



Police K9

First Aid Reference

Under Delaware Code, Title 16, Chapter 98. Section 9816 allows for the emergency care of police dogs.

A paramedic or other EMS provider may provide emergency medical services to an injured police dog at the scene of an emergency that has resulted in the police dog's injury.

- Injured or ill humans always take priority over police dogs.
- This reference guide is reserved for use only on police dogs who are injured in the line of duty.
- This is a reference guide only, please consult with your agency and local veterinarian for further details.

A paramedic or other EMS provider may transport the police dog to a designated veterinary facility and provide emergency medical services to the police dog during transport to the facility if the paramedic or EMS provider deems it necessary for the police dog's survival. The handler, if available, must be present during the provision of emergency medical services and transport to the veterinary facility.

A paramedic or other EMS provider who in good faith attempts to render or facilitate emergency medical services to an injured police dog is not liable for civil damages that occur as a result of any act or omission by the paramedic or EMS provider in the rendering of the services; unless it is established that the paramedic or EMS provider caused injuries or death willfully, wantonly, or recklessly or by gross negligence.

EMS will require the assistance of the police dog's police handler or backup handler, to approach the dog and ensure it is safe for EMS personnel to attend to the police dog. If neither police K9 handler or backup K9 handler are available, EMS may contact local Animal Control for assistance restraining and safely treating and transporting the police dog. Please be aware that Animal Control capabilities vary greatly across the state, and in some areas, this may not be appropriate. However, if transport by ambulance would impair EMS' ability to respond to persons who need EMS care and transport, Animal Control may be considered an appropriate transport choice so long as Animal Control is available and appropriately equipped to transport the police dog.

A paramedic or other EMS provider may not provide emergency medical services to a police dog if their services are needed concurrently to provide services to an individual, and the care of the police dog would hinder the care of the individual.





Police K9

Restraint

The goal is to safely provide the police dog initial medical evaluation, treatment, and transport to definitive care. An injured police dog may pose an unintentional threat to EMS; therefore, it is imperative that the police dog be secured prior to medical evaluation. This is best done by the dog's police handler. It is also preferable that the dog's police handler stay with the police dog throughout all phases of care, evacuation, and transport unless they, themselves are injured or required for urgent police duties. If the primary handler is not available, contact backup police K9 handler, or, if animal control is available and equipped to do so, contact Animal Control to secure and stay with the injured police dog. If transport by ambulance would impair EMS' ability to respond to persons who need EMS care and transport, Animal Control may be considered for assistance.

1. The type of muzzle used depends on the size of the police K9 available material type of injury and whether there is a need to access the police K9s head.
2. The police K9 should be restrained in a position of comfort, which may include sitting or standing. Do not restrain the police K9 in such a manner that its ability to breathe or pant is impeded.
3. Slide the appropriately sized muzzle over the police K9's snout from the rostral (anterior) to caudal (posterior) aspect. Be sure that the lower jaw is captured in the muzzle and not free.
4. Be sure to frequently check the security of the muzzle and make sure that it is not impeding the police K9's ability to breathe.

All injured police K9s should be muzzled before handling. The following are relative contraindications to muzzling:

- Unconsciousness
- Upper airway obstruction
- Vomiting
- Severe facial trauma
- Heat-related injury (need to allow for evaporative cooling via panting). If these police K9s need to be muzzled, a cage, or basket type muzzle is preferred.

<u>Muzzle Type</u>	<u>Required Materials</u>	<u>Suggested Use</u>
Cage or Basket	Manufactured cage/basket muzzle (preferably made from rubber.).	- All Purpose. - Preferred muzzle: allows for open mouth breathing. - Suggested if oxygen delivery is indicated.
Fabric	Manufactured, pre sized muzzle.	- All purpose
Quick Muzzle	Any available broad width (greater than 1-2 inches) tape, leash, webbing, gauze, etc.	- Use only if fabric or cage/basket muzzle is unavailable. - Narrow gauze, etc. can cause injury prevents panting (heat reduction) and may impede air flow. To apply: create a loop with the gauze or leash, slip over muzzle, tighten, wrap gauze so it is on the underside of the jaw and tie back behind the ears.

