

Manchester West Veterinary Hospital

David D. Roberts, DVM, DABVP

Pet First Aid and Emergency Care- Speaker's Notes

These are Doctor Robert's speaker's notes for the Pet First Aid Seminars and should not be considered a complete reproduction of the seminar content. They are published here as a supplement for those that attended the seminar.

Is it really an emergency? Nail trim gone awry...vs. collapse/hemorrhage.

All of these things are a problem but how they are handled makes the difference.

Keep Calm is the first decision and the most important! Whether Man or Beast!

First, protect the man or woman trying to help this injured pet from injury themselves. Injured animals are quite scared, usually in pain and their natural instincts kick in and they become defensive and will fight, bite and claw their way out of said situation. They don't know any other way.

The Take Home part of this presentation is: KEEP CALM. It is worth its weight in gold.

Second ; consider muzzling Dogs...belts, nylon stockings, roll gauze, rope, shoe lace, a leash, a real nylon muzzle...For cats: towels, pet kennels (take the top OFF), pillow case and consider gardening or work gloves to keep from getting scratched or bitten.

Topics from least to most severe:

Least Severe:

Nail trim bleeding- Quick stop, Styptic powder, flour, baking soda or powder, flour.

Insect bite reactions- Bees, Wasps, Spiders, etc. If only facial swelling or body "hive" type reaction – Benadryl orally at 1 mg/lb...that is 1 25 mg tablet per 25 lb of dog or cat. Yes it is a lot but that's the dose. Never use the liquid form in cats. It contains alcohol and they will violently reject it! If the pet is vomiting, has diarrhea, breathing problems or pale mucous membranes this is Anaphylaxis. A trip to the veterinarian or Emergency clinic is warranted for more advanced drugs such as Corticosteroids and/or Epinephrine and IV Fluids.

Punctures-These are non-life threatening unless they are so deep that they invade a body cavity (eg. Chest or Abdomen) or have significant bleeding. If not they need to be shaved and cleaned with Hydrogen Peroxide (this will burn!) or even better Betadine solution DILUTED with water...color of ice tea...is best. Remember, "soaking with a cloth" is better than "scrubbing"
THESE PATIENTS NEED ANTIBIOTICS. The wounds WILL get infected. Take the patient to your veterinarian as soon as is feasible or an abscess will form, especially in cats.

Small Lacerations- same as above but more consideration of bleeding REMEMBER-DIRECT PRESSURE is first and foremost. It will solve "most" bleeding problems. A moderate pressure wrap should be applied but the pet will need antibiotics.

Glass/Thorn – usually occurs in a foot pad. Usually it can't be seen. If it can be seen, remove it with forceps (tweezers). Most of the time, the pet will need to be sedated to explore the wound, remove the foreign material, and be prescribed antibiotics.

Hot Spots – Chronic Condition that flairs up due to the “itch-lick cycle”. A continuous cycle that creates a visually severe look to the skin. Even though not a serious problem, they can get out of hand in a matter of hours. Socks taped to feet (duct tape can be your friend) T-shirts around the forefront can get the pet through the weekend or night. Usually, a cortisone drug and perhaps an antibiotic will be needed, which would have to be obtained from your veterinarian.

Middle Level Severity:

Snake Bites – Copperheads are the most likely snakes in our area. They cause a profuse swelling of the bite area, usually the lower leg/foot or the face/muzzle. These can be as simple as having “Flu-Like” symptoms to full blown allergic reactions which needs to be treated with various drugs. Timber Rattlesnakes are in our area and pose a more serious threat and there is no anti-venom readily available in the area or even at the university. Most of the time we don't know what species of snake it is, so an emergency room visit is necessary if it occurs after hours.

Back Pain - Short legged long back breeds are more prone to this (eg. Dachshunds, Shih-Tzus) and older cats. Inability to jump or negotiate stairs, not wanting to move, not wanting to eat are common signs. This presentation requires only Non-Steroidal Anti-Inflammatory medications. There are many of these drugs on the market. CALL YOUR VETERINARIAN!!! A few doses of Ibuprofen (Motrin) can lead to a perforating ulcer in a dog. One dose of acetaminophen (Tylenol) will kill a cat due to methemoglobinemia, a severe form of anemia. It is important to know that if at any time the pet becomes “Neurologic”...meaning it loses control or drags it's back legs, loses control of other parts of it's body – forelegs, bowels, bladder – this is a medical emergency that only a Veterinarian can treat. Be proactive. DO NOT WAIT!!

