

EMERGENCY CARE OF THE POLICE DOG.©

TORONTO POLICE DOG SERVICES

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ANATOMY AND PHYSIOLOGY

1. MUSCULOSKELETAL SYSTEM:
 - SKULL
 - SPINE-Lumbosacral region
 - FORELEGS-shoulder, elbow and carpus
 - HINDLEGS-Hips, stifle, hock
2. SPECIAL SENSE ORGANS
 - EYES-Black and white vision
 - Excellent night vision
 - Sees movement better than acuity (sharpness)
 - NOSE-Smells dilution's in over 1/ 1,000,000
 - Sharp differentiation in complex odors
 - Can be adversely affected by illness, volatile gases, dental disease
 - EAR INCLUDING INNER EAR
 - Balance inner ear
 - Very sharp hearing
 - Echolocation possible
 - PROPRIOCEPTION
 - Sense of balance
 - Improved by training
3. CARDIOVASCULAR and PULMONARY SYSTEM
 - Resting heart rate 60- 180
 - Exercise ability increases with training and conditioning.
 - Responsible for Temperature Regulation
 - Decreased ability in heat and humidity
4. GASTROINTESTINAL SYSTEM
 - Stomach small intestine and colon
 - Relatively shorter and "less complex" than human
 - Less Tolerant of changes in food and water source
5. NORMAL VALUES FOR DOGS (AT "REST")
 - TEMPERATURE: 38.5°C (101.5°F)
 - PULSE: 120-130 /MIN less than 90 AT REST. NOTE; IRREGULAR RATE IS NORMAL FOR THE DOG.
 - RESPIRATION: 15-30/MINUTE (EXCLUDE PANTING).
 - WATER INTAKE : 15-30 ML/KG/DAY- Average G.Shep. needs a minimum of 35 ounces per day. OVER 100 ML/KG/DAY IS ABNORMAL. (In an average GS that translates into over 110 ounces per day)
 - WEIGHT: 30-38 KG FOR A GSPD
 - CALORIES MIN 15 KCAL/LB/DAY = 1050Kcal/day
 - CALORIES AT WORK may exceed 60 KCAL/LB//DAY - over 4200 Kcal/day
 - CALORIES in FOOD- 450 KCAL/TIN OR 350 KCAL /CUP OF DRY - In extreme conditions will be unable to maintain caloric requirements (i.e., over 12 cups of dry food/per day)

PSYCHOLOGY

1. DRIVES- Appetite
 - Prey and hunting
 - Sexual and Pack drive (includes dominance, submission)
 - Play behavior
2. CUES AND AROUSAL



The above graph demonstrates the principle that any particular behavior being elicited is dependent on two important factors:

- The arousal or excitement level of your dog
- The strength or value of a cue (signal or commands).

In an over excited or under stimulated state a stronger Cue (signal, command) will be necessary to elicit the appropriate behavior. At the optimum level of excitement a minimal cue or signal is required to elicit the appropriate behavior.

Training: Training in specific locations and conditions will reduce the arousal level to optimal levels that allows for appropriate response to commands.

3. UNCONDITIONED(UCR) and CONDITIONED RESPONSE (CR) and Neurotic behavior
 - CR = Stimulus - UCR. Example Food and drooling
 - UCR = Signal and CR. Example Bell, food , drooling
 - Neurotic behavior e.g. Bell, food, bell, food then Bell shock
4. REWARD AND PUNISHMENT
 - Random Reward stronger than continuous reward
 - Punishment is not a reward. Absence of or avoiding the punishment acts as the reward.