**It is important that the clinician be adequately trained to restrain the police K9 in order to safely apply a muzzle. A stressed police dog may not only bite the EMT or Paramedic or others but may bite its handler as well. **



Police K9

Airway Obstruction & Management

AIRWAY OBSTRUCTION

Clinical signs of airway obstruction include the following:

- Gagging
- Pawing at the mouth
- Excessive drooling
- Frequent swallowing motions
- Extension of the head and neck
- Tripod position
- Reluctance to lie down.
- Cyanosis (late sign)



Similar to a person who can speak clearly without any respiratory distress, consider a police K9 that is barking, growling, or wining without any clinical signs of respiratory distress to have a patent airway.

1. Allow for position of comfort (this may be sitting, standing, or lying with head elevated)
2. Secure police K9 with leash/rope (placing leash around neck and then pulling one front leg through the loop provides some control but does not constrict the neck)
3. Do not put hands in the police K9's mouth (serious injury to clinician can occur)
4. Attempt abdominal thrusts (avoid if sharp object involved)
 - A. "bear hug" or lay police K9 on side and place fist just below sternum or behind ribs.
 - B. Five (5) quick and upward abdominal thrusts following by airway check This can be performed by using the two loops of gauze as shown below, or by placing a rolled towel towards the back of the dog's mouth (let them bite down on that but be sure it is heavy enough to prevent the jaws from closing all the way).
 - C. If not successful, repeat 1-2 times.
5. Palpate throat/trachea through the front of the neck – you may be able to dislodge a supraglottic foreign body out of the airway.
 - A. Palpate for the object at the front of the neck (midline, slightly below the jaw).
 - B. From bottom of palpated object, squeeze/push upwards towards the front of the mouth.
 1. Two-handed with both thumbs,
 - or**
 2. Single-handed with thumb and index or middle finger.



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Police K9

Airway Obstruction & Management

continued

6. In an **unconscious** police K9, open the airway by extending the head and neck, and pull the tongue forward. A second rescuer should use gauze/leash looped behind upper canine teeth to keep the mouth open. Use a second length of gauze/leash for the lower jaw, as well.



7. In an **unconscious** police K9, if the obstruction is:

a. **VISIBLE:** attempt to manually remove; do not push foreign body further back in airway.

b. **NOT VISIBLE:** do not attempt a blind finger sweep due to risk of pushing the foreign body further down the airway. A blind finger sweep should never be attempted whether unconscious or conscious.

8. If object is not removed and police K9 collapses, provide chest compressions and mouth-to-snout or BVM (with a canine mask)

AIRWAY MANAGEMENT

1. Place the Police K9 in the sternal (prone) position

2. Open airway

a. Tilt head and slightly extend the neck.

b. If foreign body suspected, refer to Airway Obstruction.

3. Provide oxygen via BVM (with canine mask) with goal respiratory rate of 10-12 breaths/minute. Pediatric or BVM ~~Adult~~ can be used targeting goal tidal volume on seeing chest rise.

* a. If positive pressure ventilations are not required, supplemental oxygen may be administered by holding an NRB near the nose, taping oxygen tubing to the muzzle or holding a canine mask near the nose (without tight seal).

