## Workbook



## **Emergency First Aid for Cats and Dogs**



**SART Training Media** 



## **Emergency First Aid for Cats and Dogs**

Workbook

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SART Training Media are available for download from the Florida SART Web site < www.flsart.org>.

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## **About Florida SART**

SART is a multiagency coordination group consisting of governmental and private entities dedicated to all-hazard disaster preparedness, planning, response, and recovery for the animal and agriculture sectors in the state of Florida.

SART operates at the local level through county SART organizations.

SART utilizes the skills and resources of many agencies, organizations and individuals with its multiagency coordination group structure.

SART supports the county, regional, and state emergency management efforts and incident management teams.

## **SART Mission**

Empower Floridians through training and resource coordination to enhance all-hazard disaster planning and response for animals and agriculture.

## **SART Goals**

- Promote the active engagement of each county coordinator who is responsible for animal and agricultural issues
- Provide assistance in the development and writing of county ESF-17 plans
- Promote the establishment of a county SART to work as a multiagency coordination group to support emergency management and incident management teams
- Provide training for all SART and animal and agriculture personnel
- Identify county resources available for an emergency or disaster
- Work to comply with the National Incident Management System (NIMS) document

Subject: The purpose of this unit is to introduce trainees to basic concepts of the main components of emergency first aid for small animals: animal behavior, treatment practices, and emergency management procedures. The top priority in the emergency care of animals is always the safety of human caretakers.

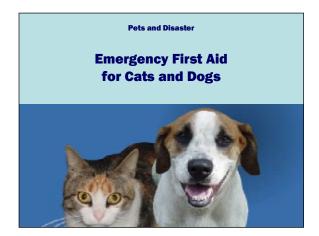
## **Learning Objectives**

At the end of this unit, participants will be able to:

- 1. Define emergency first aid for cats and dogs.
- 2. Explain the health and safety priority of personnel.
- 3 Describe how to survey and evaluate emergency situations.
- 4. Identify appropriate handling techniques.
- 5. Explain the vital signs for cats and dogs, and their measurement.
- 6. Recognize trauma types and the appropriate treatment procedures.
- 7. Identify key resources available for more information.

## Slides 1-3





## Prepared by Amy Stone Clinical Assistant Professor - Small Animal Surgery Department of Small Animal Clinical Sciences University of Florida, College of Veterinary Medicine / IFAS

## Slides 4-6

## **Learning Objectives**

After completing this training activity, participants should:

- Describe ways to practice Priority #1 Prevent Injury to
- · Understand the stages of rendering treatment that represent best practice, including:
  - Describe how to survey and evaluate the emergency situation
  - List appropriate handling techniques
  - List vital signs of dogs and cats and how they are measured
  - List and recognize types of trauma
  - Recognize which first aid procedures are appropriate to type of



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## **Primary Objective**

- · When assisting dogs and cats during an emergency situation
  - Your safety is ultimately the highest priority!!!
  - Do not endanger yourself or fellow first responders to attempt heroic rescue measures for animals



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## This Presentation is Intended for...

- Good Samaritans
- Emergency Medical **Professionals**
- First Responders
- · No Matter the level of experience, remember to seek veterinary advice whenever possible!





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## Slides 7-9

## Priority #1 -- Avoid Injury to Yourself • Animals in emergency situations - Nervous, anxious, possibly injured - Unpredictable - Dangerous!!!

## **Avoiding Injury to Yourself**

- Dogs
  - Can bite causing crushing injury
  - Can scratch causing skin injury
  - Both bites and scratches can lead to bleeding and infection





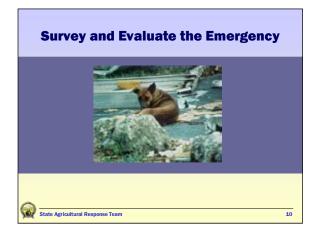
## **Avoiding Injury to Yourself**

- Cats
  - Can bite causing puncture, bleeding and serious infection
  - Scratch leading to bleeding and infection
  - They are very flexible and can be difficult to restrain without getting scratched or bitten
  - If you are scratched or bitten by a cat, contact a medical professional immediately!