- Generally rewards are stronger motivators than punishment

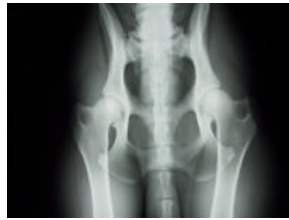
COMMON DISEASES OF DOGS

1. DISTEMPER:
 - Virus causes respiratory disease, enteritis and epilepsy
2. HEPATITIS
 - Specific virus of the liver.
 - Specific Hepatitis virus to Dogs
 - Not contagious to Man
3. LEPTOSPIROSIS
 - Bacterial disease ..affects the kidney
 - Highly infectious
 - From infected water or food
 - Passed from stool of infected rodents
 - Human contagion possible
4. PARVO VIRUS ENTERITIS-
 - 1 teaspoon of stool infects over 1000 dogs
 - Infected particles last over 1 year in the environment.
5. RABIES
 - Virus with predilection to brain - Always Fatal
 - Spread by bites
 - Carried by Raccoons and Foxes
6. BACTERIAL DISEASES
 - Bordatella -kennel cough. Improper ventilation.
 - Salmonella, Yersinia, Campylobacter
 - Causes severe diarrhea, highly infectious.
 - Public Health significance
 - Caused by ingestion of contaminated food and/or Fecal contamination
 - Once e.g., salmonella in environment it will not be eradicated
7. INTERNAL PARASITES
 - Once enters the kennel it will not be eradicated.
 - Giardia-“Beaver fever”
 - Round Worms - one round worm produces 250,000 eggs per day.
 - Hook worms-produces severe diarrhea and anemia
 - Tape worms-spread through fleas
8. EXTERNAL PARASITES
 - Fleas (common cause of “Hotspots”)
 - Mange

COMMON PROBLEMS OF THE GSD

1. HIP DYSPLASIA

- Abnormality of conformation of hip
- Leads to arthritis
- Usually screened for before entering PDS
- “Regular” H/D X-rays miss many dogs
- Pen Hipp more superior
- Amer. Armed Forces Review
 - ◆ Regular X-rays did not adequately screen dogs for HD
 - ◆ Many Working Armed Forced PD had “normal” working life span



Normal Hips



Severe Hip Dysplasia

2. ELBOW DYSPLASIA

- Screened for before entry
- Arthritis of the elbow

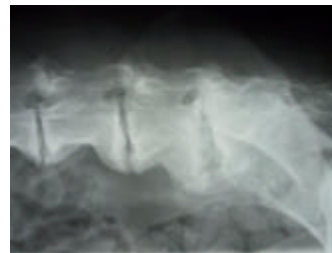
3. PANOSTEITIS

- Long Bone Disease
- Will out grow it
- Recurrent shifting lameness
- New NSAIDS available for treatment (Toradol-use with caution...very effective)

4. LUMBOSACRAL DISEASE AND MYELOPATHY

- Note; This is a serious problem and is very common in GSD that are working and JUMPING.
- Instability of the LS area.
- Onset at adult-hood and middle age
- Paraparesis / paraplegia of the pelvic limbs
- hyporeflexia / areflexia
- Muscle atrophy with chronic lesion thigh muscles may also be affected
- Ataxia (walks as if drunk in hind legs).
- Fecal incontinence -seen in severe sacral spinal cord / sacral plexus disease
- Urinary incontinence- seen in severe sacral spinal cord / sacral plexus disease
- Painful lumbosacral articulation
- Tail paresis / paralysis
- Loss of pain in tail

Xray of Police dog with
severe arthritis of the
Lumbosacral joint



5. BLOAT AND OTHER GASTROINTESTINAL DISEASES
6. HEART DISEASE AND SUDDEN DEATH SYNDROME
7. SKIN DISEASES
 - Hotspots
 - Lick granuloma
 - Lip disorders
 - Skin "Cysts"
8. EYE DISEASES
 - Pannus
9. DENTAL DISEASE, fractures and avulsions.
10. PERIANAL FISTULAS : Not an uncommon problem in the GSD. Signs of licking and anal gland disease usually present. Early detection essential.