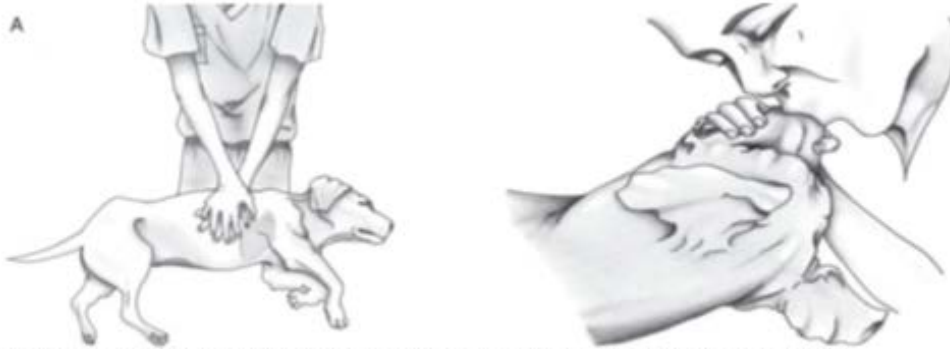


Police K9

Cardiac Arrest & Post ROSC Care

CARDIAC ARREST

1. Place dog in lateral recumbency.
2. Initiate chest compressions
 - a. See photo below.



Adapted from Journal of Veterinary Emergency and Critical Care 22(S1) 2012, pp S102-S131 doi: 10.1111/j.1476-4431.2012.00757.x

3. High-flow O₂ with BVM ventilation 1 breath every 10 compressions during recoil and without interrupting compressions or at a ratio of 30:2.
 - a. Compression rate of 100-120 compressions/minute
 - b. Depth of ½-1/3 of chest width
4. Continue 2-minute cycles of chest compressions with pulse checks.
5. If ROSC occurs, manage airway, and maintain ventilation rate between 10-12 breaths per minute.



Police K9

Hemorrhage Control & Hemorrhagic Shock

HEMORRHAGE CONTROL

1. Ascertain all sites of bleeding and control with direct pressure.
 - a. Extremity: apply an elastic wrap/pressure bandage, or SWAT-T.



*** Commercially made windlass tourniquets are not effective on Police K9s due to the tapered shape of their extremities. ***

2. For deep wounds in functional areas or areas containing large muscle bellies (neck, thigh, shoulder/triceps area) control bleeding by applying a dressing with hemostat agent and applying/maintaining pressure over the dressing for a minimum of 5 minutes.
 - a. Check for ongoing bleeding. If bleeding has stopped, apply appropriate pressure bandage over top of dressing; if bleeding continues, reapply pressure for a minimum of 5 minutes.

3. Manage airway as appropriate.

Please note: the SWAT-T should be stored and used for LEK9 care only. This is not approved for use on humans.

HEMORRHAGIC SHOCK

If history of illness or mechanism of injury consistent with signs/symptoms of shock (elevated pulse, elevated respiratory rate, pale mucous membranes, altered mentation or LOC) then transport as soon and as efficiently as possible.

1. Control bleeding, refer to Hemorrhage Control, above.
2. Manage airway as appropriate.

Stage of Shock	HR Beats/min	Capillary Refill Secs	Mucous Membranes	Mentation	Pulse Quality
Normal (at rest)	<120	<2	Pink	Bright, alert	Strong
Acute Compensatory	>120	<1	Red	Alert	Fair
Early Decompensatory	>140	>2	Pale	Depressed	Weak
Terminal/Irreversible	<80	Absent	Pale	Stupor/Comatose	Absent



Police K9

Chest Trauma

Chest Trauma

1. Administer oxygen, as appropriate, assist ventilations (BVM) if needed
2. Impaled Objects
 - a. Secure in place with bulky dressing
3. Open Chest Wound
 - a. Cover with vented or non-vented occlusive dressing
 - b. If shock present, consider tension pneumothorax has developed and burp/vent the chest seal
4. Flail segment with paradoxical movement and respiratory distress
 - a. Consider BVM ventilation