## Slides 10-12



## **Survey the Emergency Situation**

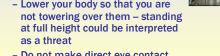
- · Avoid becoming a victim; always survey for potential hazards
  - Oncoming traffic
  - Downed power lines
  - Hazardous materials
  - Dangerous or venomous wildlife



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## **Survey the Emergency Victim**

- Approaching an Injured Dog or Cat
  - Approach very slowly
  - Approach softly as to avoid startling the animal
  - Lower your body so that you are
  - Do not make direct eye contact with the animal or stare directly



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## Slides 13-15

## **Survey the Emergency Victim**

- Keep an eye on the animal's posture and expressions
  - Face, ears, tail, fur and body
- Allow the animal to smell the back of your hand
  - WATCH for reactions carefully
  - Never make quick or sudden movements



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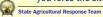
## **Emergency Triage**

 When presented with the situation, the animal that is most critical but with the best chance of living should be attended to first



## **Warning Signs - Dogs**

- Body Language Signs
  - Growling
  - Hair standing up (back, shoulders)
  - Snarling
  - Tail may be wagging or tucked under the body
  - Ears straight back
- Submission
  - Dog crouches and assumes submissive posture (lays down with belly exposed), may urinate or lick profusely
  - A fearfully submissive dog can become a biting dog if you force the situation

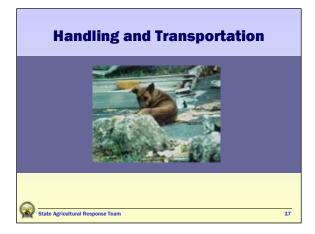


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## Slides 16-18

## Warning Signs -- Cats • Body Language Signs (Aggressive/Fearful) - Ears flattened - Salivating or spitting - Back may be arched - Hair is standing on end - Hissing



## **Handling Techniques**

- Gloves
  - Thick gloves may cause a loss of dexterity with small
  - Latex or vinyl gloves should be worn at all times when handling injured animals
- Dogs: Leashes (leather, nylon or canvas no chain-link)
  - Make a large loop by passing the end you normally connect to the collar through the hole in the handle
  - Standing just behind the animal or to the side, drop the loop over the neck and tighten

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## Slides 19-21

## **Handling Techniques**

## • Cats: Towels or Blankets

- Be aware of cat's position at all times
- Drop towel while standing well over cat
- Grasp scruff of neck and wrap towel around cat's body



## Cats or Small Dogs: Boxes

- Cats will often crawl into them for comfort
- -- Then you can use the towel technique
- -- This may also work for small dogs



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## **Handling Techniques - Muzzles**

- May be dangerous to muzzle these situations:
  - Vomiting
  - Coughing
  - Having difficulty breathing



- Muzzles may be necessary to treat injured animals
  - Use soft nylon or leather
  - There are pre-made muzzles for cats and dogs with short noses



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## **Making a Home-Made Muzzle**

If needed you can make a muzzle that can be used for dogs with the exception of those with short noses.

- Start with 18" of material, such as gauze, stocking, neck-tie, soft rope or a piece of soft cloth
- 2. Make the beginnings of a knot into a loop that can be placed over the animal's nose

Note: Keep enough space between you and animal's mouth so that the animal can't turn and bite you.







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## Slides 22-24

## Making a Home-Made Muzzle

- 3. Tighten the loop down on top of the nose, but not so tight that the animal can't breath
- 4. Pull the ends of the material down each side of the face, cross under the chin and bring the ends back behind the ears
- 5. Tie the lose ends back behind the ears

Note: For short-nosed dogs and cats, after steps 1-5, take one end of the loop and pass it under the nose loop and tie to the other end around the neck to secure onto the nose







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## **Restraint Techniques - Dog**

- · Headlock Dog Standing
  - Stand or kneel with your chest at dog's side
  - Place forearm under the dog's neck and bring the arm up the other side of the neck (around the head)
  - Lock your forearm under your head
  - Place the other arm over or under the animal's belly