RECOMMENDED FIRST AID KIT



1. 1 TOURNIQUET
2. KLING-2 INCH ROLL STRECH GAUZE #2 AND 4 INCH STRECH GAUZE #2
3. POROUS ADHESIVE TAPE (ZONAS) 1 ROLL 1" AND 1 ROLL 2"
4. ELASTOPLAST - 1x2" AND 1x 4"
5. VETRAP-NON ADHESIVE BANDAGE-1x2" AND 1X4"
6. STERILE NONADHESIVE PADS-TELEFA 4-5
7. GAUZE SQUARES , 3 INCH x 12
8. ANTIBACTERIAL OINTMENT -HIBITANE
9. ANTISEPTIC SOAP 2-4 OUNCES -HIBITANE
10. 2-4% HYDROGEN PEROXIDE -4 OUNCES
11. BLUNT SCISSORS
12. TWEEZERS
13. HEMOSTAT
14. THERMOMETER (Digital preferred)
15. SARAN WRAP or PLASTIC SHEET for Chest Wounds
16. STERILE DISPOSABLE GLOVES

EMERGENCY CARE

1. ASSESS THE SITUATION.
 - KEEP CALM. YOUR DOG WILL FEED OFF YOUR ANXIETY
 - BE FIRM BUT GENTLE.
2. CHECK FOR HEART BEAT. Tips of fingers under the chest wall and thumb opposing CPR only if required.
3. RECOGNIZING SHOCK . Shock = Failure of the Microcirculation
 - **Check the capillary refill time-over 2 secs.**
 - ◆ CAPILLARY REFILL TIME
 - ⇒ Normal 1-2 sec.
 - ⇒ Push finger against upper lip
 - ⇒ How fast does the gum refill
 - **Colour of mucous membranes-pale? Purple?**
 - **CHECK BREATHING**
 - **Rate**
 - **Depth**
 - **Ease**
 - **Mental attitude- Anxious? Painful? Depressed?**
 - **Heart rate AND PULSE STRENGTH**
 - **Temperature-cold extremities ? heat stroke ?**
 - **Check for external bleeding**
 - **Check for abdominal pain, fluid**
 - **Review: Disturbance of circulation can follow any serious injury. Dog will have white to pale white to grey gum colour. Capillary Refill time is prolonged or absent. Dazed or unconscious attitude. Weak, rapid or thready pulses. Shallow respirations. Grunting at the end of inspiration. Head held out to breath...breathing with difficulty. Weakness and collapse.**
 - **LEVEL OF CONSCIOUSNESS**

4. CONTROL BLEEDING-

- EXTERNAL BLEEDING - Leg wounds can bleed severely.
 - ⇒ Apply firm continuous pressure.
 - ⇒ Bandage can be applied.
 - ⇒ Use thick gauze or cotton.
 - ⇒ Wrap with stretch gauze.
 - ⇒ Can leave bandage on for 1-2 hours.
 - ⇒ NOTE: If entire limb not wrapped need to restore circulation every 25-20 minutes.
 - ⇒ Tourniquet can be applied above the wound. Good for arterial bleeding (pumpers). Apply bandage then release tourniquet every 2-3 min.
- INTERNAL BLEEDING:
 - ◆ Look for signs of shock.
 - ◆ FIRST AID WILL NOT CONTROL INTERNAL BLEEDING
 - ⇒ Belly bandage can help for a short period of time if bleeding is in abdomen
 - ⇒ TRANSPORT IMMEDIATELY
 - ⇒ TAKE GREAT CARE IN HANDLING ABDOMEN.
 - ⇒ DO NOT LIFT UNDER BELLY AFTER TRAUMA

5. CHECK FOR WOUNDS:

- SUPERFICIAL WOUNDS and PUNCTURES :
 - ◆ Even small puncture may require surgical care.
 - ◆ DO NOT DISREGARD.
- DEEP WOUNDS:
 - ◆ See above.
 - ◆ MUST BE CHECKED.
 - ◆ IF time a problem
 - ⇒ Wash hands.
 - ⇒ Clip hair.
 - ⇒ Use gauze and antiseptic soap or cream to affected area.
 - ⇒ Bandage as required. Wrap with gauze..not too tight.
 - ⇒ Cover with adhesive and Transport wound up.
- PENETRATING FOREIGN BODIES: Example arrow or knife.
 - ◆ DO NOT REMOVE
 - ◆ If in chest and air escaping
 - ⇒ Cover edges with gauze and Saran wrap to control air loss
 - ⇒ Tape
 - ⇒ Transport (injury up) ASAP with no pressure on penetrating object.