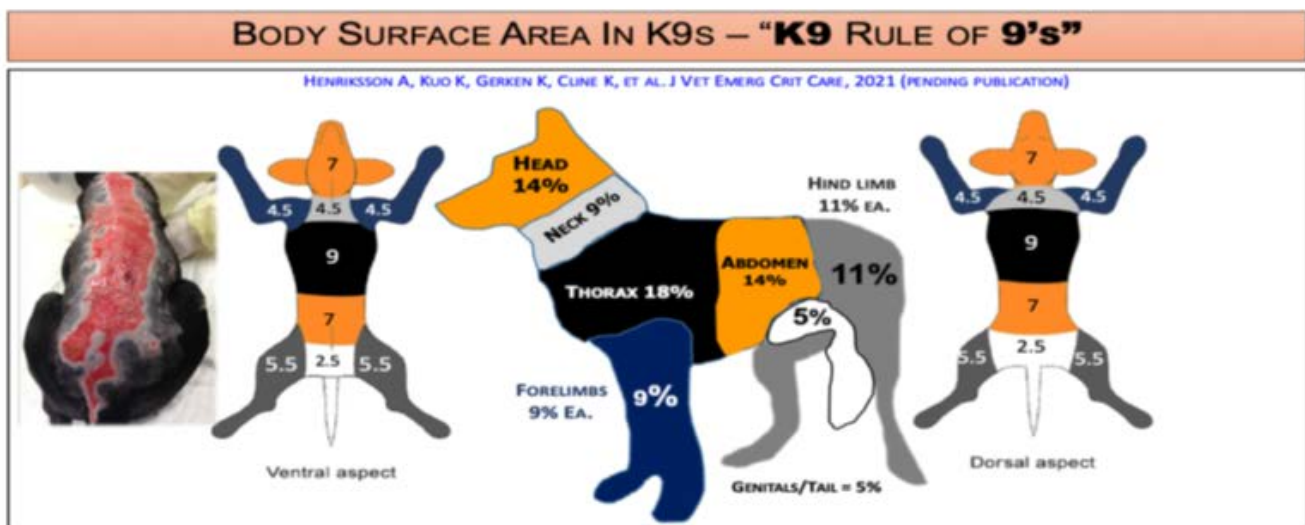


Police K9

Burns

Burns

1. Avoid pulling away any gear that is melted in the skin/coat. Only remove harness/collar if other methods are in place to control Police K9, otherwise, leave in place.
2. Oxygen, as appropriate.
3. Give highest priority to airway problems and major trauma.
4. If burn is >15% TBSA (superficial or partial thickness), consider cooling burn with cool water (sterile water/saline if available).
5. Cover burns with dry dressing, sterile sheet, or commercially prepared dry dressing
6. Prevent heat loss/hypothermia.





Police K9

Opioid Overdose/CO/CN/Smoke Exposure

OPIOID OVERDOSE:

*Opioid overdose in Police K9 is manifested primarily by excessive sedation, bradycardia, and **hypothermia**. Police K9 are less susceptible than humans to the respiratory depressant effects of opioids.*

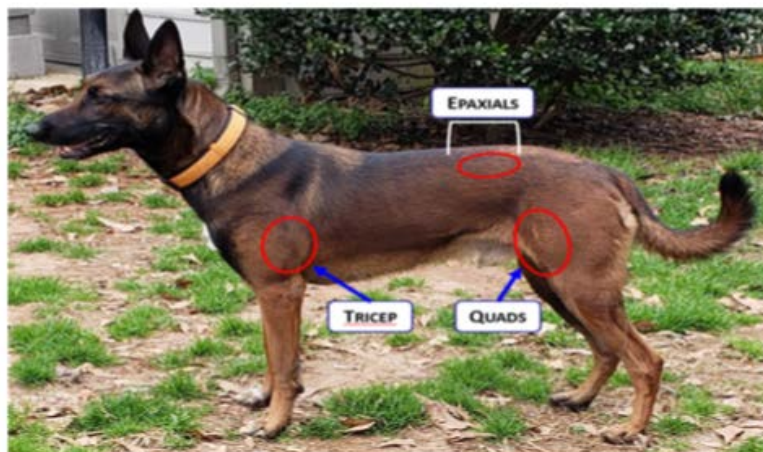
1. Administer oxygen, as appropriate.
2. Manage airway, providing rescue breaths if RR <8.
3. Consider securing Police K9 with muzzle in anticipation of reversal of opioid.
4. If it is suspected that the Police K9 came into contact with an opioid, is unresponsive and showing severe symptoms of opioid overdose, administer:
 - a. **Naloxone 2-4mg IN**, repeat every 2-5 minutes as needed (dose depends upon pre-packaged medication)
-or-
 - b. **Naloxone 2-5mg IM** via auto-injector (dose depends upon device), repeat every 2-5 minutes as needed.