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## **Restraint Techniques -- Dog**

- Lying on their side
  - Stand with your body beside dog, facing dog
  - Reach over dog and then back under dog; take hold of legs



- Hold front and hind legs straight out, thus preventing animal from standing
- Use forearm closest to animal to push neck to the ground



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## Slides 25-27

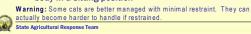
## **Restraint Techniques -- Cat**

## · Lying on their side

- The same technique as for the dog with some variation
- Instead of pushing the neck toward the ground with the forearm, grasp the loose skin behind the neck (the scruff) and hold firmly

## · Scruff in a sitting position

- Grasp and hold firmly a large amount of the scruff
- Using the other hand, hold the cat's body in a sitting position





## **Carrying and Transporting -- Dog**

## • Small (less than 25 pounds)

- Dog can be carried in box or carrier
- Alternatively, the dog can be carried in a person's arms
  - Cradle the dog with your arms
  - Place your hand around the dog's front legs, with two or three fingers between the legs
  - Hold the legs as you walk
  - Keep the injured side against your body

## • Large (25 pounds or more)

- Place one arm under or around the neck
- Place the other behind the rear legs or under the belly if you suspect a hind-limb injury

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## **Carrying and Transporting -- Cat**

## Box or carrier

- Ideal way to transport a cat They frighten easily and may jump away from you

## • Arms

- Use the small dog technique
- Alternatively, grab the scruff and support the cat's body with your other hand



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## Slides 28-30

## **Zoonoses**

- Zoonoses are diseases of animals transmissible to humans
  - Ringworm
  - Scabies
  - Rabies
- Be mindful of these while aiding animals in emergency situations
- In general, CPR is not likely to cause human illness



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## **Normal Vital Signs**

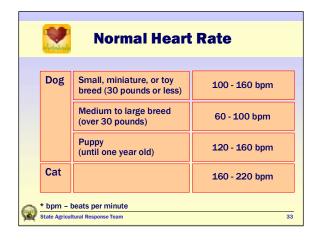
- Heart Rates and Pulses
  - Heartbeat can be felt on the left side of the chest just behind the bend in the left elbow
  - If you place your hand over this area, you should be able to feel and count heartbeats



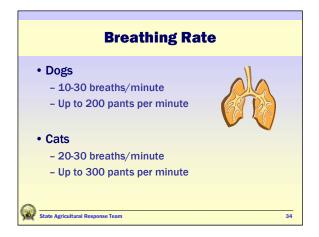
## **Slides 31-33**

## Normal Vital Signs • Heart Rates and Pulses: Femoral or inner thigh pulse - Place two fingers as high as possible on the inside of either back leg (use light touch) - Feel for pulse in middle of leg about half way between front and back of leg (there is a small recess where the blood vessels run) State Agricultural Response Team 31

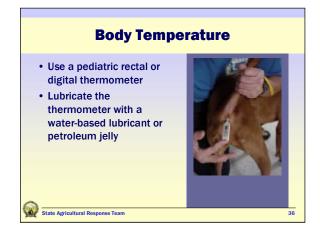
## Normal Vital Signs Just below the wrist (carpus) Locate the area just above middle pad on underside of either front paw Lightly place middle and index fingers at this point and feel for pulse Just below the ankle (hock) Locate the area just above middle pad on underside of either rear paw Lightly place middle and index fingers at this point and feel for pulse State Agricultural Response Team 32



## Slides 34-36

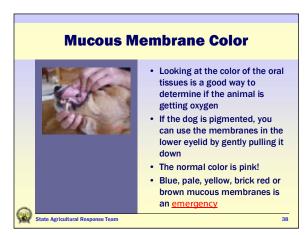






## Slides 37-39

## Body Temperature Normal body temperatures are: Dogs 100.0 - 102.8 °F Cats 100.5 - 102.5 °F Temperatures under 100 °F and over 104 °F should be considered an emergency