6. TREAT FOR SHOCK- Shock is a disturbance or failure of circulation. Can follow any injury.

- ⇒ GET ANIMAL TO VETERINARIAN ASAP
- ⇒ KEEP ANIMAL QUIET AND TRANSPORT (ON STRETCHER IF POSSIBLE)
- ⇒ CLEAR MOUTH OF FOREIGN MATERIAL (if possible)
- ⇒ ARTIFICIAL RESPIRATIONS OR CPR IF REQUIRED.
- ⇒ COVER WITH BLANKET (EXCEPT FOR HEAT STROKE)
- ⇒ NO FLUIDS BY MOUTH
- ⇒ KEEP HEAD AT HEART LEVEL

7. TRANSPORT:

- ⇒ STRETCHER PREFERRED or BLANKET or BOARD
- ⇒ MUZZLE: USE A TOURNIQUET OR A GAUZE LOOP
- ⇒ TRANSPORT-STRETCHER PREFERRED. BLANKET, BOARD.

8. ARTIFICIAL RESPIRATION:

- ⇒ Used when breathing stopped, drowning or electric shock.
- ⇒ Respirations stop before heart beat.
- ⇒ Clean mouth of vomitus or foreign material.
- ⇒ Clamp mouth closed.
- ⇒ Exhale into animals nose at 15 breaths per minute.
- ⇒ CAN BE COMBINED WITH **CPR**.

9. CPR; ONE OR TWO PERSON METHOD: Use in severe shock with Cardiac and respiratory failure.

ONE PERSON :



- ⇒ Lay animal on side on a Flat surface (unyielding).
- ⇒ Kneel at head , below jaw and close to front legs
- ⇒ Hold muzzle closed w. one hand and begin artificial respirations.
- ⇒ Place heel of other hand on chest wall behind the shoulder to apply cardiac massage.
- ⇒ Compress at 60-80 times per minute.
- ⇒ For every 4-5 beats breath for dog.
- ⇒ Do a COUNT PATTERN (See Below)
- ⇒ ALTERNATIVE Technique **** SEE BELOW for Thoracic Pump method.

TWO PERSON:



- ⇒ One person breaths for dog at the head
- ⇒ Breath every 5th to 6th compression.
- ⇒ Second kneels along the spinal column at the level of shoulder.
- ⇒ Place heel of hand just above and behind the elbow.
- ⇒ Compress wall 1-2 inches at a rate of 60-80 per minute.
- ⇒ “One and Two and Three and Four and Five and BREATH”
- ⇒ Every 10 Breaths person two checks for pulse.

- **THORACIC PUMP:** Last Resort
- ⇒ **Try regular technique first.. if failing switch to thoracic pump.**
- ⇒ Variation of above.
- ⇒ BREATH and COMPRESSION occur SIMULTANEOUSLY .
- ⇒ Much harder to perform.
- ⇒ Very labour intensive.
- ⇒ Reach higher blood pressures esp. to brain.

10. CHEST WOUNDS:

- Seen after car accidents and gunshot wounds.
- Signs of abnormal breathing and color of mucous membranes.
- Abnormal contour to chest.
- Often in pain.
- Oral or nasal frothy bleeding.
- Shock.
- DO NOT USE CONSTRICTIVE (stretch) BANDAGES AROUND CHEST.
- If GAPING WOUND and AIR LOSS as dog breaths
 - ⇒ Cover wound with airtight material (layers of gauze pad, clean cloth wrap, plastic or Saran Wrap).
 - ⇒ Secure with one- two strips of tape or hold to chest.
- TREAT FOR SHOCK.
- TRANSPORT, (IF POSSIBLE) WITH CHEST WOUND DOWN (except if an object penetrating the chest).

