



Pet Health Academy Inc. was founded by James Calihan, owner/operator Happy Couples Pet Care and Cara Armour owner/operator of Active Paws Inc. Before James began caring for other people's pets, he wanted to make certain he was trained on how to save them in the event of an emergency. James' initial search was for an online course, which would be most accommodating to his schedule but when he couldn't find one he ended up attending one of Cara Armour's pet first aid and CPR classes. After taking Cara's class, James asked why it was not offered online and this began the creation of an online certification course that brought the real life techniques on real pets into your living room; Pet Health Academy.

Cara Armour brings over 13 years of pet care experience to Pet Health Academy Inc. Cara is Pet Sitters International's 2009 Pet Sitter of the Year. Cara has been trained by a well-known national company as well as several veterinarians in Pet First Aid and CPR from 2003-2013. In 2011 she completed a course and became a certified Pet 1st Aid and CPR instructor.

Pet Health Academy believes anyone can become a pet's hero as long as they possess the knowledge to do so.

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Learning to Be a Pet's Hero

This e-book represents the text version of the Pet First Aid & CPR course you just completed. The goal of this e-book is to provide you with written resource available to you anytime. What you have learned through completing our course will help you reduce the number of major medical emergencies, help reduce the chance of an issue becoming a major medical emergency, reduce the stress that the pets will go through when an emergency does happen, and reduce the cost you will spend on a veterinary emergency. Whether an emergency happens with your animal or an animal in your care, learning to prevent, recognize, and treat any issues as they may occur will make you a pet's hero. The Pet Health Academy system will provide you with the techniques to save and the confidence to act with real-world applications.



So why can't you just take him to the vet if something is wrong? That is why they exist and emergency veterinary clinics are open 24 hours a day, right? Correct. There are 24-hour veterinary clinics, and going to the vet may in fact be part of your treatment plan. However, being a pet's hero means knowing what is normal and checking regularly to find what is not so that you can make the best decision for that animal. It means knowing when the pet needs first aid. It means knowing when a pet has to go to the vet and what you can do before to make things better for them.

Here are some facts to help you understand why knowing how to save the lives of the animals in your care is so critical;

- 92% of pets will experience a major medical emergency in their lifetime. (A major medical emergency can be anything from poisoning, hit by a car, a broken limb, or bloat).
- The annual cost of veterinary care is more than \$15 billion. According to the American Animal Hospital Association, 1 out of 4 pets could have been saved if just one pet first aid technique were applied prior to getting veterinary treatment.
- One of the most important facts I find humbling and one of the main reasons why I would want to know the skills to save animals in my care is that there are no animal EMTs! You cannot turn to someone and say, "You, call 911!"

Disclaimer: *The contents of this program such as text, graphics, images, and other material contained in this program ("Content") are for educational purposes only and do not constitute veterinarian advice; the Content is not intended to be a substitute for professional veterinarian advice, diagnosis, or treatment. Always seek the advice of a veterinarian with any questions you may have regarding a medical condition of an animal.*

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Be Prepared

In order to *prevent*, *recognize*, and *treat* any issues that may arise with pets, it is best to be prepared. Be prepared by having all the information you need and having the tools necessary, including rabies certificates, first aid kits, disaster kits and pet carriers. You want to know what is normal for the pet(s) (so you can recognize the abnormal), and how to perform first aid & CPR. Practicing techniques creates muscle memory for you so it comes more naturally in the event of an emergency. Practicing on pets will make the techniques seem more natural when they need to be touched during the stress of an emergency. When your brain function is overpowered by adrenaline from a real emergency, your practice will then help you function on muscle memory. We will review shortly the specific items that you want to have in a pet first aid kit and disaster preparedness kit. Having carriers for dogs and cats, is extremely beneficial because they can stay safely locked away and travel more securely. When caring for or if you have a larger breed, it is not always possible to have appropriately sized carriers available. In this case, it is highly recommend that the pet be crate trained or at the very least, used to being confined.

One of the most important pieces of information that you can have is knowing where the nearest pet emergency hospital is where you may be visiting and of course nearest to where you live.

What You Need to Know About Pets



Some common household products and medicines that we as humans take for granted can actually be poisonous to pets. Do not give any painkillers, sedatives, or other drugs on the way to the emergency animal hospital or the veterinarian's office whether pet-safe or not. These drugs can lower blood pressure and/or mask important signs and symptoms for a thorough medical examination. If the pet is ill and you are taking it to the veterinarian, do not give them anything to eat or drink before or during transportation. We will discuss this later in the poisoning section of this program.

Feces color: can be a reliable indicator of disease or internal injury to pets. Knowing what went in can tell you much about what it should look like when it comes out. If the pet has internal bleeding or has some disease, their feces can look very different from normal. If the pet's feces is gray and foamy, this is usually disease related. If the pet has suffered any recent injury, trauma or has an internal rupture and you notice dark, tarry stools, you should suspect internal bleeding and get the pet (and stool sample if possible) to the veterinarian immediately.

In cases of diarrhea, withhold food for 12 hours. Make sure water is available because diarrhea can cause dehydration. We will provide a chart a bit further on about when to be concerned with a pet that has diarrhea.

Urine color: can also be a reliable indicator of the pet's health and well-being. The pet's urine should normally be clear or yellowish. If it is dark yellow, then make sure the pet has an adequate supply of fresh, cool, clean water available. Supplements can also turn the urine bright yellow, which would be normal. If the pet passes blood in the urine, it may be a sign of kidney or bladder stones and it should be seen by a veterinarian immediately. If there is a female pet in heat, blood in the urine can be normal and the pet should just be observed.

You should also notice the frequency and amount that the pet urinates and defecates on a regular basis. If the frequency increases or decreases, do not hesitate to contact a veterinarian.

As a person who shares their life with pets, you need to observe & assess them with a clinical eye. Here are some ways in which you can make note of a pet's wellbeing.

Physical Stance and Gait: How does the pet look as it stands and sits from the side, walking, running, or sleeping in the warm afternoon sun?

Food and Water: One of the best signs of something not being right with a pet is a change in its eating habits. Is it eating more than usual or not eating at all? Does it sit and drool at the food? (This could be a sign of a toothache or other mouth problems.)

Skin and Coat: A strong first sign of an animal affected with disease or malnutrition is the skin and coat. Has the coat dramatically changed? Is it shedding more than normal for the time of year or does it have significant dandruff?

Being trained in pet first aid, being prepared for disasters and being prepared by keeping good records of pets' health are some of the best things you can do.



How to Obtain a Urine Sample: To obtain a clean urine sample, begin with a clean, dry jar, pan, or pie tin. For a dog, take it outdoors on a leash. When the dog squats or lifts its leg to urinate, quickly slip the pan midstream to catch the urine. For a cat, catch it at the litter box. You only need to catch about one-fourth cup of urine for a complete urinalysis. Transfer the urine to a clean container and take it to the veterinarian for analysis within the hour. If you will have to wait longer than an hour, refrigerate the urine. Try not to contaminate the urine with hair, dirt, grass or other foreign materials. Use a container with a lid when possible.

How to Obtain a Stool Sample: This should be done once a year. Use a clean food baggy or poop bag, to pick up the feces. The stool sample should be fresh for best results. Refrigerate if it will be longer than 1-2 hours before you can get it to the veterinarian.

Note: It is best to write the name of the pet, date and time on the baggie with a permanent marker before you fill the baggie with a urine, vomitus, or stool sample

Administering Medications

Veterinarians have several options when prescribing medicines for pets. Medicines can come in many forms such as tablets, pastes, liquids, capsules, granules, powders, ointments, topical, injections and drops.

The majority of medicines administered by you, will usually be in oral form (tablets, pastes, liquids, etc.). Therefore, it is essential that you know how to open the pet's mouth. This is best if started when the pet is young, so you, the caregiver/owner and the pet are comfortable when doing this maneuver.

*Always follow
veterinary instructions
for all prescribed
medications for that
particular animal.*

How to Administer Tablets or Pills: To open the pet's mouth, place your hand over the muzzle, grasping the lips between their teeth and your fingers (they won't bite their own lips). Lift its mouth upward in one movement. It may help if your forearm is used as leveraged against the pet's head (especially for larger dogs). Note: If you need help, have someone help you restrain the pet. Hold the pill between your finger and thumb (like a pinch) and place over the hump of their tongue at the back of their mouth. Then quickly withdraw your hand and hold the pet's muzzle closed until it swallows. Blowing gently into the nose from a few inches away or rubbing the pet's throat can help stimulate the swallowing reflex.

**Grasp Lips
Between Teeth
and Open
Mouth**



**Place Tablet Over
Hump**



Note: Keep an eye on the pet afterwards because it can regurgitate the pill and spit it out, even up to 30 minutes later.

Administering Liquid Medications (orally): There are two popular methods for administering liquids. Never use glass. Use a plastic syringe because the pet has strong jaws and sharp teeth that can break even tempered glass. The first method is similar to administering pills or tablets.

Instead of placing the liquid at the back of the throat, just slowly dribble the liquid onto the back of its tongue allowing the pet to swallow it. The second and most preferred method is to pull the corner of the pet's cheek out and slowly dribble the liquid into this pouch allowing it to swallow.



Administering Ear Drops: Dogs and cats have extremely good hearing, so their ears can be sensitive. If necessary, have someone help you restrain the pet. If the pet has ears that stand up, this makes your job easier. Otherwise, lift the tip of the ear up and over the pet's head, exposing the ear canal. Administer the drops or ointment directly into the ear canal (or as directed by veterinarian). Then, gently massage the base of the ear to work the medication thoroughly into the ear.



Hint: You may want to do this outside or in the bathroom because the pet will undoubtedly shake its head vigorously afterwards, sending the residual medication everywhere.

Administering Eye Drops: Generally, eye drops are gelatinous for ease of application. Therefore, it's important to hold the pet still for 15 to 30 seconds, allowing the medication to warm up and liquefy to coat their eye. To apply eye drops, carefully hold the eyelids apart with your thumb and finger. Then apply the recommended amount of medication into each eye. This is best done with the pet's head tilted up.