Eye Problems - They should probably be under the serious category. Corneal problems such as a scratch, abrasion, or a grit of sand or dirt can lead to a Corneal Ulcer which is painful. Your pet may not be crying in pain but it will most likely SQUINT that eye due to pain. Most likely this patient will be needed to be seen by a Veterinarian to perform a “dye test” to see the extent of the injury. The eye can heal OR put itself in a state of disrepair within hours. Unless this is a chronic problem, the dog or cat should be seen in a timely fashion. Glaucoma is another problem seen mostly in dogs and usually certain breeds. It is usually an acute problem (all-of-a-sudden) and is severely painful. Most dogs won't even let you touch their face. As a pet owner you have about 12-24 hours to save the eye. They will usually NOT SQUINT because they can not close their eye. The pupil will be severely dilated. Use a flashlight to check.

Ingestion of a Foreign BODY...not a toxin! This would include socks, nylons, underwear...yes underwear, it happens all the time. Induce vomiting with Hydrogen Peroxide at 1/4 cup per 20 lbs and repeat every 5-10 minutes for three administrations if no vomiting has occurred. If this doesn't work, Veterinarians and Emergency Clinics have more potent emesis drugs. The goal is to remove “soft” items from the pet's stomach. This has to be done in the first 1-2 hours. If you suspect something “sharp” (eg. nails, needles, sticks). Do NOT induce vomiting. It is better to have these items in the stomach than damaging the esophagus.

True toxicity – Examples would be Chocolate, Raisins, Human Medications, Xylitol in sugar-free chewing gum and candy and certain plants. If you're pretty sure they have ingested these things within an hour to an hour and a half – Induce Vomiting as above. If you feel it has been longer, contact a veterinarian to see if the dose warrants Activated Charcoal treatment.

Antifreeze – Most people know this is a deadly toxin but most people forget all the sources. Sneaky sources are leaky radiator, leaking Antifreeze Jug, neighbor's yard for roaming dogs and cats. You have a very short window of time to help. If less than 4 hours; a professional would administer Ethanol (yes,

Grain Alcohol) intravenously to block a certain enzyme leading to the metabolism of the toxic product. Longer than 4 hours, a bonafide Emergency Clinic would administer 4-MP and they are usually the only ones who carry this antidote. The toxicity is irreversible at 24 hours post-ingestion and causes Kidney Failure.

Petroleum Ingestion – This can be serious and you should NEVER induce vomiting. If you do the pet will breath the product into its lungs and most likely die due to a condition called Aspiration Pneumonia. A professional will administer Activated Charcoal to help slow the absorption of petroleum distillates.

Hyperthermia – This occurs in the heat of the summer and is where Body Temperature exceeds 104.5 F. It can be seen more commonly in older pets that are predisposed to Laryngeal Paralysis such as Labrador and Golden Retrievers with severe panting and weakness/collapse being the predominate signs. Temperatures can be taken rectally and digital thermometers are quick and accurate. The goal of treatment is to reduce the body temperature with cool water as a spray down or a bath. Putting alcohol on just the feet helps dissipate heat. Cool the pet to 103 F then stop to prevent going too low and creating Hypothermia!!

Hypothermia – Of course this usually occurs in the winter and body temps will fall below 100 F. It is often seen in short hair and small breeds and also wet dogs. Duration of exposure to the cold is the problem. Symptoms of this are shivering, hair standing up, lethargy, stiff muscles, slow Heart and Respiratory rates. From mild to moderate, the ways to warm can be with a warm blanket taken from the dryer and performed in a warm area. Moderate cases require Rewarming Sources such as Hot Water Bottles, Heat Lamps, Hair Dryers, Warm (NOT Hot!!) Baths at 103 – 105 F, Heating Pads with plenty of towels between pad and pet. These Can and Will Burn Your Pet!!!

Frostbite – Exposure of the extremities or hairless areas of the body to cold or snow. Often seen on the Toes, Ear Tips, Tail, or Scrotum. It will appear as very pale skin which will become red, swollen and painful as it warms. Quick rewarming as in the Hypothermia section is warranted. Do NOT rub or massage the area. This can cause an increased amount of sloughing of dead skin and even release Toxins. Get the pet to a Veterinarian as soon as feasible. They will prescribe Antibiotics and Pain Relief.