11. FRACTURE MANAGEMENT :

- ◆ Muzzle as fractures are painful
- ◆ **Signs** of
 - pain
 - swelling
 - abnormal angulation
 - no weight bearing
- ◆ **Other signs** of trauma include
 - abrasions
 - contusions
 - bleeding wounds
 - shock.
 - ⇒ CONTROL BLEEDING
 - ⇒ Treat for Shock.
 - ⇒ Transport.
 - ⇒ If close to clinic do not apply splint.
 - ⇒ Splint only if veterinary care not close by.
 - ⇒ DO NOT splint fractured pelvis or fractured ribs.

12. BURNS:

- Look for singed hair, redness, blistering or charring.
- Swelling and pain present.
- Liquids often run under coat and burns not evident (water, oil, gas) .
- Muzzle before handling due to pain.
- Minor burns treat within 20 minutes with cold water.
- Clip hair gently around wound
- Treat as a superficial wound
- Severe Deep wounds will lead to Shock. TRANSPORT ASAP.
 - ⇒ Keep animal quiet.
 - ⇒ ICE PACKS IF ALLOWED. COVER WITH GAUZE
 - ⇒ +++NO OINTMENT++++
 - ⇒ flush with cold water

13. CHEMICAL BURNS:

- Often involve mouth, lips, face. Pads. Occasionally ingested.
 - ⇒ When Handling-Wear gloves.
 - ⇒ Flush with cold water.
- Determine if Acid or Alkali.
 - ⇒ **ACID USE BAKING SODA PASTE**
 - ⇒ **ALKALI RINSE WITH LEMON JUICE OR VINEGAR AND WATER**
- Transport

14. CHOKING

- ◆ FOREIGN OBJECTS IN MOUTH
 - Pawing at mouth
 - Gagging
 - Drooling.
 - ⇒ Force open mouth
 - ⇒ Remove with pliers.
 - ⇒ Often stuck between upper Canines
 - ⇒ Be careful of bites
 - ⇒ Transport if required.
- ◆ FOREIGN OBJECTS OR SWELLING IN THROAT (Trachea).
 - Signs are related to difficult breathing
 - Bluish colour to lips and gums

- Collapse
 - ⇒ Force mouth open and check back of throat
 - ⇒ If can be removed use pliers or Hemostat
 - ⇒ Can use a roll of Tape as a Moth Gag
 - ⇒ In dogs can use a K9 Heimlich maneuver.
- **K9 Heimlich.**
 - ⇒ Stand behind dog with arms around body behind the last rib.
 - ⇒ Use a “two handed hand over hand” fist
 - ⇒ Exert a quick forward upward thrust.
 - ⇒ Repeat 2-3 times
 - ⇒ If animal collapses continue maneuver , pull tongue forward...try artificial respirations.
 - ⇒ Transport.
 - ⇒ Emergency tracheotomy
- Objects in esophagus
 - Frequent swallowing motions
 - Extended head and neck
 - Avoids food or water
 - If swallows water it comes up immediately
 - ⇒ DO NOT FORCE ANY FOOD
 - ⇒ Transport ASAP for scoping and removal
 - ⇒ Necrosis and injury to esophagus can happen in hours.

15. HYPOTHERMIA:

- Following cold submersion or prolonged exposure to wet and cold
- Dog will be depressed and feel cold.
- Body temperature will be below 97°C.
- Respiratory Rate will be slow.
- SHIVERING may be present but it WILL NOT BE PRESENT IN SEVERE HYPOTHERMIA
- HEART RATE SLOW. WEAK PULSE.
 - ⇒ Move to a warm location.
 - ⇒ Cover with blankets.
 - ⇒ Gently rub the body (not legs)
 - ⇒ Use heater carefully. Allow patient to breath warm air.
 - ⇒ Can give corn syrup.
 - ⇒ If unconscious.....TRANSPORT ASAP.