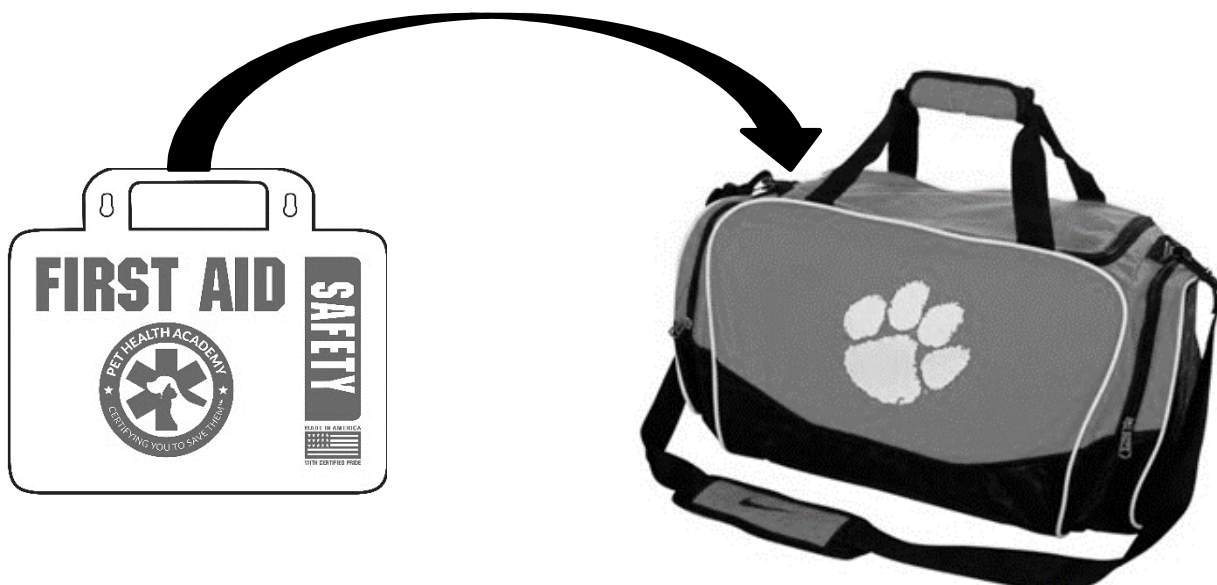


Administering Pastes: These types of medications are usually flavored so the biggest concern here is to make sure you put the medication away so that none of the pets in the household eat or run off with the tube. It's happened before; the tube is set down while working on one pet and the second pet picks it up before you notice and eats it before you can stop it.

Administering Injections: There are several areas of concern regarding hypodermic needles that are beyond the scope of this program. We do not recommend you do this yourself unless instructed by a veterinarian or if you have a medical or agricultural background.

Pet First Aid & Disaster Preparedness Kits

A 1st aid kit is something you want to have available to you at all times you are with a pet. A disaster emergency kit is a bag or container that you will want to have readily in your home so that in the event of an emergency, you can grab and go. This is in preparation for a disaster such as a tornado, earthquake, hurricane, fire, flood etc. and will contain items like food, leashes, collars with tags, rabies certificates, bowls and a first aid kit. Both 1st aid kits and disaster kits should be checked yearly for freshness/expiration.



First Aid Kit Contents

Remember to replace all items after each use and update twice a year.

Dressings & Bandages:

- Adhesive tape, breathable and at least ½ inch
- Gauze rolls, 2-3 inch
- Standard gauze Pads
- Non Stick gauze pads
- ABD or maxi pads
- Bandanna or triangular bandages with safety pins

Instruments:

- Pen light for pupils
- Digital thermometer (check battery at least once per year)
- Chemical ice pack
- Blunt tip scissors
- Metal Tweezers
- Long-handled Q-tips
- 10ml (2tsp) Syringe (no needle)
- Rubber gloves
- Tongue depressor

Ointments, Antiseptics and Medications:

- Antibiotic (triple) - ex. Neosporin®
- Hydrogen Peroxide (3%) in a light block bottle
- Alcohol prep pads
- Iodine prep pads
- Petroleum Jelly (sterile lubricant for thermometer)
- Betadine solution
- Saline solution
- Styptic pads/power
- Pepcid tabs
- Antihistamines (gel caps in blister pack)

Miscellaneous Equipment & Supplies:

- Poop bags/plastic bags (for clean up or samples)
- Permanent Marking Pen
- Emergency blanket



Note

To purchase a complete pet 1st aid kit, go to Pethealthacademy.com



Above is a list of recommended pet first aid kit contents. Some of these items are obvious, for those that are not or ones not found in traditional first aid kits we will review the purpose and/or benefit. **Digital thermometer** is not something that you would find in a pet first aid kit but these are advantageous for taking accurate temperatures indicating if their temperature is too high or low. Digital thermometers are more precise than standard glass thermometers and are much safer. We recommend **metal tweezers** over the plastic ones that most kits come with due to their precision and ease-of-use. **Tongue depressors** make great splints. Light duty **Maxi pads** or even **ABD pads** are ideal to have because what can absorb blood better? **Saline solution** is useful for puncture wounds, rinsing out eyes or cleaning out any wounds to prevent infection. **Styptic powder** or pads are wonderful to stop light bleeds like on toenails or ears. **Antihistamine** such as Benadryl with a safety pin attached to the packaging will allow you to make a quick and accurate dosing when you need to give to an animal that might be suffering from an allergic reaction or anaphylactic shock. We will discuss many of these items as we move forward in the first aid section of this program but I just wanted to mention a few of these and point them out as to why they should definitely be in your first aid kits.

Integrative Animal Health Center
355 Main Street
Burlington, MA 01740
(978) 779-2385

Rabies Certificate

Client ID: 4877

Pet ID: 7952

Pet Name: Debbie

Breed: Boxer

Sex: Female

Color: Fawn

Markings:

Birthdate: 05/08/2013

Weight: 46.10 pounds on 12/22/2014

Tag Number: 14-0322

Lot Number: 162096

Rabies Vaccination: 3 year

Producer: Merial

Killed Virus

Staff Name: Linda S. Rogers, DVM

License Number: 9573

Your pet emergency disaster kit will have a first aid kit, water bottle, flashlight, canned food (it has a great shelf life and can be stored easily), collar and leash complete with name rabies and any other identification tags. You will also want to have a Tupperware container in there for food storage. If you open a can and don't use all of it you'll need to safely store it and Tupperware containers are good for that along with functioning as food or water bowls. Just like you would have in your car, you also want to have a laminated rabies certificate for all of your animals inside your emergency disaster kit, shelters will require these in the event you need to board or take refuge in a shelter provided for humans where pets may be permitted. The final important items that you will want to have in your pet emergency disaster kit are pictures of you with your pets; that means pictures clearly showing you with your pet's distinctive markings. It is certainly a great idea to add a blanket should you need to cover your pets or provide some type of bedding. The items listed here are of the greatest importance should an emergency occur where you and your pets need to evacuate.

Must Have Information

We reviewed the items that you should have available to you but you also want to have some information on hand, some must haves are numbers for poison control helpline's, these will be extremely valuable when you least expect it. Along with the poison control helpline, you will also want to have your credit card number available for the emergency poison helpline calls. This is because these helplines are available to us 24/7 and paid for by us, the pet owners/caregivers so have a credit card number readily available for a poison emergency. I write the numbers down in the notepad of my phone and transpose a few numbers that I know for security reasons.



Bostonmycologicalclub@gmail.com is a valuable email to have as many of our pets, particularly dogs, enjoy eating mushrooms and some of these mushrooms can be very toxic. If you were able to take a picture of the ingested mushroom you can send a picture to the Boston mycological club and they will then let you know what type of species of fungi the pet has ingested and will be able to let you know how toxic or concerned you should be for the pet.

The regular veterinarian name, practice location and phone number as well as pet insurance information if you have pet insurance are other pieces of information that you should have readily available, especially for any pet sitters taking care of your animals. It can make a big difference for them to have this information in an emergency. ER vet hospitals will take your pet if they are not a regular client but they always attempt to get medical records from the pet's regular veterinarian.

Animal control contact information for all surrounding towns is necessary as dogs and cats do not always stay within town boundaries. Know where your pet will be taken if they're found loose and get this information either from your animal control officer or from your veterinarian if they are near the town in which you live. Information that you must have on hand for your pet sitter is contact information as well as a form stating that they have the right to make decisions regarding the well-being of your pet in your absence essentially a pet power of attorney.



Natural Disasters & Lost pets



One benefit from the events of Hurricane Katrina is now there are better policies in place when there is a natural disaster. It took a terrible event to bring this to light but you should check with your state, city or town as to where you can go with your pets in a state of emergency.

This is helpful information when a disaster strikes but what happens when your pet just gets loose? Do you know where they are taken if picked up by animal control and cannot be identified? In many cities and towns that have shelters, a 10-day hold exists and if not recovered, adopted or deemed adoptable, your pet could be considered for euthanasia. This is if you are

lucky enough to not have your pet get hit by a car. You can prevent this from happening to your pet by having proper identification on them at all times as well as connecting with the animal control officers in all the surrounding towns. Wouldn't you much rather pay a ticket and have your pet back safely then have to pay to have your pet's body disposed? Animal Control officers are animal lovers, they want to reconnect you with your pet and most importantly, they want to make sure your animal remains safe.

Also it is very important for you to share with your animal loving, non-animal loving friends and family members that if they see an animal that appears to be out of sorts, It is important for them to know to call in and report it.

Travel Safely

The most common injury to dogs traveling in a car that have been in an accident is a severed tongue. One of the ways in which we can prevent injuries to our dogs and ourselves while traveling in a vehicle is by restraining them. Properly restraining your pet can mean the difference between life and death. Our pet becomes a projectile in a car accident: An unrestrained 10-pound dog in a crash at 50 mph will exert roughly 500 pounds of force, while an unrestrained 80-pound dog in a crash at only 30 mph will exert approximately 2400 pounds of

force. What's worse is that the higher the speed or the heavier your dog, the worse the impact would be for them, for you, or for your passengers. The other danger to consider is that pets may pose a threat to first responders like EMTs. In a car accident injured or frightened pets can lash out due to their instinct of fight or flight. When people approach the car including paramedics their instincts may drive them to protect themselves and you, hindering emergency personnel from helping anyone inside the vehicle, especially if they're loose and snapping at anyone that comes close. A police officer is going to be called in, in order to be able to save your life, but if your dog bites emergency personnel the protocol is for first responders to attend to their colleagues injuries before anyone else's which would be a problem if you're injured. If a police officer feels threatened by your animal and feels that their life is in danger they may take actions to protect the safety of themselves and those around them which may include dispatching the pet. Don't put police in the position where a dog's life is taken to spare yours. Safely restrain your pet and yourself so that in the event of an accident chances for survival and receiving treatment will be possible.

None of the safety restraints are perfect, but by restraining animals in your car you are preventing further harm should an accident occur.



PRT

Prevent dangerous situations by knowing the potential hazards and knowing the normal condition of a pet in order to recognize when they are not themselves and when something is wrong. Being able to recognize when something is wrong will help you determine a plan to treat minor or major concerns appropriately. You're going to learn how to prevent recognize and treat issues that may arise with yours or someone else's pets. This will help decrease the stress for you, the animal and save money.

