

LARYNGEAL PARALYSIS: ADVANCED HOME EMERGENCY CARE

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****The following is information that may be useful during a breathing crisis.
Do not expect to manage a life-threatening breathing crisis without
considerable advance preparations and self-education.****

Understanding the Breathing Crisis

When a dog cannot move enough air into and out of the lungs to shed carbon dioxide (CO₂) and gather oxygen (O₂), the body detects this high CO₂ first and later low O₂ and triggers several things—

- 1) Breathing rate increases;
- 2) Breathing effort increases (lips pulled back; chest moving hard; standing up with front legs spread apart);
- 3) Anxiety associated with “air hunger” develops (all else is forgotten);
- 4) Heart rate increases.

Once the patient reaches the point of critically low O₂, systems begin to fail—

- 1) Muscles get weak (dogs collapse or lie down);
- 2) Involuntary defecation, urination and vomiting may occur;
- 3) Mucous membranes (gums, tongue) become cyanotic or bluish-tinged;
- 4) Heart rate slows;
- 5) Unconsciousness develops.

Dogs will enter a breathing crisis in several ways.

- 1) Hot environments that cause normal panting may overwhelm the dog's ability to move air in and out.
- 2) Stressful situations (car rides, veterinary clinic visits, groomer visits, boarding) may result in normal panting that overwhelms the dog's ability to move air.

- 3) Barking can briefly close the larynx and cause the next few breathes to be really deep and pull the larynx closed; the negative spiral of sucking really hard on the airway continues.
- 4) Excited moments (before feeding, when greeting visitors) can result in normal panting or a slightly closed larynx that causes deep breathing that sucks the airway closed.

General comments

- 1) Your dog will be experiencing severe anxiety brought on by “air hunger” and will not act normally. He/she will not want to be comforted or held or restrained in any manner. They will vigorously fight any manipulation of the head or mouth.
- 2) Their stress and anxiety can be made worse or better by their environment, including your behavior. It is your job at this critical moment to project a calming influence for them and maintain a clear head to manage the necessary activities to save your pet.
- 3) The following suggestions do not necessarily follow in lock-step order. Multitasking is the name of the game, with continual vigilance and adjustments.
- 4) Without preparation and self-education, many of the following recommendations will not be useful to you.
- 5) A veterinary professional can be a useful resource as you prepare yourself for this emergency. Please recognize that you will need to find a veterinary professional who is comfortable with and good at client education; not everyone has these attributes or inclination. Some of these lifesaving activities can be harmful, deadly, or ineffective if performed improperly, so teaching them to laypersons is a morally and legally challenging proposition.

- 6) The level to which someone prepares for an emergency of any kind is something that each person must decide for themselves. Time is of the essence with this breathing crisis emergency, and every patient is different. In severe cases, dogs can suffocate in 5-10 minutes. In less severe case, they can struggle for long periods before correcting themselves or succumbing. We can't predict what will happen, so we prepare to the level that we are able or comfortable.

- 7) Some pets will experience these crises repeatedly. Many are managed at home; some require continued veterinary care. Develop a relationship with your veterinarian and local emergency clinic; episodes can be efficiently managed with minimal stress to your pet if advanced preparations are made. Most patients will need a light to moderate sedative, some time with an endotracheal (breathing) tube in place, and some supplemental oxygen. Some will not easily return to their home environment without entering another crisis (and need surgery urgently), while others will have these crises infrequently (and surgery can be considered on somewhat of an elective time-frame).

Calm your Pet

- 1) Eliminate exciting event.
 - a. Tell guests to go away.
 - b. Close the window blinds.
 - c. Put food away.
 - d. Tell the other pets to go away/put them away.

- 2) Actively soothe your pet with voice and gentle petting.
 - a. Do not restrain
 - b. If they are pacing, gently guide them away from dangerous areas (stairs).
 - c. Do not manipulate head or mouth in any way.

- 3) Give sedative by injection.

- a. Do not attempt to feed medication.
- b. An injection will require training.
- c. This emergency solution requires a close veterinary-client-patient relationship.
- d. This can be dangerous, but may be less dangerous than the breathing crisis.
- e. Expect to seek emergency veterinary care as soon as feasible after giving medication.

Cool your Pet

- 1) Move or firmly guide to a cooler location.
 - a. Shade
 - b. Indoors
 - c. Car with A/C on high.

- 2) Provide access to drinking water
 - a. Raise bowl for easier access.
 - b. Do not allow pet to gorge; offer and remove every few minutes.
 - c. Gradually chill the water with addition of ice cubes.

- 3) Actively lower body temperature
 - a. *If event started due to high environment heat, slowly and frequently pour room temperature water on chest and abdomen.*
 - b. For all cases, pour or swab rubbing alcohol on feet and foot pads (keep fumes away from pet's face.)

- 4) Cool the immediate environment
 - a. Place a fan near pet
 - b. Turn on A/C
 - c. Air blowing past the pet's face/mouth but not too directly or harshly will be accepted better.

Secure your Pet's Airway

- 1) Give sedative by injection

- a. If possible, this should be by the IV route (this is a very difficulty thing to learn and do in this emergency, especially if alone.)
 - b. Without a sedative, you must wait until the patient passes-out or goes into respiratory and/or cardiac arrest before trying to secure their airway.
- 2) Pass endotracheal tube thru mouth, thru larynx and into trachea.
- a. If spontaneous breathing is still present, simply maintain the tube location.
 - b. If no breathing is occurring, blow firmly but gently thru tube and watch chest rise (2 seconds); release. Repeat every 10 seconds until spontaneous breathing begins again.
 - c. Once an airway is secured, determine whether the heart is still beating. If not, begin standard CPR steps that include breathing for the patient and performing chest compressions.
 - d. When the patient is awake and actively trying to chew, remove the tube.
 - e. Seek emergency veterinary care as soon as feasible during this event.
 - f. You will need to prepare in advance and self-educate for this option to be useful.
- 3) Perform an emergency tracheostomy
- a. This will not be possible until and unless the patient passes-out or goes into respiratory and/or cardiac arrest.
 - b. This is a very difficult thing to learn and do; it is very dangerous to the patient.
 - c. Without any other options for airway access in a dog that has become unconscious and stopped breathing, this may be tried.
 - d. Once an airway is secured, determine whether the heart is still beating. If not, begin standard CPR steps that include breathing for the patient and performing chest compressions.
 - e. Seek emergency veterinary care as soon as feasible during this event.

- f. You will need to prepare in advance and self-educate for this option to be useful.