16. FROST BITE:

- Usually to extremities (ears, tails, scrotum).
- Area cold, white gray.
- Often will self mutilate the area.
 - ⇒ If deeply frozen TRANSPORT
 - ⇒ KEEP AREA COLD UNTIL SURE CAN KEEP AREA WARM.
 - ⇒ THAWING AND REFREEZING CAUSES INTENSE INJURY
 - ⇒ Submerge tissue in 100°C (Warm water).
 - ⇒ DO NOT MASSAGE.

17. HEAT STROKE.

- Often occurs if dog is in a confined space
- Exercised in warm, humid weather.
- Heavy breathing, panting, vomiting, collapse, red mucous membranes.
- Tongue engorged.
 - ⇒ **Monitor rectal temperature.**
 - ⇒ Cool Animal
 - ⇒ Submerge in cool water briefly.
 - ⇒ IF NO WATER PRESENT...Can use alcohol on feet and head.

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- ⇒ Can cause temperature to drop too low.
- ⇒ When temperature starts to drop to 40-41°C (103-104°F) dry dog.
- ⇒ TRANSPORT: Usually need IV fluids and will have electrolyte disturbances and cardiac irregularities.

18. DROWNING:

- ⇒ Clear mouth of foreign material
- ⇒ Hold hind legs up for a few second to help remove water
- ⇒ Artificial respirations
- ⇒ CPR
- ⇒ If vomits water, head down... rump up.
- ⇒ Transport and have checked even if recovers well.

19. ELECTRIC SHOCK:

- Often occurs when chew electric cords.
- Rigid and unconscious.
- **Turn off electric source before handling.**
- Heart beat weak or absent.
- Burns may be present.
 - ⇒ CPR essential.
 - ⇒ Often irregular heart.
 - ⇒ Hit or "punch" chest over the heart to try and establish a regular rate.
 - ⇒ Transport

20. EYE INJURY:

- Have eye checked ASAP.

21. DENTAL INJURY:

- Fractured tooth: check within 12 hours to prevent loss of tooth. Partial pulpotomy may be curative.
- Avulsed Tooth: Can often re-implant tooth and save it. Collect tooth and keep moistened by using a sterile or clean saline solution, or place in milk and transport ASAP. Notify us IMMEDIATELY if these injuries happen.
- Pulpal hemorrhage: Notify ASAP. Do not work dog until checked.
- Routine care: At least have an annual dental prophy done.

22. PAD INJURY:

- Often can bleed badly .
 - ⇒ Pressure to area.
 - ⇒ Bandage with Gauze square
 - ⇒ Check ASAP. **Can have tendon injuries.**

23. FISH HOOK:.

- Skin or lips
- Near eye
 - ⇒ Pull through and cut off barb
 - ⇒ If can't remove bandage or wrap and transport
- Swallowed
 - ⇒ Will need Xray and Removal
 - ⇒ If line attached DO NOT PULL as THIS WILL SET HOOK

24. INHALED POISON: (Smoke, Carbon Monoxide).

- Cough
- Disorientation
- Collapse
- Unconsciousness
- May look PINKER than normal
 - ⇒ Move to fresh air.
 - ⇒ Artificial respirations and/or CPR
 - ⇒ Transport

- ⇒ Following CO advise hyperbaric oxygen chamber
- ⇒ If concerned about CO exposure refer for evaluation

25. ABSORBED POISON: (Insecticides, chlorinated hydrocarbons)

- Signs are dependent on type of material
- Often are excitable
- Uncoordinated
- Unresponsive
- “Spaced out”
- Twitching
- Convulsions
 - ⇒ Wash with soap and water.
 - ⇒ Rinse well.
 - ⇒ Transport