Prevent

There are countless ways that you can prevent medical emergencies; safely restraining while transporting, always considering your surroundings and planning ahead. If you're going for a hike and it's going to be four hours bring enough water for eight or more in case you get lost. Use a backpack that you can carry your 1st aid kit, poop bags, snacks and anything else that you or a dog may need. If you're going to help a dog that's been hit by a car make sure that you have safely stopped traffic, which will prevent one accident from becoming two. Another excellent way for you to be able to prevent any issues from becoming major or recognizing them before they become serious problems is to perform daily checks of an animal. This will let you know what is normal so you can more easily find what is not. A body check today can keep stress and a wallet away. On the next page you will find a Pet Assessment form. This is best used to document growths or abnormalities; specifically, the date the issue is first noticed, the location, the size and the document has a place for a brief description; is it hard to the touch? Is it warm? Does it seem to be connected to the bone? Don't forget to look at what they leave behind as well, loose stool or blood in the urine for example. If you can save a video of the animal's normal gait to reference in case an injury is suspected that is always ideal.

Recognize

Throughout the program we will teach you to recognize the signs of common pet ailments, how to find vitals, zoonotic diseases, puncture wounds, cuts & abrasions, bleeding & shock, fractures, limb injuries, and amputations, impaled objects, choking, unconsciousness, poisoning, insect bites and stings, allergic reactions, snake bites, burns and hyperthermia, frostbite and hypothermia, seizures, and bloat.

Treat

We're going to help you use your skills and knowledge to decide the best way you can help this animal now and what your action plan will be. Keeping in mind your action plan can be just providing 1st aid at home and monitoring all the way up to and potentially including performing CPR, then going to the emergency vet.



Pet Assessment

Date: _____

Pets Name: _____ Breed/Type: _____

Age: _____ Weight: _____ lbs/kg Spayed/Neutered: Yes ☐ No ☐

Take vitals over a 6 week period, the 1st week starts on the date this form is initially started

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Heart Rate						
Breathing rate						
Temperature						

Capillary Refill time under 2 seconds: Yes ☐ No ☐ Date abnormal: _____

Pupillary response equal: Yes ☐ No ☐ Date abnormal: _____

Gum color: normal pink and/or black Yes ☐ No ☐ Date abnormal: _____

Urine normal: Yes ☐ No ☐ Date abnormal: _____

Feces normal: Yes ☐ No ☐ Date abnormal: _____

Behavior normal: Yes ☐ No ☐ Date abnormal: _____

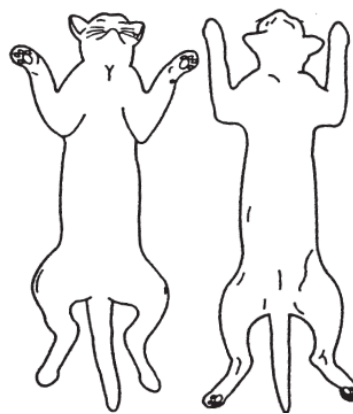
Gait/Stride normal: Yes ☐ No ☐ Date abnormal: _____

Notes:

Use body illustrations below to mark any abnormalities. Be certain to document date, size and location. Note lumps and bumps, note if they are attached/detached, hard/soft, or warm



Dog Abnormalities



Cat Abnormalities

Zoonotic Diseases

As animal lovers we may be putting ourselves at risk for contracting zoonotic diseases; these are diseases that we can contract from our animals which can be transmitted via touch, blood, excrement or saliva.

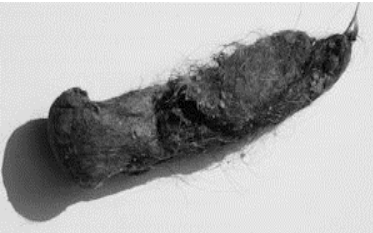
Here is a list of common transmittable diseases and parasites from our pets:


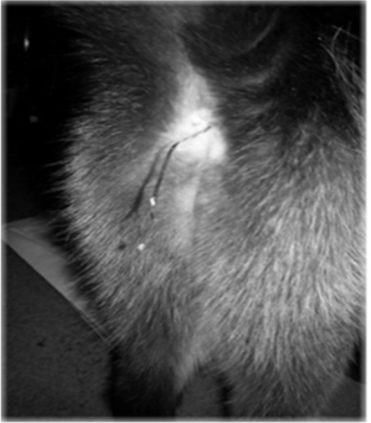
- Sarcoptic mange (scabies) presents itself as red blisters and/or itchy blisters
- Bubonic Plague and Typhus from fleas
- Giardia
- Conjunctiva; pink eye
- Cat scratch fever, sepsis
- Rabies
- Dog tapeworm: mostly affects children; they become infected when they swallow an infected flea. Symptoms include itching around the anus, vague abdominal pain and diarrhea.
- Ringworm: also called tinea, is a skin infection caused by several types of fungi found in the soil and on the skin of humans and pets. Ringworm of the skin usually is a dry, scaly round area with a raised red bumpy border and a clear center.
- Toxocariasis: is an illness caused by the parasitic roundworm
- Toxoplasmosis: In most healthy people, toxoplasmosis infection is asymptomatic. When symptoms do occur they may include swollen glands, fatigue, muscle pain, fever, sore throat and a rash. In pregnant women, toxoplasmosis can cause miscarriage, premature births, and severe illness and blindness in newborns. It comes from cat litter boxes, which is why pregnant women are discouraged from cleaning them.



Common Issues in Cats

Leading into cats, many issues will be found by doing daily checks on your animals. We're going to review some of the common issues that you may find with many cats.

UTI's & urinary blockages	These are caused by inflammation or infection of the urinary tract. They will present as straining, going outside the box, and sometimes will have bloody urine. This is one of the most common cat issues. Crystals in the urine most often cause urinary blockages, the most common type are struvite. Symptoms of urinary blockages will be similar to UTIs only more discomfort and an inability to urinate, this is a very serious condition and you will be taking the cat to the vet immediately.
Hairballs 	Hairballs, which are known to be common and thought to be normal, are not. Indoor-only cats in particular develop hairballs due to hair length, shedding patterns, over grooming of themselves, or other cats in the household, deficiencies in their diet, and digestive dysfunction, or combination of these issues. The main cause is too much ingested hair, a moisture-deficient diet, or a problem in the G.I. tract.
Matting	Matting can cause serious skin irritation up to and including infection. The problem with matting is that the hair gets really tight against the skin preventing any air getting to the skin. Bacteria then builds up, which can cause serious issues.

Upper Respiratory Infections	Upper respiratory infections are usually caused by the feline herpes virus, which is not contagious to humans or dogs but is to cats. 95% of cats have been exposed and it can present as cold-like symptoms and even pinkeye. You do want to go to the vet to for any flare ups, L-lysine treats or powder can help to prevent its reoccurrence.
Ear Mites 	Ear mites are microscopic parasites that infest the ears of dogs and more common in cats. 50% of cat ear infections are due to ear mites. Ear mites do occur naturally but due to a compromised immune system, stress, and poor diet, mites can overrun the ear and cause an infection
Mouth Issues	Cat's mouths, just like dogs and just like us, need regular checking. Tartar buildup and breakage can cause serious health problems and pain.
Fleas & Ticks	Fleas and ticks can carry blood-borne diseases as well as parasites like worm larvae. If you are concerned your cat has a flea infestation, look for what is known as "flea dirt" which looks like dirt usually found on their abdomen. Add water to this dirt and if it turns red (indicating blood from the fleas' waste) then you indeed have an issue.
Allergies	Allergies can be caused by food, cleaners around the home, dust mites or various other reasons. It can be very uncomfortable and will present as itchy dry skin.
Puncture Wounds	Puncture wounds can get infected easily and are often hidden by the fur. These can be caused by other cats, dogs or other animals in and around the home.
Limping, Broken Toenails & Luxating Patella	Limping can be caused by a puncture wound near or on the limb, broken toenails, or something that's called a luxating patella (shifting kneecap). Luxating patellae are very common in cats and it looks like a limp or off-gait in the rear.
Swallowed String/Tinsel 	You never want to attempt to pull any strings from the cat's anus or mouth that has tension on it as it could be wrapped around the intestines or cut into other organs such as the esophagus causing serious internal bleeding and infection; please go to vet immediately.

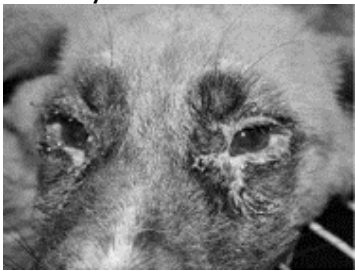
Pancreatitis




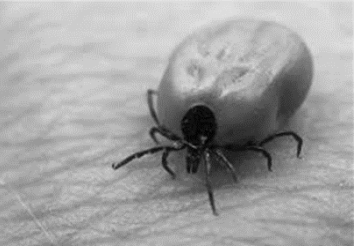





Pancreatitis is a very common condition that can be deadly to cats and dogs. Pancreatitis is an inflammation of the pancreas and it can be acute or chronic. The pancreas has two vital functions; it secretes insulin to balance blood sugar and it secretes digestive enzymes, amylase, lipase and proteases for digestion. The condition of pancreatitis presents as fever, lethargy, dehydration, abdominal pain, anorexia, vomiting, and diarrhea in both cats and dogs. It can be deadly! Most commonly, it is caused by acutely high fatty foods like turkey drippings, gravy and fat from meat. It is one of the more common ailments that veterinarians will see around holidays like


Thanksgiving and Christmas. It is can also be caused by drugs like steroids or potassium bromide and phenobarbital, which are both used for seizures. There are few breeds that can have a genetic predisposition to pancreatitis like mini schnauzers. A serious problem with pancreatitis is it most often reoccurs so once your animal has it once it's at a very high risk for getting it again. With pancreatitis' propensity to be so common, it can often be overlooked, as many of the symptoms are just that of an upset stomach. A little further on we will discuss when to seek veterinary care when tummy troubles continue beyond a certain period.

Common Issues in Dogs

Colitis	This condition will present as a white mucus, loose stool and may contain bright red blood in the stool. Colitis is essentially upset and irritated intestines; the dog's bowels have been irritated by either a toxin, stress or something that disagreed with them in their diet. Some of the best advice to deal with colitis is do not fuel the fire; do not add more food that could potentially irritate the dog's G.I. tract.
Giardia	Giardia is a parasite we discussed briefly in zoonotic diseases. It presents in dogs as diarrhea and it is a tough parasite to get rid of. You should definitely go to the vet because it can be one of many causes of colitis. Bring in a fecal sample and expect to be on a round of antibiotics sometimes up to three times before the pup will be cleared of the parasite.
Pink Eye 	Pinkeye or conjunctivitis is another condition we discussed in the zoonotic disease section. With pinkeye the dog will have a red itchy eye and the eye may have a greenish discharge. Eye ulcers will present similarly to pinkeye; with either condition you're going to the vet. Watch for red, irritated eyes with green boogers especially if your dog is pawing at their eyes. You will want your pet to be seen by a veterinarian to make sure that there are no corneal tears, ulcers or infection that are causing your pet discomfort.