## **Capillary Refill Time**

- This is the time that it takes for the gums to return to their normal pink color after you press them
- As you press, the membrane should turn white
- Then it should only take 1-2 seconds for pink color to return
- This is a good way to assess circulation
- If capillary refill time is more than 3 seconds, it is an emergency



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## Slides 40-42



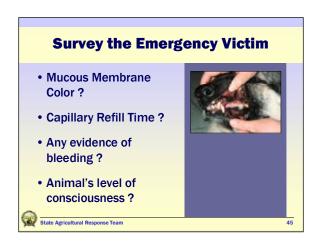




## Slides 43-45

## Survey the Emergency Victim ABCs of CPR Airway Is there an open airway? Breathing Is the animal breathing? Circulation Is there a heartbeat and a pulse?





## Slides 46-48

## **Cardiopulmonary Resuscitation**

- Method to treat an animal that is not breathing and/or has no heartbeat
- It involves rescue breathing (mouth-to-nose resuscitation) and chest compressions
- The ABC's or basic principles (airway, breathing and circulation) must be followed

Warning: CPR does not always work even when performed by an experienced veterinarian. If your attempt fails, know that you did everything that you could to save an animal's life.



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## **Establish an Airway**



- Check to see if the throat and mouth are clear of foreign objects
- To clear the airway, gently tilt the head back and extend the neck
- Pull the tongue between the front teeth
- Use your finger to remove any material or liquid from the airway

Do not put your finger into the mouth of a conscious animal; you will be bitten

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## Establish an Airway State Agricultural Response Team 48

## Slides 49-51

## **Breathing**

- If the animal is breathing, let them continue on their own. If not, then do the following:
  - Medium and large dogs (over 30 pounds): seal animal's mouth and lips by placing your hands around its lips
    - Gently hold the muzzle closed
  - Cats and small dogs (under 30 pounds): your mouth will seal the mouth and lips – no need to seal with hands
  - Place your mouth over the animal's nose and forcefully exhale
    - Give 4-5 breaths rapidly, then check if animal is breathing
    - Continue up to 20 minutes. After each breathing session, check if the animal can breath without assistance



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## Artificial Breathing Artificial breathing for medium or large dogs State Agricultural Response Team 50

## Artificial Breathing Artificial breathing for small dogs and cats State Agricultural Response Team 51

## Slides 52-54



## **Circulation - Small Dog or Cat**

If no pulse or no detectable heartbeat, perform chest compressions

- Lay animal on its right side
- Kneel next to animal with chest facing you
- Place palm of one of your hands over animal's ribs at point where elbow touches chest
- Place other hand around back of and underneath animal
- Compress chest ½ 1 inch (elbows should be locked)
- Alternate with breaths
- 5 compressions for each breath and check for a pulse
- If more than one person, each take a position and alternate at 3

compressions for each breath, then check for pulse

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## Cardiac Compressions State Agricultural Response Team 54

## Slides 55-57

## **Cardiac Compressions**

- Medium to Large Dogs (30 90 pounds)
  - Stand or kneel with the animal's back towards you
  - Extend arms at the elbows and cup your hands over each other
  - Compress the chest at the point where the left elbow lies when pulled back to the chest
  - Compress about 1-3 inches with each compression
- · Alternate with breathing
  - If alone, do 5 compressions for each breath, then check for pulse
  - If two people, perform 2 3 compressions for each breath, then check for a pulse



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## **Cardiac Compressions**



## **Cardiac Compressions**

- Giant Dogs (Over 90 pounds)
  - Use the same technique for medium to large dogs
  - If alone, do 10 compressions for each breath, then check for a pulse
  - If two people, do 6 compressions for each breath, then check for a pulse

Note: Do not assume there is no heart rate or pulse because an animal is not breathing. <u>Always check for a heartbeat</u> before starting chest compressions.