26. INGESTED POISON: (Antifreeze, petroleum, plants, rat poisons, slug bait, herbicides, insecticides, garbage and Compost)

- Signs are variable but often are neurologic.
- Increase excitability or decreased consciousness often present
- Gastrointestinal signs (e.g., vomiting) often present.
- Convulsions Common
 - ⇒ **TRANSPORT ASAP.**
 - ⇒ **contact poison control**
 - ⇒ **Do not give first aid if unconscious or having seizures**
 - ⇒ **Do NOT induce vomiting if substance is unknown or corrosive, petroleum .**
 - ⇒ **Induce vomiting if known poison , non corrosive or is not a petroleum product and if within 1-2 hours.**
 - ⇒ **Give milk, vegetable oil or activated charcoal. (1 tbsp per 3 lbs body weight)**
- ◇ **For acids:**
 - ⇒ **Milk of Magnesia- 1 tbsp per 3 lb.**
 - ⇒ **follow with vegetable oil**
 - ⇒ **or 6-7 egg whites.**
- ◇ **For Lye or strong alkali:**
 - ⇒ **Dilute vinegar with lemon juice (equal amounts at 1 tbsp per 3 Lb.)**
 - ⇒ **or give orange juice 1 tbsp/3 lb.**
 - ⇒ **Follow with vegetable oil or egg white.**
- ◇ **For Petroleum products:**
 - ⇒ **Give Vegetable oil.**

ANTIFREEZE

- **EVEN IF YOU ARE ONLY SUSPICIOUS -TREAT**
- **INDUCE VOMITING**
- **TRANSPORT TO CLINIC ASAP**
- **Once signs are present it is often too late to treat..**

26. MARIJUANA INGESTION (dope toxicity, pot intoxication, grass, Cannabis sativa, THC poisoning)

- Behavioral changes -
 - ◇ Signs of depression
 - ◇ Stupor
 - ◇ Ataxia
- Increased pulse rate
- Decreased blood pressure
- Muscle weakness
- Conjunctival injection

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- Hypothermia
- Vomiting
- Increased pulse rate
- Respiratory Arrest

TREATMENT:

- ⇒ Induce Vomiting (within one hour of ingestion)
- ⇒ Treat **BEFORE** animal develops clinical signs of toxicosis
- ⇒ Emesis (Vomiting) can be induced by crushing one tablet of apomorphine and adding 0.5 ml of water to suspend it, and then via 3-ml syringe dropwise place into the conjunctival sac until vomiting occurs
- ⇒ Apomorphine impregnated discs (see disc instructions)
- ⇒ Orally with 3% hydrogen peroxide administered at a dose of approx. 1 teaspoon/5 kg of body weight
- ⇒ Syrup of ipecac at a dose of at 2.2 ml/kg of body weight
- ⇒ After vomiting has ceased
 - * 1 to 4g of activated charcoal/kg & 1/4 teaspoon (1.25 ml)/ 5kg of a saline cathartic (in 5 to 10 times as much water) USE Sodium sulfate or magnesium sulfate should be given orally
- ⇒ Administer narcotic antagonists
- ⇒ Naloxone HCl (Narcan-0.04 mg/kg IV preferred)
- ⇒ Repeat at 2-3 minute intervals to effect
- ⇒ Diprenorphine HCl (Nororipavine, Cyprenorphine, Revivon)
- ⇒ Transport ASAP. Need to monitor for Respiratory Tract Arrest

Support respiration

- patent airway required
- cuffed endotracheal tube (unconscious)
- Tracheostomy (with local anesthetic)
- Respirator

Efficacy: Prognosis is good with treatment

Diuresis

- * If kidney is functioning minimum urine flow 0.1 ml/kg/min
- * Mannitol (2 g/kg/hr)
- * Furosemide (Lasix -5 mg/kg q6-8 hours)
- * Maintain hydration