Ear Infections 	<p>Ear infections can be quite irritating to pets and are often caused by ear mites, stress, poor diet or a compromised immune system. Ears will smell, be very warm to the touch, look red, irritated, and the dog may constantly shake or tilt their head.</p>
Mouth Issues 	<p>Mouth issues, like bad breath, can mean that the teeth are bad or there are some stomach issues. Gum color can tell us a great deal of information, which we will look at in the vitals section. What you want to look for in the dog's mouth especially if they have bad breath are any gum issues, cuts, tartar or abscesses.</p>
Reverse Sneezing	<p>Reverse Sneezes are common but can also be very scary. They are also known as mechanosensitive aspiration reflex and pharyngeal gag reflex. It's actually a fairly common respiratory event in dogs. It happens more often in small breeds, especially brachycephalic breeds (like pugs and bulldogs) with elongated soft palates. They occasionally suck the palate into the throat which can cause an episode of reverse sneezing. Reverse sneezing is not life-threatening and can be as normal as regular sneeze, it just goes the wrong way!</p>
Hotspots 	<p>Hotspots are created when a dog's natural bacteria over populate parts of their skin. When an infection arises from a dog's own bacteria, there's almost always a root cause. Hotspots often occur in dogs who are stressed or have underperforming immune systems; they can show up out of nowhere. They're very painful and need to be kept dry. Shaving the surrounding hair, if possible, will help them heal as well as applying a soothing antibacterial agent like colloidal silver, honey, or iodine. Do not use agents that will sting, like vinegar and alcohol.</p>
Fleas and Ticks 	<p>The concern with fleas and ticks is that they carry blood-borne diseases as well as parasites. Ticks can carry diseases such as Lyme disease or anaplasmosis. Fleas can carry disease as well as parasites, one of which we spoke about in zoonotic diseases which are tapeworm. You can do the same trick we discussed earlier with cats if you have a suspected flea infestation. Find the flea dirt on a pet's abdomen, apply water, if its red then you have a flea issue.</p>

Ringworm	Ringworm, discussed in zoonotic diseases earlier in the program can be contracted from your dogs as well and keep in mind that you can give it to your dogs too.
Skin Issues 	Sarcoptic mange or scabies, a parasite discussed in zoonotic diseases, is something that dogs can get, but a more common form of mange is called demodectic. Demodectic mange is often referred to as "puppy mites" and may result in a little bit of itching and hair loss. Many cases resolve on their own. In extreme cases, a trip to the vet is in order. Contact dermatitis is essentially a skin rash that you will find on areas such as the belly and paws, where skin is exposed to surfaces. It is often caused by an allergic reaction to cleaners in the home, such as floor cleaners or laundry detergent. Allergies and itchy skin can result in contact dermatitis (showing on the belly or paws) or cover their entire body from food, dust or other environmental factors.
Lick Granulomas 	Lick granulomas, can be caused by injuries, hotspots or behavior. A dog can get so used to licking a wound or self sooth by licking; that a granuloma appears. Lick granulomas are red, raw irritated skins caused by obsessing licking of the area.
Lipomas	Sebaceous cysts, or lipomas are good to check out and measure often as they can change without much notice. They're known as fatty tumors, but they sometimes can develop into cancerous growths which would be warm and hard to the touch with rapid growth. Any lump or bump you notice should be brought to a vet's attention, if the vet has some concern they can aspirate, or remove some cells for examination.
Matting	Matting, as we discussed with cats can cause serious skin issues.
Anal Sack Issues 	Anal sack issues will present with a dog dragging their butt on the ground or in shorter coated dogs swelling or reddening around the anus. This is not normal and you should consult with a vet about a good course of action. Sometimes it could mean they need expressing, they have been over expressed, fed a better diet producing harder stools or they could have an infection.

<p>Limps</p> 	<p>Limping could be a result of many conditions. It could be a sign of Lyme disease, OR it could be a sign of a strain, sprain, tear or even a break. This is why it is a good idea to have a video of what your dog's normal gait is so you can tell when it is off or limping. Broken toenails can also be a cause of a limp. A broken toenail can be a very painful condition; if the quick (the bright pink soft tissue underneath the nail) is exposed, the dog can be at risk for infection. Luxating patellae, or shifting kneecaps, are common in smaller breeds. While often not painful, they should still be checked by a vet. It presents with a dog holding up one leg at a time, often when going down stairs or walking on flat surfaces.</p>
<p>Seizures</p>	<p>Seizures are listed here because they are more common among dogs than in cats. We will discuss them later in the program.</p>

Vomiting & Diarrhea

Vomiting and diarrhea are probably the most common issues that you will experience with most pets. Pet owners tend to bring their pets to the vet if they have thrown up once or had one bout of diarrhea, yet as humans, we don't run off to our doctors if we have only been sick once. As long as there isn't a suspected toxin, foreign body, distended stomach, or any other signs like pain or lethargy then a vet is not a necessary stress for you or the pet. A veterinarian designed formula is listed below. It explains that if your pet vomits more than 4 times in 24 hrs, the pet needs to go to the vet. If the pet has been vomiting and hasn't held down food for 24 hours, or if the pet hasn't eaten in over 48 hours (missing 1-2 meals is fine), or if the pet has been having diarrhea for more than 72 hours, go to the vet.

When does your pet need to go to the vet

- Vomiting > 4 X in 24 hrs
- Vomiting > 24 hrs
- Anorexia > 48 hrs
- Diarrhea > 72 hrs

When is it an emergency

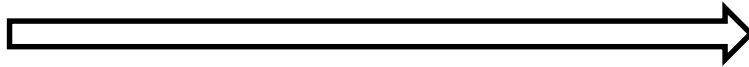
- Known foreign body or toxin ingested
- Abdominal distention or retching
- Pain
- Lethargy

Treatment for Vomiting & Diarrhea

Here are some options that you can use at home for early digestive track issues. You can fast for 12 hours; allow constant, small amounts of water. The pet should always have access to water, because diarrhea and vomiting flush their body of valuable water in their system. You can introduce food in small quantities after the output improves or stops. Pet safe probiotics can be used to ease digestion, and Pepcid (.5mg per pound) can be used to help with nausea.

Restraining & Muzzling

Restraining & muzzling prevents the animal from causing further harm to itself while protecting you or any bystanders. Here are some guidelines as to when or when not to restrain and/or muzzle a pet. Muzzles not only prevent bites, but they also calm the animal down with the pressure applied in specific places. We will build a muzzle that goes over their nose, which not only keeps the mouth closed but applies pressure to the bridge of the nose. Dominant dogs in packs bite the nose of the dogs that needs to be submitted; this is a submission pressure point. The muzzle will be tied off at the back of the head; another submissive pressure point. When females are mounted to be mated, they are bitten on the back of the neck/head in order to subdue them.



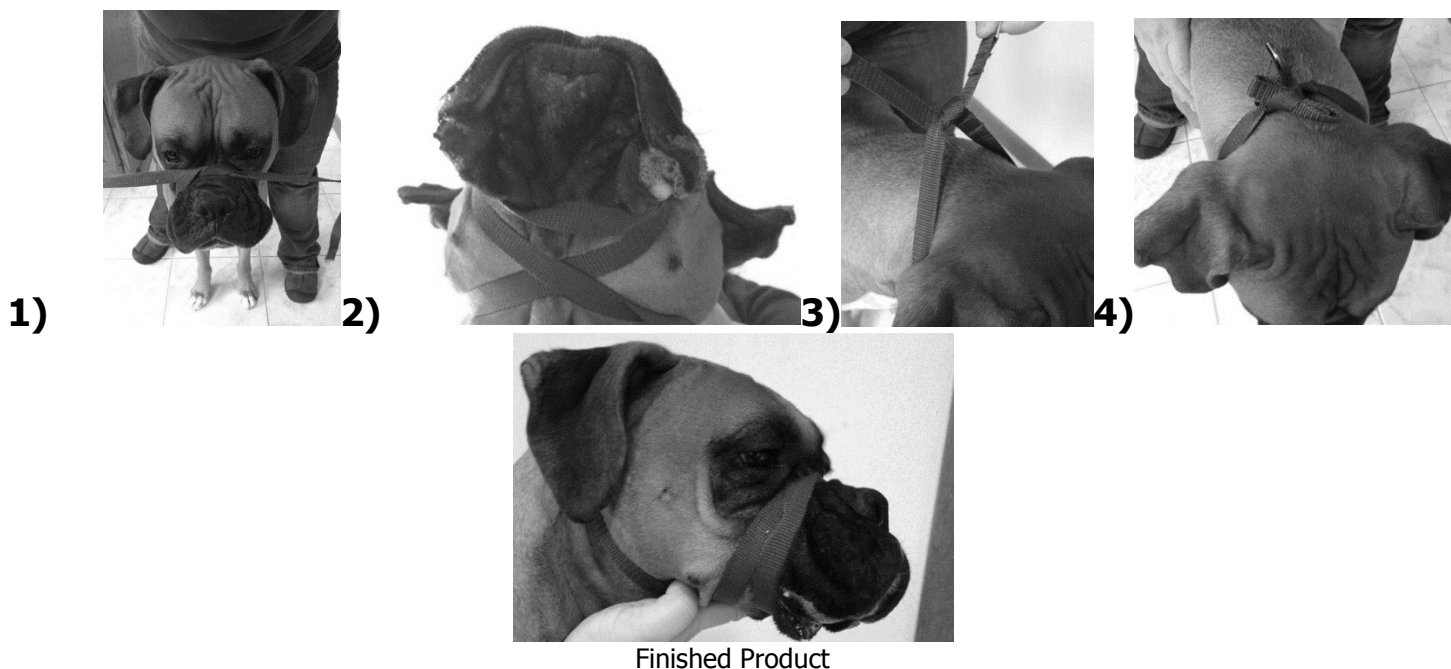
This is a picture of one of our clients who was assisting his injured dog. The dog was not muzzled and 1 injury became 2.

Important Do's & Don'ts

- | | |
|---|---|
| <ul style="list-style-type: none"> ✱ Always restrain and muzzle if attending to an injured animal ✱ Always be cautious for your safety, theirs, and anyone around you ✱ Be as calm as you can, for you and them ✱ The best techniques can often be learned from veterinary technicians ✱ Muzzles should be wrapped around the natural submissive pressure points | <ul style="list-style-type: none"> ✱ Do not use more pressure than needed ✱ Never muzzle or restrain if the pet is vomiting, seizing, overheating or having problems breathing ✱ Never leave a muzzled or restrained pet alone |
|---|---|

Muzzling

When muzzling a dog, always approach from behind. Tie a knot in whatever you're using as a muzzle in order to add weight, so that it drops over the nose easily. **1)** When you make a loop, tie it as if you're starting to tie your tennis shoes. Drop it over the pet's nose making sure that you get their entire muzzle in the loop, tie it snugly. **2)** Take the two ends, cross them underneath the nose. **3)** After you've crossed them underneath the nose, then bring them behind and underneath the ears. **4)** Tie as if you're tying a tennis shoe again, then tie in a bow.