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## Slides 58-60

## **Shock**

## Shock results from decreased blood and oxygen flow to tissues and organs. Symptoms include:

- · Increased heart rate
  - Pulse may be bounding or, in later stages, weak
- Increased respiratory rate
- · Delayed capillary refill time
- · Decreased body temperature/cool feet
  - If in septic shock (infection), temperature may be elevated
- Weakness
- Disorientation
- Rescue workers must focus on stopping bleeding, warming the animal and the ABC's



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## **End Stage/Terminal Shock**

- When the body can no longer compensate for decreased oxygen and blood to vital organs
- Cardiac arrest likely to occur soon
  - Assess ABC's of CPR
  - Control bleeding
  - Warm animal
  - Elevate hind end slightly (unless broken back is suspected)





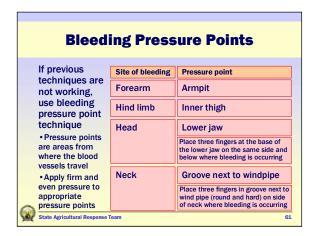
## **Bleeding**

- · Check ABC's of CPR
- Apply direct pressure with gauze or cloth
- Add more cloth if material gets soaked
- Do not wipe
- Secure with tape



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## Slides 61-63



## **Bleeding Points**

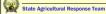
- When using pressure points, you must release pressure every 10 minutes (for a few seconds)
  - Prevents permanent damage to limb
- When using head and neck pressure points, take care not to obstruct breathing



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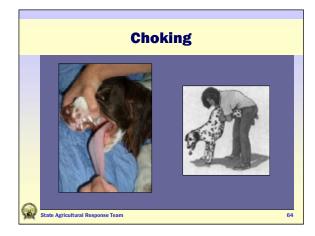
## **Choking**

- Open animal's mouth and sweep from side to side to see if object can be dislodged
- If animal is small enough, suspend animal by the hips with head hanging down
- If animal is bigger, place your arms around animal's waist
- Close your hands together to make a fist just behind first rib
- Compress the abdomen by pushing up 5 times
  - Alternate with performing 5 breaths (any air around the object is better than none)
- As a last resort, administer a sharp blow to the back between the shoulder blades
  - Then repeat abdominal compressions



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## Slides 64-66



## **Fractures**

- Lameness
- Swelling
- Abnormal limb position
- +/- bruising

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• +/- protruding bone



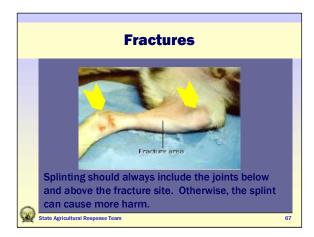
## **Fractures**

- If a piece of bone is sticking out, wash the area with water or saline
  - Loosely place a dressing over the wound and wrap with tape
- If the animal can't be kept completely still for transport, a splint may be applied
  - Place a rigid structure along each side of the fractured limb (rolled paper, stick, pen, etc)
  - Hold with tape in multiple locations, but do not wrap too tightly



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## Slides 67-69

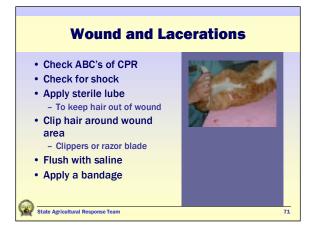






## Slides 70-72







## Slides 73-75

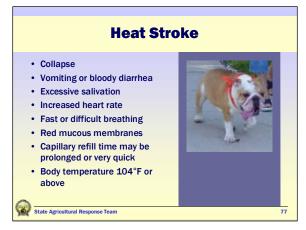
## Eye Injury Foreign Objects in the Eye • Swelling, squinting, pawing or obvious object • Gently wash the eye with large amounts of tap water or sterile eye wash • Inspect closely to confirm that all of the object has been removed

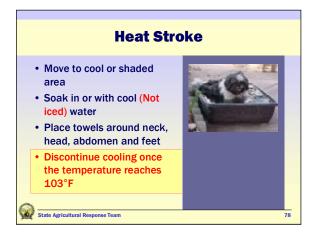
## Flush with sterile eyewash Cover the eye with a moistened gauze Blind the opposite eye Do not put a leash around the animal's neck Get veterinary attention as quickly as possible