Efficacy: Prognosis is good with treatment

27. COCAINE INTOXICATION :

- CNS excitation
- Peripheral vasoconstriction
- Hyperthermia secondary to the vasoconstriction
- Increased muscular activity
- Seizures
- Death usually results from respiratory arrest, cardiac arrest, or hyperthermia

TREATMENT

- ⇒ Dogs that have consumed cocaine should be treated ASAP.
- ⇒ detoxification should be instituted quickly after ingestion before dog has any clinical signs
- ⇒ Induce vomiting
- ⇒ Sedation followed by enterogastric lavage may be safer and more beneficial due to the rapid onset and high toxicity of this drug
- ⇒ In addition to detoxification, one should take steps to combat the cocaine that has been systemically absorbed by using:
 - ◇ Chlorpromazine

◇ Nitrendipine

- ⇒ If seizure activity is evident 1 mg of diazepam/kg should be administered IV to a maximum to a total dose of 20 mg/dog
- ⇒ Can also give Diazepam via rectal route; 1-2 vials pending size

28. AMPHETAMINE INTOXICATION: (Causes potent stimulation of the CNS and cardiovascular system with increased amounts of catecholamine at nerve endings via increasing release and inhibiting uptake & metabolism). **Minimum lethal dose 10-23 mg/kg.**

- Pallor
- Pale Mucous Membranes (Shock due to circulatory collapse)
- Hyperactivity
- Hyperexcitability
- Increased Sensitivity to stimulation (Hyperesthesia)
- Panting
- Rapid respirations (Tachypnea)
- Elevated Temperature (Hyperthermia)
- Vomiting
- Diarrhea
- Dilated pupils (Mydriasis)
- Hypertension (and then hypotension)
- Irregular Heart Rate (Cardiac arrhythmias)
- Missed Heart Beats (Heart block)
- Palpitations
- Trembling
- Seizures

◇ Other poisons with similar signs include :

- * Strychnine
- * Xanthines
- * Zinc phosphide
- * Metaldehyde
- * Nicotine

◇ Toxicologic (Laboratory) Analysis of:

- * Urine
- * Stomach contents

TREATMENT: PRIOR TO ONSET OF SIGNS

- ⇒ Indicated in all dogs that have consumed amphetamines
- ⇒ **Induce Vomiting**
- ⇒ **SAVE CONTENTS-Evidence**
- ⇒ After emesis, detoxification of the GI tract involving
 - ⇒ Activated charcoal
 - ⇒ Transport ASAP
 - ⇒ Saline cathartic may be indicated
 - ⇒ Urinary acidification via oral administration of ammonium chloride (enhance renal excretion (this treatment should only be used when dog is not acidotic)
- ⇒ from exertion or other manifestations of the amphetamines
 - ⇒ Chlorpromazine (10 to 18 mg/kg, IV) } **have shown to be beneficial in alleviating amphetamine toxicity**
 - Haloperidol (1mg/kg)
 - ⇒ Phenothiazines and butyrophenones have also shown to be beneficial in protection against lethal effects of amphetamine

TREATMENT: AFTER ONSET OF SIGNS

EMERGENCY CARE OF THE PD
VERSION 2003

- ⇒ Vomiting may be contraindicated
- ⇒ Treatment after initial detoxification procedures is mainly supportive and based on clinical signs
- ⇒ Prevent further absorption
 - ⇒ Gastric lavage
 - ⇒ Activated charcoal
 - ⇒ Cathartics
- ⇒ Sedation with Acetylpromazine maleate has been recommended (Caution - may lower the seizure threshold)
- ⇒ Diazepam 2.5-20 mg IV for seizure activity - as needed
- ⇒ Barbiturates IV to effect (Caution- they may deepen poststimulant CNS depression)
- ⇒ Hasten elimination by Acidify urine 100-200 mg NH₄Cl/kg/day PO divided QID
- ⇒ Supportive therapy (Fluids and monitor electrolytes and Blood pressure)
- ⇒ Cold water baths may be necessary for severe hyperthermia (Caution- as hypothermia may follow)

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