This type of restraint does not work for cats/short-nosed dogs. It is best to purchase a cat muzzle for your first aid kit or follow the instructions below for using a pillow case.

Restraining a Standing Dog



Figure 1.

A dog's head is immensely strong and can exert a large amount of force, so you will need to protect your face from their head. This is best done by wrapping your arm around the dog's neck and ending with your head resting in your palm (see figure 1). Not only is this a comfortable way to restrain a standing dog, but it offers great protection from being struck in the face. Lifting a leg helps to throw them off balance and thus prevents them from struggling as much. While dogs can certainly get away on 3 legs, feeling the pressure of being pulled into your body and having a leg lifted keeps them calm.

Restraining a Dog Laying Down

If the pet is to be restrained while lying down, make certain their feet are away from you. Place your body on theirs using pressure, instead of force. They will resist force, but will succumb to pressure.

Restraining a Cat



You want to take caution with cats, because unlike dogs, they work in more directions, meaning that they are more agile. The best thing to do with cats is elongate to prevent potential energy, which is their ability to lash out.

You want to scruff along the length of the neck, as to prevent neck movement for safety. Scruffing means using your hand and grabbing with pressure, not force, the skin on the back of the neck. Never pick up an adult cat by their scruff; you must support their lower body.



Since cats' faces tend to be too small to build a muzzle, a pillow case is your best option. A towel, sweatshirt, or blanket can be used if you do not have a pillow case. Make certain that the pillow case is of low thread count. (Don't use your 1200 thread-count Egyptian cotton!) The lower the thread count, the more easily air can flow through the fabric. Pillow cases are also great to use to protect yourself from Bulldogs, Shih Tzu's, Pugs, Pekinese, or any other breed with an extremely flat face that prevents you from building a muzzle.



Note: When placing a cat inside a pillow case, remember to scruff, hold their rear, and place them in gently. You want to use pressure, not force.

Vitals

Assessing the Pet's Vitals

The following list outlines the necessary information you need to know about pet health and how to gather that information. It is important to understand the pet's normal physical conditions so you can quickly recognize what is not normal. We're going to show you how to obtain the heart rate, breathing rate, temperature, capillary refill time, gum color meaning and pupillary light reflex.



Checking Pulse: The femoral artery is the best place to check for a pet's heart rate due to lack of fur and the bone available to press the artery against to obtain the pulse. The femoral pulse is located on the inside of the thigh of either back leg. Slide your fingers inside the upper thigh, feeling for the slight depression. Once you've located the pulse, use a watch and count the beats for six seconds - then add a zero to that number **or** count the beats for 15 seconds - then multiply by four and you will have beats per minute. The pulse rate for adult dogs will vary between 60-140 beats per minute. Toy breeds or small dogs can be higher and range from 90-220 beats per minute. A cat's pulse rate can vary from 110-240 beats per minute.

**Pulse Check -
Femoral**



**The elbow will point to
where the heart**



Locating the Heart: The elbow will point to where the heart is, much faster than counting to find between the 3rd and 5th rib.



Breathing Rate: You can physically watch or feel a pet's breathing. Count the rises or the falls for 30 seconds and double to get breaths per minute. The breath rate for Dogs is about 10-20 breaths per minute. Cats are about 20-30 breaths per minute.

**Look or feel for
breathing**



Temperature

For both cats and dogs, the normal range of temperature is 100.4° to 102.5°F. KY or petroleum jelly is listed in your pet first aid kit contents to act as a lubricant for taking a pet's temperature, which must be done rectally. Place an arm under the waste of the pet to keep them from moving away when you're taking their temperature and be sure to lift their tail. The use of digital thermometers is recommended for their accuracy.

The thermometer goes



CRT Checking the capillary refill time on a pet helps to monitor the amount of blood flow that is going to the tissues and helps you determine the state of the pet; for example, are they in shock, does everything look normal could this be a heart problem etc.? To check capillary refill, lift the pet's lip so that you expose right above the upper canine, which is the large pointed tooth. Press firmly on the gum and release. The gum where you pressed should turn white then refill within 2 seconds back to the original pink color. This should happen so quickly that it is hard to count. Any slower than 2 second and this would be one indicator that something is wrong with the animal but they would exhibit other symptoms in addition to slow capillary refill time.

CRT

Gum Color & Condition: As mentioned previously with mouth issues being common, you will want to visually inspect a pet's gums often. Healthy gum color and condition should be moist, pink or black. If you are caring for a pet with mostly black gums, then capillary refill cannot be done as you will not be able to see the gums change color when pressure is applied. If gum color is pale, yellow, blue or bright red these colors indicate that the animal has a problem. Pale indicates there is an inadequate blood flow, yellow signifies a liver or organ issue as toxins are building up in the body tissues and blue gums mean that they are not getting enough oxygen. Bright red gums indicate the pet is hyperthermic, meaning that they are overheating.

Gum color = pink or black

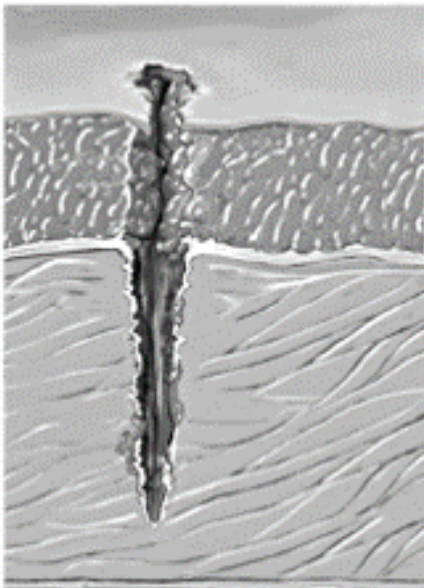
Pupillary Light Reflex: The pupils on a pet should both constrict when light is applied. When one or both eyes are not responsive to the light, take the pet to the vet immediately. This could be a sign of a neurological issue. The cat pictured here has one normal eye that has constricted to the light it is exposed to, and one dilated pupil (not in sync with the other eye).

Pupillary Light Reflex

1st Aid, Bleeding & Shock

Once you've determined that the pet needs first aid, you first and foremost want to recognize any safety concerns for yourself and the animal. This means if you're helping a cat that got hit by a car, you need to stop traffic before entering the road. Part of your assessment will include restraining. Based on their injuries, you may need to muzzle. When you are petting to assess for all injuries, do so with purpose, but with caution so you don't cause further injury. Next, you want to administer the appropriate first aid and transport to the vet if needed. If you do so, contact the nearest pet hospital to prepare them for your arrival.

Puncture wound



Puncture wounds are one of the most common ailments you will encounter. Estimates suggest that dog bites which result in puncture wounds account for about 10% of the injuries that vets see regularly. What's important to know about puncture wounds is that as you can see from this picture, the penetrating wound is V-shaped.

It heals from the bottom up. Pets' mouths are full of bacteria. When a pet bites another animal (or human), bacteria is injected into the tissues. Puncture wounds heal from the bottom up, so if the bacteria is trapped, it is likely to cause an abscess. Therefore, when treating puncture wounds, there are several factors to take into account.

- 1) Don't ever leave a puncture wound covered.
- 2) Be certain to clean with a non-caustic antiseptic, such as saline, iodine, or betadine. You don't want to use common antiseptics like alcohol or hydrogen peroxide because they can cause pain and/or damage to the internal tissues.

Recognizing Puncture Wounds

Puncture wounds are hard to find mostly because fur can hide

them, even the finest coats and they don't tend to bleed much. They can also be the cause of lameness or soreness due to their high risk of infection. Puncture wounds act as incubators for the bacteria that has literally been injected into the animal's skin. Notice the black arrow on the image, which shows a puncture wound, nearly completely hidden by fur.



Treating Puncture Wounds

To treat a puncture wound, you'll need to restrain and possibly muzzle, based on the location of the wound and the animal's reaction. As we mentioned before, you do not want to use hydrogen peroxide or alcohol, but you should use saline, iodine, or betadine. If you do not have these available, you can make your own saline solution.

- * The recipe makes a 9% saline solution; 1 cup of water, ½ teaspoon of salt, boil for 15 minutes.

Bleeding

When pets lose 25% of their blood volume, their chance of survival becomes 50:50. This significant blood loss would most often be the result of an arterial bleed. There are 3 types of bleeds, arterial is of the greatest concern. The two other types are venous, coming from veins, and capillary, coming from capillaries, like when you scrape a knee. Lots of situations can cause bleeding, which result in contusions, lacerations, impaled objects, and even amputations.

Treating Bleeding

To treat bleeds, you need to recognize the type of bleed. For capillary bleeds; clean with an antiseptic. You may need to apply pressure and a dressing if necessary to keep out dirt and debris in order to prevent infection. The same procedure applies for venous bleeding, but be prepared to transport to the vet for stitches. For arterial bleeds, you will want to take the time to slow the bleed.

Capillary

Clean with
antiseptic

Cover when
necessary

Venous

Clean with
antiseptic

May need to
go to vet

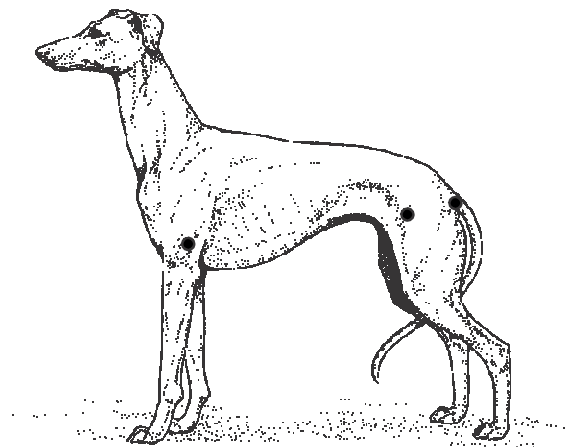
Arterial

Take time to
slow the
bleed

Go to the vet

Treating Active Bleeds

The first thing you will want to do is elevate the affected area. Apply pressure directly over the wound with a sterile dressing (or best alternative). To further slow the bleeding if on a limb, find and grab the pressure point located between the heart and the wound. Wrap with a dressing, and prepare the pet for transport to the nearest veterinary hospital.



Pressure Points for dogs and cats are located inside the armpits, the groin and under the base of the tail. These points are where you want to apply pressure to help slow a bleed.