## Embedded Foreign Bodies DO NOT REMOVE IMPALED FOREIGN BODIES Roll up gauze or other material that can be used to stabilize the object in place Use tape or an object that fits over the foreign body to make a brace to hold foreign body still If the object is long, make it shorter without removing it Get veterinary assistance as soon as possible

## Slides 76-78







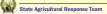
## Slides 79-81



## **Toxin Ingestion**

## Signs of potential toxin ingestion

- Vomiting or diarrhea
- Seizures or abnormal mental state (hyperexcitable, depressed)
- Excessive salivation
- · Ulcers in mouth
- Bleeding from mouth or any body cavity





## Seizures Animals may have seizures from toxin ingestion or other causes Protect from harm due to surroundings Do not put hand in the mouth or try to pull on the tongue State Agricultural Response Team 81

## Slides 82-84

## **Toxin Ingestion**



- Check the ABC's of CPR
- Check the mucous membrane color, capillary refill time, animal's mental state
- Check the surroundings for possible poison or toxin
- If possible, call the National Animal Poison Control Center 1-800-548-2423 or 1-900-680-0000



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## **Toxin Ingestion**

If advised to induce vomiting, give household (3%) hydrogen peroxide orally (animals only!)

- 1 teaspoon per 10 pounds of body weight
- This can be repeated every 10-20 minutes for 3 – 4 doses
- Ipecac should not be used in dogs or cats



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## **Burns**



- · Check for shock
- Flush chemical burns profusely with water
- Apply cool water or cool compresses to burned area
- · Apply sterile nonstick dressing
- Do not immerse in water or ice!
- Do not apply butter or ointment!

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## Slides 85-87

## Remember Emergency Triage When presented with the situation, the animal that is most critical but with the best chance of living should be attended to first State Agricultural Response Team 85



## Treatment or Euthanasia Criteria to be included in the decision making should include Pain and distress of the animal Likelihood of recovery Diagnostic information Welfare for the animal, humane considerations

## Slides 88-90

## **Euthanasia**

- · In some cases, sustained injuries may necessitate humane euthanasia
- Best performed by a veterinarian or under veterinary guidance
- · However, such assistance may not be readily available – The person performing a physical method of euthanasia must be well trained for each technique that may be used

www.avma.org/issues/animal



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## **Important Considerations**

- When euthanasia is necessary, always minimize animal distress as much as possible
  - The presence of humans may be reassuring for animals accustomed to human contact (penetrating captive bolt (dogs)/exsanguination in unconscious animals may be
  - For wildlife, human contact causes fear and greater distress (gunshot may be preferred – gunshot permits the least amount of human contact)



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## **Aesthetic Concerns**

**Humane Euthanasia by Gunshot or Penetrating Captive Bolt** 

- Despite being humane, both are aesthetically displeasing procedures
  - Involuntary movement will occur
  - Exsanguination requires several minutes and is visually uncomfortable to observe
- These procedures should be conducted out of the public



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## Slides 91-93

# Confirmation of Death • Death should be confirmed by evaluation of the following physical parameters over a period of several minutes • Lack of heartbeat • A pulse is normally not present under such circumstances • Lack of respiration • These may be erratic in an unconscious animal • Lack of blink reflex • Lack of movement over a period of several hours • The presence of "rigor mortis"

## The following are forbidden under Florida Law 828.12 Manually applied blunt trauma to the head such as a large hammer Injection of any chemical substance not labeled for use as a euthanasia agent Injection of air into a vein Electrocution



## Slides 94-96







## Slides 97-99

## **Closing Thoughts**

- In an emergency, your safety is of the utmost importance
- Prevention and preparation are key
- Providing animals with adequate shelter, water, and food is critical in the immediate aftermath of an emergency
- Treating injured animals may not be feasible without help from trained professionals



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## **References and Helpful Resources**

 HSUS Pet First Aid. Bobbie Mammato, DVM,MPH. 1997
 Small Animal First Aid Presentation, Bay Area Animal Response Team. May-li Cuypers, DVM, DACVIM. 2007



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## **Resources**

The following sources of information, including agencies, may be helpful.