Minor Burns – These occur on Footpads, Tails and Ears. Scalding water is another source and is usually on the trunk of the body. The stove burner itself can be a spot where cats can walk on and large dogs can put their feet on. The first step in treating is to rinse or immerse in COOL water (NOT Cold) and do not rub nor use butter or grease. Then bandage with a Moist Bandage secured with tape. It is worth a trip to the Veterinarian to not only have it evaluated but to get Antibiotics and potentially Pain Medications.

Chemical burns – very acidic acids such as Hydrochloric, Muriatic, and Oxalic will cause immediate burns as will very basic compounds such as Deck Cleaners and some Pool Chemicals. The rinsing portion with these types of burns is more important than thermal burns. Rinse for at least 10 minutes and do not allow the pet to lick at the area.

Serious Level Severity:

These are where only a professional, a Veterinarian, can help!!

Bleeding - severe...no matter where it is "Direct Pressure" will save a life!

Lacerations – Depth is more serious than length. If a blood vessel is severed you will know it by the amount of blood being expelled from the wound. Sometimes only muscle has been cut but still can create a lot of hemorrhage but not allow as much blood loss as an artery or vein. Direct pressure, which will be a recurrent theme, with things in your kit (4X4 Gauze, Vet Wrap, Tape) but in a pinch, improvise using things like socks, towels, a T-shirt cut up, clean cloth of any sort, diaper, sanitary napkin, etc.,etc. held in place by your hand while someone else drives to the Clinic, held in place by any kind of tape –

white medical tape to duct tape. This WILL be a painful procedure so have a muzzle or towel in place. A Veterinary Professional is going to have to find the source of bleeding and surgically correct it as well as suture the wound and prescribe antibiotics.

Chest Wounds – The worst of these are penetrating and what has been termed the “sucking chest wound”. These usually occur from Big Dog- Little Dog Fights, Gun Shot or Vehicular Trauma. This means the wound/puncture has gone through the body wall it has entered the thorax and the negative pressure system that all of us and our lungs need to inflate. The task here is to clog the wound. This may mean putting a finger or two beneath the skin to close the hole in the body wall, which will be an inch or so IN FRONT of the skin deficit due to the mobility of the canine or feline skin. This is life saving and WILL be painful. The pet needs Emergency help NOW. There are certainly cuts over the chest or abdomen, which are more superficial and may simply require sutures and antibiotics and pain relief.

Seizures – These are, fortunately, not as bad as they look. Seizures are non-painful for the pet but very painful for the owner. The best thing to do is protect your pet and ride it out. This means do not let it flail and hit its head or fall down a staircase. Also wrapping the pet in a blanket or towel, dimming the lights and speaking quietly can actually help bring your pet out of the seizure. If the seizure is approaching 5 minutes - Try to get a grasp on time – it will seem like hours – start thinking about a call to an Emergency Facility and your route of exit. If the seizure continues for 10 minutes you should be in the car. In any event, a seizure lasting more than 20 minutes can be life threatening and considered an emergency. Any first time seizure on any pet should be promptly evaluated by your veterinarian.

Gastric Dilatation-Volvulus – (“Bloat” “Torsion”) – The signs of this are Vomiting, then retching without being able to vomit, abdominal distention (some savvy Dog People will measure their dog’s girth at a certain level for a reference and record it) and Shock, which will be described later. This occurs in large or giant deep-chested breeds such as Great Danes, Irish Wolfhounds, Weimaraners, Standard Poodles, Irish and Gordon Setters, etc. but can happen in any deep-chested breed or mix thereof. There is not much one can do at home for this condition, as it is a true emergency, except quickly recognize it and get your dog to a veterinarian who is knowledgeable in this condition. Emergency Clinics generally know how to handle this crisis.

Hemorrhagic Gastroenteritis (HGE) – That was for the big dogs. This is for the small dogs. HGE is a serious medical condition of Toy and Miniature breeds. Its symptoms are vomiting, diarrhea, lack of appetite, weakness and non-responsiveness. Breeds include Yorkshire Terriers, Toy Poodles, Chihuahuas and other toy breeds. The common symptom is “blood” in the vomit or feces. Stomach contents may look visually bloody or like “coffee grounds”. Diarrhea may look like fresh blood, mucous or “strawberry jam”. Because of these pets small size they can become dehydrated and shocky in a short period of time. Again, if it’s just loose stool, maybe a fast or bland diet may solve the problem. But if the feces or vomit is anywhere between red and black there is not much that can be achieved at home and professional help should be sought.