Restrain & Muzzle



Elevate if it does not cause further harm



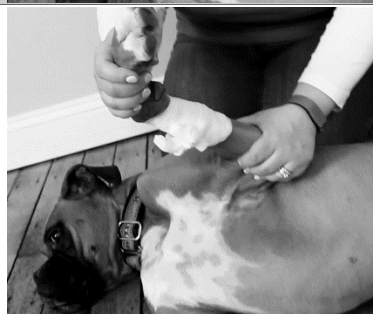
Apply pressure directly over the wound. When applying new dressing do not remove pressure, slide your hands over each other maintaining direct pressure the entire time. Hold for 30-60 seconds.



Apply pressure over **the pressure point**. Make certain the pressure point is between the wound and the heart. Hold for 30-60 seconds



Wrap to maintain direct pressure

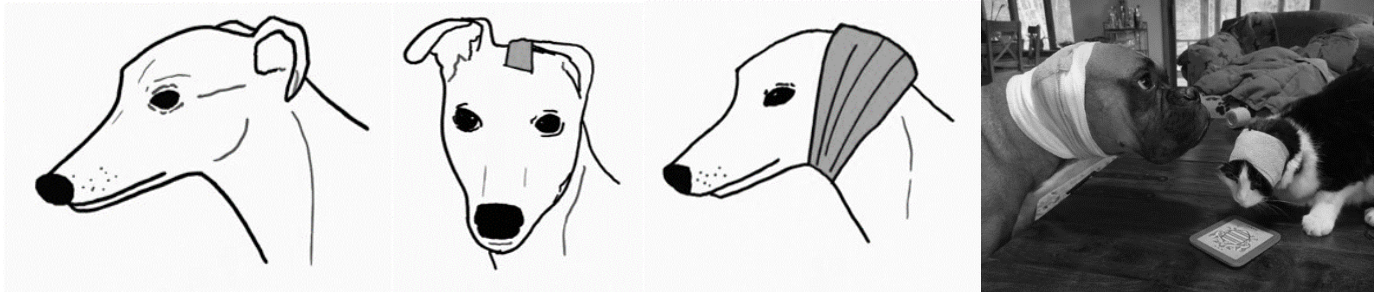


Be prepared to treat for **shock**

Prepare to Transport

Ear Wounds

Ear wounds will not be arterial. However, there is a lot of blood flow to the ear, which results in a lot of blood loss. With the centrifugal force of a dog or cat shaking their head, you have a compounded issue. In order to treat a bleeding ear wound, flip the ear back on the pet's head and apply a dressing to the wound itself. Then, apply rolled gauze, or best alternative, to keep the ear elevated and firmly in place. Ears can be taped to the head after initial dressing is applied if adhesive is available.



Shock

Shock is a condition that can result from arterial bleeds, trauma, like being hit by a car, poisoning, large body temperature fluctuation, and a myriad of other causes. Shock is a serious medical emergency wherein the organs and tissues are not receiving the blood supply they need. This prevents the body from getting oxygen and allows the buildup of waste products, which can result in permanent organ damage and even death. One of the major issues with shock is that it prevents the body from regulating temperature, which makes the animal more susceptible to burning or freezing under situations that otherwise seem normal.

Recognizing Shock



The signs of shock will be weakness, convulsions, and collapsing. The pet may seem depressed and lose consciousness. They will have pale gums as this is a telltale sign and the animal may feel cool to the touch, presenting a low body temperature. They may have a rapid, but weak pulse, rapid breathing, a fixed stare, and dilate pupils.

Treating Shock

Because the pet cannot regulate their body temperature, make sure they are on a surface like a towel, a blanket, or grass. Keep them off cement, pavement, or any surface that feels cool or warm to the touch. With shock, you always want to maintain an

open airway and since the body is drawing blood to the organs in the torso, you need to get blood to the pet's head. Raising the rear end will cause blood to travel towards the pet's head by the force of gravity. Do not give a pet in shock anything to eat or drink. Check the pet's temperature. If low, it is a sign of severe shock and you need to get to the vet immediately. The pet's temperature will move towards the ambient temperature. If capillary refill time takes longer than 5 seconds, they are in severe shock and need immediate medical attention. The goal is to reduce the symptoms before heading to the vet, but if the pet shows no improvement, head to the vet sooner rather than later.

Fractures & Limb Injuries

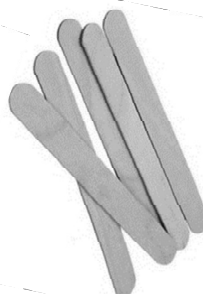
- ✱ Recognizing the type of injury
- ✱ Recognizing the type of break
- ✱ NEVER FORGET SAFETY
- ✱ Immobilize with whatever you have available



Limb injuries can happen anywhere, from running in the woods to being hit by a car. Recognizing the type of injury may not be easy, but recognizing that there is an injury is important. Limb injuries range from sprains, strains, dislocations, to breaks. Dogs and cats can often hide their pain or be hypersensitive to it. Keep this in mind when assessing a limb injury. When it is a break, it's best to splint the injury. There are 2 types of breaks to deal with. One being simple, the other compound.

A simple break may not be obvious, while a compound break will be, as the bone will protrude through the skin. A break is called compound because you must deal with the broken bone as well as the injury to the soft tissue, and the significant risk of infection and/or blood loss. First deal with the wound, and then the break. Be gentle with the animal. Due to the painful nature of breaks, or even sprains, strains, or dislocation, never forget about your safety. Restraining can be difficult with a limb injury and muzzling will be necessary. There is no question that this animal must be seen by a veterinarian. You can help by stabilizing the broken limb, so that transportation is less stressful and painful for the animal. Immobilize with whatever splint material you have available. Ideally, use a wooden spoon, which is very similar to a veterinarian splint. Of course, not many people hike with a wooden spoon! Always think about what you have on your person. Insoles to shoes, sticks, rolled up newspapers or magazine, toilet paper or paper towel rolls all make great splints. Remember never to feel at a loss. The steps you take to make this animal stable and more comfortable before heading to the vet will pay dividends.

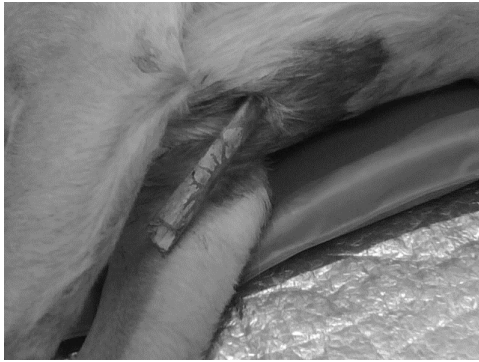
- ✱ **Treat the bleed first**
- ✱ **Build a splint**
- ✱ **Secure the splint**
- ✱ **Never try to reset the bone**
- ✱ **A splint is not a treatment**



Amputations

Dogs and cats can function well on 3 limbs. While it seems natural to want to save a limb, your focus should be on saving the host. Amputations will result in arterial bleeds. Constriction around the arterial pressure point between the heart and injury site is paramount. This should be used in conjunction with direct pressure. If there is a healthy chance for reattachment, the severed limb should be placed in saline solution in a cool, dark bag for transport. Reason being, muscle and skin tissue can regenerate under most conditions. Nerve tissue becomes irreparable when exposed to light.

Impaled Objects



Due to the painful nature of an impalement, restrain & muzzle. The most important thing to understand about impaled objects is that while they are protruding out of a pet's body and may have caused serious internal injuries, at the same time they may be saving the pet's life. When an object enters a pet's body, it undoubtedly tears through skin, muscle and blood vessels. Despite causing trauma, the object acts as a barrier, helping to prevent bleed out. If removed, the cavity left by the object can fill with blood and cause the animal to bleed out and

die. For this reason, impaled object should be immobilized to help reduce further damage and removal should be handled by a veterinarian hospital. If something is impaled in the eye, use a coffee cup or Dixie cup, making a hole for the impaled object. This will accomplish limiting movement of the eye and calm the animal by limiting its vision.



Choking

You will find that choking is more common among dogs since they taste the world with their mouths. Cats like to touch things with their feet first. Some of the most common items that cause choking are pictured here:



This is where the power of prevention is key. Never leave pets unattended with a new toy or treat. Knowing a pet's behaviors around certain items can help prevent choking. You will need to continually puppy and kitty proof your house. Dogs counter surf and cats can reach anything. Remember that if there is tinsel or string

coming out of the mouth or anus of a pet, you may attempt to pull gently. If there is any tension, **do not** attempt to remove it and head directly to the vet.

Recognizing the Signs of Choking

Because choking is often a life threatening condition, fear will take over which will present as anxiety and pacing. You may witness pawing at the face, which is an attempt to extract the object. Pets will cough in a wide stance, again trying to dislodge the object. Pets may drool, which is their natural response to flush the mouth or throat. Choking may also cause a stridor sound, which is a high pitched whistle caused by the inadequate flow of air.

- * Anxiety/Pacing
- * Pawing frantically at their face
- * Coughing in a wide stance
- * Drooling
- * Possible stridor or whistle sounds

Choking Treatment

Pet CAN Cough or Gag may seem counter-intuitive, but if a pet in your care is coughing, you want to calmly corral them into a room where they cannot hide while you monitor them. Bathrooms are great for this because they have a door and tile flooring in case the pet vomits. The pet, while conscious has a better chance of getting the object up themselves. Be prepared to have to take action and go to the vet even if the airway stays open enough for the pet to cough or gag but after several minutes they cannot get the object up or down.

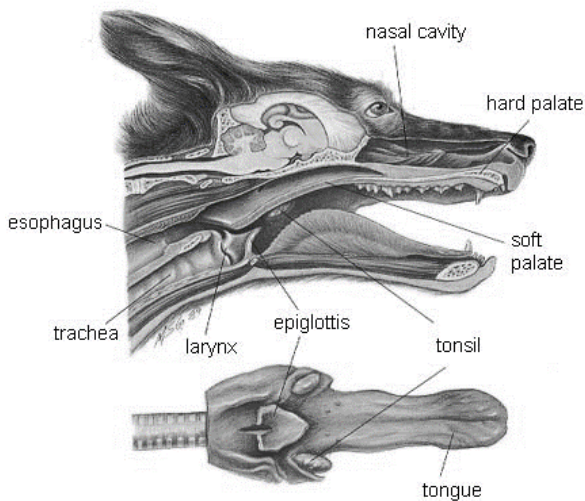
Pet CANNOT Cough or Gag, Stridor is Present If the pet stops being able to cough, starts making a whistle sound, or suddenly stops breathing you will need to start performing chest thrusts. To perform chest thrusts, spread your fingers wide and while standing over and behind the pet, place each hand on either side of their ribcage at the widest part. Quickly press in and down as if to quickly squeeze the air out of them. You are trying to use the trapped air to force the object to come back up. This can be done on cats and small dogs with one hand while lying on a hard surface.