- The American Veterinary Medical Association (AVMA), established in 1863, is a not-for-profit
  association representing more than 76,000 veterinarians working in private and corporate
  practice, government, industry, academia, and uniformed services. Information on animal
  welfare and euthanasia can be found at: http://www.avma.org/issues/default.asp
- Animal Management in Disasters. Health, Sebastian E. Ph.D., DVM., Mosby, Inc, 1999.
- Disaster Planning Tips for Pets, Livestock and Wildlife. Federal Emergency Management Agency publication, June 2002.
- Extension Disaster Education Network (EDEN) is a collaborative multi-state effort by Extension Services across the country to improve the delivery of services to citizens affected by disasters. This site serves primarily Extension agents and educators by providing them access to resources on disaster mitigation, preparedness, response, and recovery that will enhance their short- and long-term programming efforts.
- Florida Agricultural Law Enforcement. The Office of Agricultural Law Enforcement is dedicated
  to protecting Florida's agriculture and its consumers through professional law enforcement.
  http://www.fl-aglaw.com/
- Florida Dept. of Agriculture and Consumer Services (FDACS). http://www.doacs.state.fl.us
- Florida Animal Disease Control http://www.doacs.state.fl.us/ai/adc/adc\_main.shtml
- Florida Dept. of Community Affairs, Div. of Emergency Management. http://www.floridadisaster.org
- Florida Pet Friendly: Florida emergency shelters where you can stay with your pet if you must evacuate from your home during hurricanes or disasters. http://www.floridapetfriendly. com/pet-friendly-hurricane-shelters.htm
- Guidelines for the Development of a Local Animal Care Plan in Emergencies, Disasters, and Evacuations. Heath, Sebastian E. Ph.D. D.V.M., Purdue University, School of Veterinary Medicine.
- Homeland Security http://www.dhs.gov/index.shtm
- Humane Society of United States (HSUS), Cat First Aid Kit: http://www.hsus.org/pets/pet\_care/cat\_care/keys\_to\_a\_healthy\_cat/your\_cats\_firstaid\_kit.html
- National Agricultural Safety Database (NASD), The information contained in NASD was contributed by safety professionals and organizations from across the nation and provides a national resource for the dissemination of information. http://www.cdc.gov/nasd/
  - o Animal Handling Safety http://www.cdc.gov/nasd/docs/d001801-d001900/d001823/d001823.html

- o Fleas
  - http://www.cdc.gov/nasd/docs/d001201-d001300/d001253/d001253.html
- o Preparing to Evacuate Your Farm, Safety Measures When Flooding is Expected http://www.cdc.gov/nasd/docs/d001401-d001500/d001487/d001487.html
- o Things to Know about Pet Grooming and Pesticides http://www.cdc.gov/nasd/docs/d000901-d001000/d000986/d000986.html
- Pet First Aid Kit list of supplies can be found at the dog owners website: http://www.canismajor.com/dog/fstaidk.html
- State Veterinarian Office contact information for each state. http://www.aphis.usda.gov/vs/ sregs/official.html
- United States Dept. of Agriculture (USDA). http://www.usda.gov
- University of Florida Institute for Food and Agricultural Sciences Extension publication resource (EDIS) offers many fact sheets for veterinary and animal health issues. http://edis.ifas.ufl.edu/Departement\_Veterinary\_Medicine
- University of Florida IFAS Extension Disaster Handbook. http://disaster.ifas.ufl.edu
- USDA-APHIS Veterinary Services publication, "Animal Health Hazards of Concern During Natural Disasters" (Feb. 2002). This publication aims to "describe some of the natural disasters that have occurred in the U.S. during recent years and to review some infectious and noninfectious hazards that are perceived to be related directly to natural disasters." http://www.aphis.usda.gov/vs/ceah/EmergingAnimalHealthIssues\_files/hazards.PDF
- World Organization for Animal Health (OIE). http://oie.int