CARBON MONOXIDE/CYANIDE/SMOKE EXPOSURE**

Remove Police K9 from source of smoke/inhalation

1. Secure Police K9.
2. Manage airway.
3. If you suspect CO/CN exposure:
 - a. Administer **high flow O2**

**pulse oximetry may be inaccurate in exposure to CO/CN*



Adapted from NAVEMS Training, used with permission.

Clinical signs of cyanide toxicity are frothing at the mouth, rapid/deep breathing, excitability (tremors, seizure), and can progress to severe respiratory depression, loss of consciousness, coma, and death.



Police K9

Organophosphate/ Carbamate Exposure

Pearls:

WARNING: CONTACT WITH THESE TOXINS CAN BE FATAL TO RESCUERS

CONSIDER SCENE SAFETY & DECONTAMINATION

- Assess for **SLUDGEM** symptoms (*Salivation Lacrimation, Urination, Defecation, GE Distress, Emesis, Muscle twitching/Miosis [constricted pupils]*) and the **Killer - B's** (*Bradycardia, Bronchorrhea, Bronchospasm*)
- Transport Police K9 with all windows of ambulance open, or ensure exhaust fan and ventilation system activated.
- Decontaminate entire ambulance after Police K9 transport

In unstable Police K9 with known organophosphate/carbamate poisoning:

1. Remove Police K9 from contaminated area and perform decontamination as needed based on scene/call circumstances.
2. Oxygen as appropriate
3. Manage airway as appropriate.
Ventilatory support may be critical in these poisonings
4. Vigorous suctioning may be necessary
5. Mark 1 or Duo-Dote kit (*noted as auto-injector in table below,*) if already carried on the ambulance. (*Not required medication.*)

Atropine

LB	Kg	Dose (mg)	Min # auto-injectors
40	18	36-9	2
50	22	4.5-11.4	2
60	27	5.4-13.5	2
70	32	6.4-16	3
80	36	7.2-18	3
90	41	8.2-20.5	4

2-PAM Chloride

LB	Kg	Dose (mg)	Min # auto-injectors
40	18	180-360	2
50	22	227-450	2
60	27	270-540	2
70	32	320-640	3
80	36	360-720	3
90	41	410-820	4



Police K9

Heat Injury

- Police K9's do not sweat. Their predominant cooling mechanism is by panting.
- The progression of heat injury in the Police K9's can be quite rapid and requires immediate intervention.
- Causes are environmental, exertion or, a combination of the two.
- **AVOID muzzles** unless required for safety reasons; an open basket muzzle is the preferred muzzle in this case to allow for panting.

	Core Temp (F)*	HR	MM	LOC	Panting**	Behavior/Performance
Mild (heat stress)	Varies 105-106	Fast, strong	Moist, Pink	Alert	Heavily Controlled	Excessive thirst, discomfort with physical activity, slightly decreased performance
Moderate (heat exhaustion)	106-108	Fast, Strong, or Weak	Tacky or Dry, Bright Red	Alert	Uncontrolled, Failure to Salivate	Weakness, anxiety, unwillingness to work, acts tired, unresponsive to handler commands
Severe (heat stroke)	Usually, >108	Weak	Dry Pale	Altered	Maybe	Vomiting, diarrhea, ataxia, head tremors, seizures, blindness, abnormal pupil size

Treatment for all stages of heat illness includes:

1. Remove the Police K9 from the heat source and stop their work/exercise.
Transport immediately and perform other actions en route.
2. Begin cooling methods
3. Monitor temperature (rectal or axillary), if trained and equipped
4. Monitor for changes in mentation