When a pet has lost consciousness from choking CPR will serve several functions:

1. Act as a force to use the trapped air and push the object up
2. Will keep the flow of blood and thus oxygen to the body going
3. When attempts at breaths are made this will increase the chance of establishing an airway by pushing the lodged object

Pet Collapses When pets go unconscious, their neck muscles relax, which sometimes makes it easier to remove the object. It is important to note that breeds like bulldogs and pugs have tracheas that often collapse. You want to make certain with all dogs, but particularly these breeds that you open and extend the airway before attempting rescue breaths or CPR. Check to see if you can see, feel or extract the object. If you cannot get the object out with your hands or a tool, attempt 2 breaths. At this point you are trying to establish an airway either by pushing the object down with attempted breaths, or back up with CPR compressions which we will discuss in the next section.



Attempting Breaths

When the pet goes down from choking (after attempting to remove the object by hand), you need to attempt breaths. Dogs and cats have a large amount of tongue tissue that sits in the back of their mouths. Because of this tissue, you need to pull the tongue out through the canines in order to deliver a breath. This means that the tongue will be coming over their incisors (little front teeth). You will then grab the muzzle (depending on size of pet) with your hand or completely covering their mouth with yours to create an airtight seal.



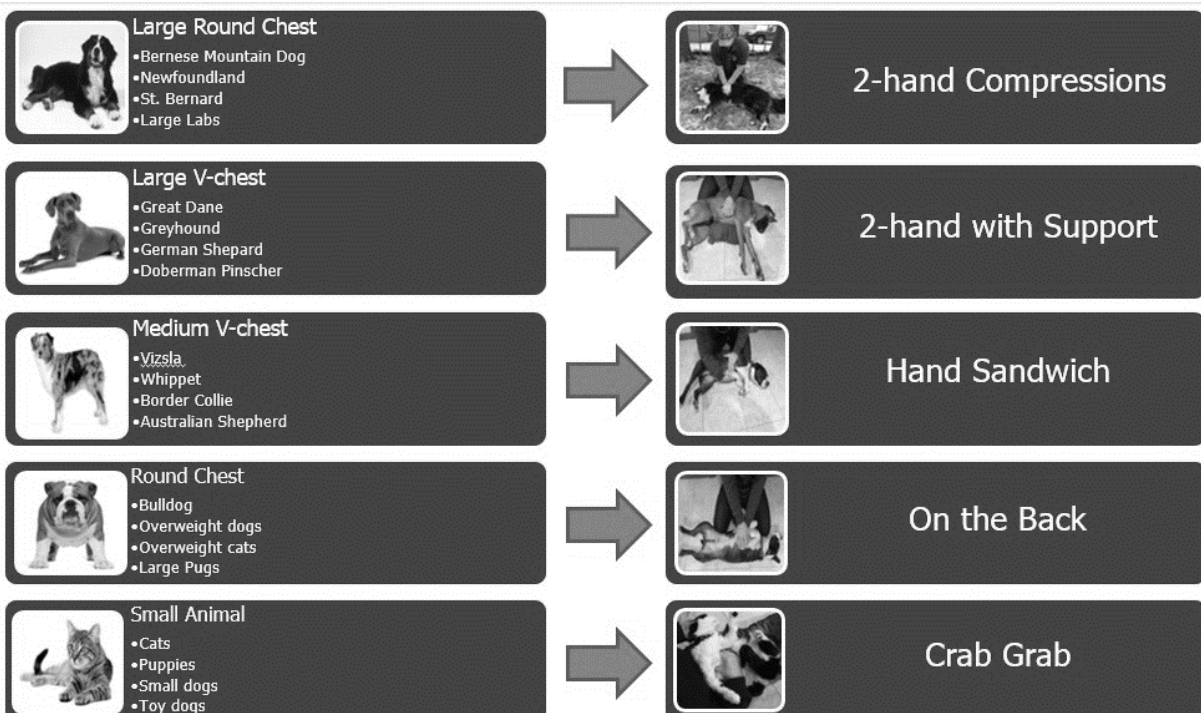
Breathing into the Muzzle

Always open and extend the airway when an animal has passed out from choking. Their throat muscles may relax which would allow or prevent your ability to get air into them. Recognize the best technique for that specific animal; the technique that gets the most air into the pet. If you feel any air escaping through your mouth or hands, readjust for a better seal.

CPR

CPR Techniques

Size up every animal in your home or your care so that in an emergency you will know immediately what technique to use for that animal. This image shows you, based on the general size and structure of certain breeds, which technique may be best. However, all animals are unique, so if you ever feel that the technique you choose is inadequate; try another technique in order to deliver the best compression for that animal.



Two-hand Technique



For large, round chested breeds such as Bernese Mt Dogs, Newfoundland's, St. Bernard's and round bodied labs, the 2-handed technique, similar to that used on humans, is best. This is for large dogs whose chest's lay flush with the ground. You will need most, if not all, of your strength to perform quality chest compressions.

Two-hand with Support Technique

For large v-chested animals such as Great Danes, Greyhounds, German Shepherds, and Doberman Pinschers, 2-hands with support is advised. When a v-chested animal is placed on its side, there is a large gap between the chest and the floor, which needs supporting in order to deliver quality compressions. The energy of the compressions would be lost without support from underneath. Here a sweatshirt and a toy are shown adequately filling the gap.



Illustrating the gap



Two hands with a sweatshirt



Two hands with a toy

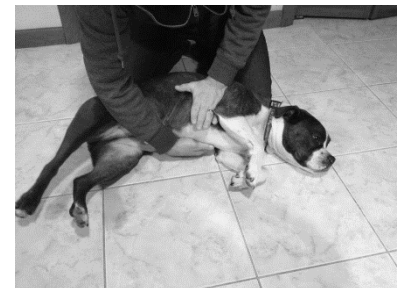
Hand Sandwich

Medium v-chested dogs such as Vizsla, Whippet, Border Collie, and Aussies will need a "hand sandwich" technique. Similar to the large v-chested dogs, a gap remains between the chest and the floor. Because of the smaller size, your hand can fill this gap, while the other delivers quality compressions.



On the Back

For round chested animals, such as Bulldogs, overweight dogs & cats, and large pugs, you will perform compressions with the pet on their back. Depending on the size of the animal, you will use one or both hands for compressions.



Crab Grab

For small animals such as cats, puppies, small dogs, and toy dogs, you will use the "crab grab" technique. Use your hand like the claw of a crab to compress their chest. Compress with your thumb and middle two fingers on either side of the chest, over the heart. Note that you will want to do this at a faster rate because smaller animals have faster heart rates.



CPR Goals

For nearly 50 years, the American heart association, with the help of researchers and physicians from across the country developed guidelines on how to perform CPR on human patients. No such evidence based guidelines existed in the veterinary world. This may have resulted in a 20% survival rate in humans, having received CPR at a hospital to the equivalent for dogs & cats of less than 6%. In June 2012, the reassessment campaign on veterinary resuscitation aka "RECOVER" which was a collaborated effort between the American college of Veterinary Emergency and Critical Care and the Veterinary Emergency and Critical Care Society arrived at the first evidence-based recommendations to resuscitate dogs and cats in cardiac arrest. They suggested that:

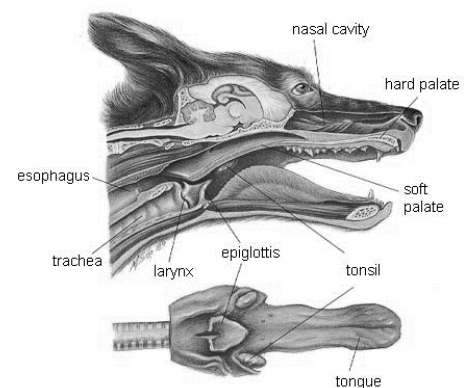
- Best to perform chest compressions that are 1/3 to 1/2 of the chest's width with the animal lying on its side or back depending on its size.
- Ventilating (breathing) for dogs & cats at a rate of 10 breaths per minute or at a compression to ventilation ratio of 30:2 for mouth the snout resuscitation.
- CPR is best performed in 2 minute cycles, switching the person doing compressions each cycle if a second person is available.

Compressions

Delivering quality compressions is extremely important in effective CPR. You need a hard surface to facilitate the compressions. Do not lean into the animal, as this could prevent the chest from springing back. Springing back to resting position allows the pet's body to suck in air. Also, counting out loud will help keep you on track, keep you calm, and may stimulate the pet's senses.

Breaths

To deliver breaths in CPR, you will use the same technique you used in the choking treatment. Pull the tongue through the canines, grab the muzzle (depending on size of pet) with your hand, or completely covering their mouth to create an airtight seal. You may need to use a cloth to grab the tongue. Deliver 2 breaths after the 30 compressions. The breaths should be about 1 second each. You can time them by saying "first breath in" (breathing), then "second breath in" (breathing). Be careful not to over ventilate. In most cases, our lung capacity will be greater than that of the pet we are saving.



2 Min CPR cycles

CPR is performed at a ratio of 30 compressions to 2 breaths, repeated 4 times. After each set, if you have a second person, change who does the compressions to prevent fatigue. The person not performing compressions can then check the femoral artery on each compression performed to see if a pulse is being created.

Check Heartbeat

After each set of CPR compressions, which will be about every 2 minutes, you want to check the pet's heartbeat to see if it has been reestablished or if you should continue with CPR. This is done at the femoral artery as illustrated in the vitals section of this program.

Rescue Breathing

Rescue breathing is performed when you know the pet has a heartbeat but is not breathing. Typically, at the end of a CPR set after and only after you have ascertained a pulse, created by the pet, at the femoral artery. Rescue breathing should only be performed for about a minute, because you do not want to go any longer without reassessing the heartbeat. Every minute, you are making sure the pet still has a heartbeat. If that should change, go back to CPR. Always be ready to go back to CPR. Your goal is to deliver 20-30 breaths per minute, which mimics a pet's natural breathing rate. Count out loud to keep you focused, calm, on track, and stimulate the pet's senses.



Poisoning

poi·son
'poiz(ə)n/
Noun

a substance that is capable of causing the illness or death of a living organism when introduced or absorbed.

***synonyms:* toxin, toxicant, venom;**

#1 Cause is Human Error



As volunteers for rescue organizations, one of the things that we check when doing home visits for potential adopters or foster homes is where and how safety household chemicals are stored. Questions typically asked include whether the animals have access to the garage or basement, and/or can they get to items underneath the sink? Poisonings occur because pets are allowed access to hazardous substances. The majority of these occurrences are preventable.

Dogs are more likely than cats to ingest a poisonous substance since they taste the world with their mouths, but both lick themselves. Just walking through a poison can cause serious harm or death.