Feline Urinary Obstruction – Not to leave the kitties out, this is very much a life-threatening situation. The end of the urethra in the male cat becomes very narrow and grit and mucous can form a plug thereby not allowing the cat to urinate. The bladder continues to fill, becoming painful and not allowing the filtered toxins to leave the body. The first signs will be straining to urinate with no urine being produced. Within 12 – 18 hours the cat becomes weak, dehydrated and will be too weak and painful to even try to urinate. Only a Veterinarian or Emergency Clinic can help save the cat’s life in this situation. They will re-hydrate the pet and under sedation, pass a urinary catheter while flushing the bladder out. Most of the time, the kitty is kept in the hospital for a few days. Remember a Bladder Stone can obstruct any sex of dog or cat.

Smoke Inhalation – Usually these will be due to a house fire and luckily the first responders in our area have Oxygen and Masks such as the one I will show. Room air is 21% Oxygen and the main culprit with smoke is Carbon Dioxide and Carbon Monoxide. By breathing 100% oxygen after a smoke inhalation, the Oxygen will “flush out” the CO₂ and CO. This should be done even if the pet is asymptomatic. The thermal and particulate properties of smoke add to the problem but 100% oxygen is the gold standard. The pet should still be evaluated by a Veterinary Professional for longer lived complications.

Serious Burns – The initial treatment for these is the same as for a minor burn. Copious amounts of COOL water to reduce heat to the deeper tissues. Cover with a wet towel and secure with tape or an ACE bandage. Get this pet to a Veterinarian ASAP. These burns often need to have the patient started with IV Fluids, IV Antibiotics and sometimes Protein Transfusions.

Shock and How to Identify It – Not unlike a human: Pale Gums/Slow CRT (Capillary Refill Time), Fast Heart Rate, Cool or Cold Extremities and Weak Pulses. Okay:

Temperature: Normal is between 100.5 and 102.5 F

Gum Color: The inside of the cheek or gum tissue above the K-9 tooth should be pink The color of bubble gum. Unless you pet has a “pigmented” mouth. Get a Baseline!

CRT= Capillary Refill Time: When you put moderate pressure down on the surface, the color will go from pink to white then back to pink. The time should be less than 2 seconds.

Respiration Rates: Between 6 a minute and a pant. It is better to note the “quality” of The breaths (ie. Not shallow, labored, noisy).

Heart Rate: You do not need a stethoscope! A hand on the breast-bone or inside the leg can tell a lot. On the chest you may have to squeeze a bit in a large dog or any pet who is obese. Inside the leg takes more patience to feel a femoral pulse. PRACTICE before there is a crisis!

Normals Are: 60 – 170 bpm. This doesn't say a lot. The Best Rule –of –Thumb is: the Smaller the dog the Faster the Heart Rate. The Larger the Dog the Slower the Heart Rate.

Please Realize: Dogs have a Sinus Arrhythmia! The heart Beat will quicken and slow As you feel or listen. This is NORMAL! Rate is what is Important. See Below.

Count beats felt over 10 secs and multiply by 6 or 15 secs and times 4 or 6 secs X 10

Cardiopulmonary Resuscitation – CPR

ABCDE'S of....

- A. Airway:** Make sure there is no vomitus in the oral cavity. Do Not Get Bit!
- B. Breathing:** At home it's Mouth to Snout. Fire professional can use a sealed mask or a Tracheal Tube. Do Not blow too hard. You can “blow out” a lung.
- C. Cardiac Compressions:** If you bend the foreleg at the elbow and pull the shoulder back at its joint, this will be approximately where the heart is located. Since the heart is encased in the rib cavity, you will need to apply some force with these compressions.

The Ratio of Compressions to Breaths is 5 to 1

- D. Drugs:** For the First Responders or the E-Clinic.
- E. Evaluation/Electrical Defibrillation:** Also for the above professionals.

CPR should only be used if you feel no Heart Beat or Pulse and/or if the pet's Gum Color is Purplish in color instead of healthy pink.

