heart Rate
- Respiration Rate
- Responsiveness

Like people, every pet is an individual, and no source can provide specific vital statistics for your pet. It is up to you to determine what “normal” is for your pet. Knowing these “normal” statistics can help you to assess how serious an animal’s condition is, what steps need to be taken, and what first aid, if any, is needed.

Temperature: Normal body temp for a dog or a cat is between 99° and 102.5°. Temperatures will rise with physical activity but should return to normal range with rest. Fevers by themselves are not necessarily dangerous (although they can be if high enough) but are more frequently used as indicators of more serious conditions. To take a pet’s temperature, use a rectal thermometer. If it is a mercury thermometer, be sure to shake the mercury down to 96° or lower for an accurate reading (some thermometers do not go down with temp, only up, and need to be shaken down). Lubricate the tip of the thermometer with KY or Vaseline; use saliva only if nothing else is available in an emergency. Lift the tail of your pet at the base with a firm grip and insert the thermometer halfway (they will not enjoy this, but it should not cause pain). Wait a minute to three minutes and then read the thermometer according to manufacturer’s instructions. Clean the thermometer with disinfectant before putting in storage.

Temp	Diagnostics	Call a vet?
106+	EMERGENCY - IMMEDIATELY COOL YOUR PET	IMMEDIATELY
105	High Fever	YES - within a day
104	Moderate Fever	YES
103	Moderate Fever	YES
102	Normal	No
101	Normal	No
100	Normal	No
99	Normal	No
99-95	Mild Hypothermia	YES - within a day
95 or lower	EMERGENCY - WARM YOUR PET IMMEDIATELY	IMMEDIATELY

Skin and gums: due to their ease of access, vets will focus on the color of mucus membranes, e.g. the gums, and the whites of their eyes, to gauge the health of an animal (the skin of an animal can be hard to see). If your pet has pigmented (non-pink) gums, try to find a pink area on the gums or lips to assess (the vulva or penis can be used if nothing else is available). For gums, anything other than a pink color calls for immediate veterinary care.

Membrane Color	Diagnostics	Call a vet?
Pink	Normal	No
Pale - White	Anemia or Shock	IMMEDIATELY
Blue	Smoke inhalation or suffocation	IMMEDIATELY
Bright cherry red	Carbon monoxide poisoning or heatstroke	IMMEDIATELY
Yellow	Liver problems or failure	YES - within a day

Capillary Refill Time: Capillaries are tiny blood vessels that link arteries to veins and provide oxygen to bodily tissues. Among other places, they can be found at the surface of the skin. These vessels are what give healthy gums their pink color. They can also be a good indicator of pet health. To gauge this with capillaries, lift your pet's upper lip and press the flat of your finger against the non-pigmented pink gum tissue. This light pressure will squeeze blood out of the vessels. Quickly remove the pressure and you should see a white, finger-shaped mark on the gum. Use the second hand of a watch or clock to time how long it takes for the pink color to return – this is the capillary refill time.

CRT	Diagnostics	Call a vet?
1-2 seconds	Normal	No
2-4 seconds	Moderate-poor. Possible dehydration or shock	YES
4+ seconds	EMERGENCY - Severe problems (dehydration or shock)	IMMEDIATELY
Less than 1 second	EMERGENCY - Severe problems (heatstroke or shock)	IMMEDIATELY

Dehydration Test (Skin Tenting): The first sign of dehydration is the loss of elasticity in the skin. Normally hydrated pets have extra loose skin in the scruff (top of head and base of necks). Under normal hydration, the skin will immediately return to its normal state when you gently pull on it (a light pinch). The skin at the top of the head gives the best indication. The more severe the dehydration, the slower the skin will return to normal. Under severe dehydration, the skin remains standing up in a ridge off the body even after releasing it (skin tenting) like a piece of Play dough. If skin tenting occurs, call a veterinarian immediately.

Heart Rate: To measure your pet's heart rate, have him or her sit in a relaxed position and place the palm of your hand over his or her left side directly behind the point of the elbow. Once you have felt the heart rate, look at the second hand of a clock or watch and count the pulses within a 15 second time span. Multiply by four to get the beats per minute (BPM) rate. With illness or injury, a slower-than-normal rate (bradycardia) can indicate heart disease or shock. A racing heart can also point to shock. Either requires prompt medical attention. A stopped heart is the most dire emergency of all and requires immediate CPR.

Pet	Normal Heart Rate
Small dog (<20 lbs)	70-180
Medium-Large Dog (>20 lbs)	60-140
Cats	120-240
Puppies	up to 220
Kittens	200-300

Respiration: Most dogs breathe 10-30 times per minute. For cats, the rate is 10-40 times per minute. Dogs who are hot or exercising breathe faster and may pant up to 200 breaths/minute. Panting and open-mouthed breathing are considered danger signs in cats because they do not use panting to cool down. If your cat is panting or breathing with his or her mouth open, call the vet immediately.

Respiratory Signs	What They Mean	Call a vet?
Effortless breathing; quiet to soundless breathing.	Normal	No
Increased respiratory rate	First sign of breathing problems	YES - immediately if condition is worsening. If resp. rate is increased but problem is not worsening, call within the day.
Excessive panting or gasping; dogs stand with elbows outward; cats sit crouched with head and neck extended.	EMERGENCY - Progression to early respiratory failure	IMMEDIATELY
Labored open-mouthed breathing and blue gums	EMERGENCY - Pulmonary failure - pet is suffocating	IMMEDIATELY
Slow, shallow, or stopped breathing, unconsciousness imminent	EMERGENCY - Respiratory collapse; prepare for artificial respiration.	IMMEDIATELY

Responsiveness: healthy dogs and cats are alert and responsive to whatever is happening in their surroundings. When they are injured or ill, their behavior is affected to various degrees. The more serious the condition, the less responsive your pet will be.

Level of Consciousness	What it Means	Call a vet?
Alert and responsive; if you call your vet, they respond.	Normal	No
Depressed - response slow to sight or touch stimulation; may be sleepy, reluctant to move	Common to many illnesses	Yes - next day if the condition does not improve with first aid.
Disoriented - bumps in objects; stares blindly; walks with unsteady gait or falls to one side.	Probably neurological or inner ear problem.	YES - same day.
Stupor - can be aroused only by deep pain stimulation (e.g. pinched toes)	Neurological or metabolic problem; serious.	IMMEDIATELY
Comatose or having seizures	EMERGENCY! Severe neurological damage or disruption from injury, disease, or toxin.	IMMEDIATELY

Top 10 Triage Priorities

In order of urgency, treat these conditions before anything else in an emergency situation. Then take care of your pet's other problems.

1. Stopped breathing, no pulse
2. Stopped breathing with pulse
3. Loss of consciousness
4. Shock – pale gums, rapid breathing, weak rapid pulse, cold skin.
5. Difficulty breathing.
6. Chest puncture or gaping wound.
7. Severe bleeding
8. Abdominal puncture or gaping wound
9. Extremes of body temperature – too hot or too cold
10. Poisoning – stings, snakebites, and toxins.