Mild Heat Injury (heat stress):

5. Cool by bringing to a shaded or lightly air-conditioned area. If no A/C available, use circulating fan to blow a light breeze by the Police K9
6. As feasible, remove muzzles, harnesses, tactical gear, etc.
7. Place on a cool surface to promote conductive cooling
8. Offer cool water and encourage drinking
9. Monitor vital signs every 5 minutes; if able to measure temperature, discontinue cooling efforts when core temp is 104F or less

Source: DHS Working Dog Handler Medical Care Manual 2017 Continues Core Temp (F)* HR MM LOC Panting** Behavior/Performance



Police K9

Heat Injury *continued*

Moderate Heat Injury (heat exhaustion)

9. Follow guidelines above and start active external cooling
 - Use air conditioning or cooling fans, if available, to reduce core body temperature
 - Place cold compress or wrapped in towels on the head and neck as well as the axillae and groin. Avoid placing ice packs on the limbs as this shunts hot blood back to the core.
 - Do use or spray body with cold water; soak hair to skin with cold water and use fans or A/C to cool further.
10. Monitor vital signs every 5 minutes; if able to monitor temperature, discontinue cooling efforts when core temperature drops below 104F
11. Dry Police K9 off, place on a dry surface, *if possible and avoid direct application of air on Police K9 from circulating fans or A/C*
12. If able to monitor temperature, and if body temperature drops below 100F (rebound hypothermia) consider passive warming by covering with blankets or other similar materials

Severe Heat Injury (heat stroke)** This is a life-threatening condition**

13. If able to monitor temperature, rapid cooling to a body temperature of 103.5-104F
 - Cool water (do not submerge in ice bath)
 - Soaking the Police K9 to the skin with cool water. Soak the entire Police K9 as rapidly as possible through the hair, soaking the skin thoroughly and implement convective cooling with cooling fans or A/C.
14. If able to monitor temperature, when temperature reaches 104 F, remove from the bath/water, dry hair and continue to monitor temperature, watch for rebound hypothermia, as above.

NOTE: No single core temperature value defines heat-related illness for all Police K9s in all circumstances. Well-conditioned, acclimated Police K9 may reach peak core temperatures as high 106 - 108° F while working, yet display no behavioral or clinical signs of heat stress. Base clinical assessment on presence and progression of clinical signs over core temperature.

*****Controlled panting: the Police K9 can stop panting with an alcohol-soaked gauze is put in front of the nose or when the Police K9 becomes interested in or distracted by something (i.e. toy, reward, noxious stimulus, verbal command). *****

*****Uncontrolled panting: the Police K9 cannot stop panting even when offered a treat or reward or when exposed to alcohol-soaked gauze or other noxious stimuli. *****



Police K9

Anaphylaxis

Anaphylaxis

1. Allow Police K9 to assume position of comfort
2. Secure Police K9 with leash/rope
3. Manage airway as appropriate
4. Supplemental oxygen, as appropriate
5. If anaphylaxis identified, administer epinephrine via auto-injector or IM using Check and Inject, dosed by Police K9 weight.
 - a. epinephrine 0.3 mg IM (Adult auto-injector) for Police K9s 20kg or greater
 - b. epinephrine 0.15 mg IM (Pedi auto-injector) for Police K9s less than 20kg

May repeat IM epinephrine dose every 5-15 min x 3 if signs/symptoms continue or return despite initial treatment

PEARLS

In allergic reactions with progression to anaphylaxis, clinical signs are most often associated with the cardiovascular (CV) and gastrointestinal (GI) systems. Respiratory signs may also develop, along with seizures and anxiousness, progressing to weakness and collapse. Signs include:

1. *CV: tachycardia, weakness, weak pulses, mucous membrane color changes*
2. *GI/GU: urinating, vomiting, and diarrhea that is often bloody*
3. *Respiratory: increased respiratory effort, wheezes, and crackles*