In 2013 the ASPCA Animal Poison Control Center processed nearly 180,000 cases of pets potentially exposed to toxic substances. There are at least 3 other pet poison control call centers in the US, which means there are many more cases seen every year.

Common Poisons

Provided is a list of some of the common poisonous foods and holiday hazards.

Foods to Avoid

- Alcoholic beverages
- Avocado
- Chocolate
- Coffee (all forms)
- Fatty foods like butter, gravy, meat fat, turkey drippings etc.
- Macadamia nuts
- Moldy or spoiled foods
- Onions, onion powder
- Raisins and grapes
- Salt
- Yeast dough
- Products containing xylitol

Warm Weather Hazards

- Animal toxins—toads, insects, spiders, snakes and scorpions
- Blue-green algae in ponds
- Citronella candles
- Cocoa mulch
- Flea products
- Outdoor plants and plant bulbs
- Swimming-pool treatment supplies
- Fly baits containing methomyl
- Slug and snail baits containing metaldehyde
- Rat and mouse bait

Human Medications

- Pain killers (Tylenol, Advil, Motrin, Aleve)
- Cold medicines
- Anti-cancer drugs
- Antidepressants
- Vitamins
- Diet Pills

Winter Weather Hazards

- Antifreeze
- Liquid potpourri
- Ice melting products
- Rat and mouse bait
- Common Household Hazards
- Fabric softener sheets
- Mothballs

This list is certainly not exhaustive but gives you a basic idea of many of the items that can become poisons to our pets if ingested, absorbed or injected. The most important thing you should know is how to prevent, recognize and treat any suspected poisons.

Holiday Hazards

- Christmas tree water, which may contain fertilizers and bacteria
- Electrical cords
- Ribbons or tinsel
- Batteries
- Glass ornaments
- Homemade ornaments from salt



Preventing Poisonings

This seems like a simple enough task but in order to prevent pets from getting into toxic trouble, you have to prevent their access. Store all chemicals in areas where animals would never have access. Do not use rodenticides or insecticides where pets have access. Don't leave bowls of candy out or give peanut butter with xylitol in it. Pay attention to what is in the animal's surroundings, walk into every room with the view of a cat or a dog and eliminate all or as many hazards as you can.

Recognizing the signs of poisoning

When a pet has ingested a poisonous substance, their bodies turn on their flushing mechanisms. This can result in vomiting, diarrhea, and drooling. During any suspected poisoning where a pet is exhibiting any of these symptoms, make certain they have access to clean, fresh water. Other signs that will let you know a pet may be suffering from poisoning are breathing difficulties, anxiety and pacing, seizures, and a loss of consciousness. The breathing difficulties could be caused by a poison's effect on the brain or because of an internal burn due to inhalation of a chemical. Seizures are caused by poisonous substances acting on the organs or brain, causing the brain to dysfunction. Loss of consciousness is a result of the poison affecting the brain or organs to such an extreme that the body shuts down.

Signs of Poisoning

- Vomiting
- Diarrhea
- Drooling
- Breathing Difficulties
- Panic/anxiety
- Seizures
- Loss of Consciousness



Treating Poisoning

One of the best things you can do when you suspect that a pet has been poisoned is to stay calm. If your energy rises through panic or concern, the pet's energy may rise, thus causing their heart to beat faster and the toxin to travel more quickly through their bloodstream. When attempting to treat a poisoning, you have to play part detective in order for the vet to adequately treat the animal. You need to find out what the poison is, how they were exposed, and how long ago they were exposed. If you are unaware of what the poison is, collect a stool and/or vomit sample to bring into the vet. If, and only if, you know that the suspected substance they have ingested is safe to come back up, then you may induce vomiting. To gather more information about how a particular substance will affect an animal, contact a pet poison helpline (remember to have your credit card ready), and then contact your vet, giving them the information that the poison helpline gave you. In general, when seeking assistance from a veterinarian or poison helpline, be prepared to answer questions. The more accurate information you can provide, the better they can assist you.

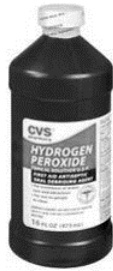
Inducing Vomiting

Hydrogen Peroxide 3% (H₂O₂)

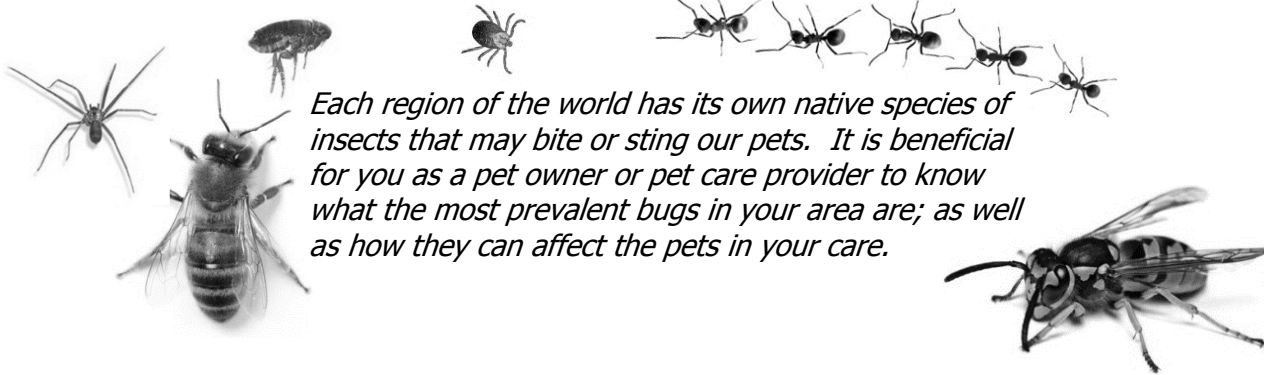
- 1tsp per every 10lbs (about 5ml per tsp or 1 cap = 1 tsp)
- Repeat up to twice if necessary
- Caution in small dogs and cats
- Best to do in a kitchen or bathroom

The use of hydrogen peroxide is generally safe to induce vomiting. Hydrogen peroxide is unstable in that it expires and must be kept in a light-block bottle or else it will break down into water rendering it relatively useless. The dosing is **1 teaspoon for every 10 lbs.** Best to administer using a syringe (no needle) or for larger dogs, a turkey baster. Since syringes tend to come in ml measurements, know that approximately 5ml= 1teaspoon. Most bottle's caps hold a measured teaspoon. You can repeat

the dosing up to twice within a half hour if necessary, but do be careful not to repeat too often because you can overhydrate and dilute smaller animal's blood volume.



Insect Bites & Stings



Each region of the world has its own native species of insects that may bite or sting our pets. It is beneficial for you as a pet owner or pet care provider to know what the most prevalent bugs in your area are; as well as how they can affect the pets in your care.

Recognizing Insect Bites & Stings

The good news is that dogs and cats are less likely than us to have an allergic reaction to an insect bite or sting. It is often difficult to tell when an animal has experienced a sting or bite from a bug, but generally they tend to act erratically and bite at the area. Fur may hide swelling that exists from an insect bite or sting, but you will know within minutes whether a pet is having a severe allergic reaction. Severe reactions result in significant swelling. A golden retriever may begin to look like a Sharpei in no time! Swelling generally happens around the face and head on dog's as their curious nature sends them into hives head first.

Treating Insect Bites & Stings

Just like with a poisoning, you want to keep the pet calm so that if any venom that has been injected will travel more slowly through the blood stream. If you can find a stinger, use something with a hard edge, like a credit card or a license to remove it. You don't want to use tweezers or your fingers because many stingers contain more venom, which if squeezed will be released causing discomfort or further allergic reaction. Treat symptoms only if presented. For example, swelling at the wound site, you can apply ice or antihistamine cream. In general, you just want to keep the pet comfortable. If dramatic swelling occurs, have antihistamine available to give the pet.



Tick Removal

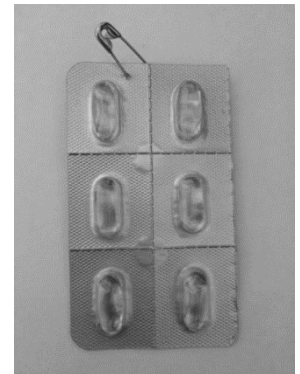
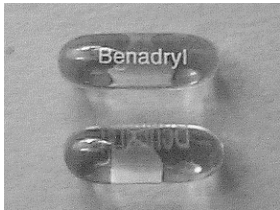
The best tools for removing ticks from your pets are slotted scoops like the Tick Spoon or Tick Ease. Tweezers, which are better used to remove ticks from humans can be used if these tools are not available to you.

- * Place the slotted scoop or tweezer edges directly against the skin.
- * Slide the scoop/tweezer edges under the tick's mouthparts and as far back as possible.
- * Pry or lift the tick carefully from the skin with steady, even pressure.
- * After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub, or soap and water.

Antihistamine/diphenhydramine

Antihistamine/diphenhydramine, better known as Benadryl is an effective antihistamine that will help reduce swelling and histamine reactions of a pet experiencing a severe allergic reaction. It was listed in the first aid kit content list to have Benadryl available in gel caps. These can be found in blister packs to which you can easily attach a safety pin that can be used to puncture the gel cap to directly administer on

a pet's tongue. This is a fast, safe way (and less messy than the pink Benadryl pills) to administer the treatment. Usually forms of diphenhydramine are sold in 25mg doses. **The safe dose for a pet is 1mg per pound.** If you have a pet that's smaller than 25 lbs, give them an approximated amount of the gel cap based on their weight. If you do not know a pet's weight, it is safest to under-dose as antihistamines are breathing suppressants and contact a veterinarian for advice.



Anaphylactic shock

Anaphylactic shock is the result of a severe allergic reaction. The signs are extreme swelling, usually in the face, which can result in breathing difficulties, loss of consciousness, and seizures. The pet should be treated with an antihistamine and must be seen by a veterinarian. Remove the collar from any pet that is experiencing swelling around their face or neck as this can impair their ability to breathe.

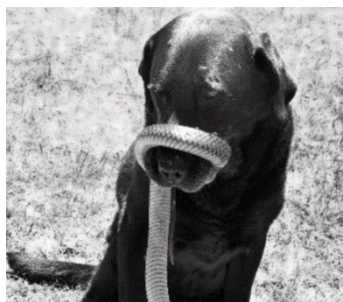


Spider bites

Most spider bites leave pets with puncture wounds resulting from the fangs being injected into the skin, very few envenomate. Spider puncture wounds will be treated the same as any puncture wound. There may be some swelling, but mostly you are trying to prevent infection from setting in. In particular, female black widow spiders, noted by the red hour glass shape on their bodies, are very dangerous to both cats and dogs. There is an anti-venom but it is difficult to get depending on in what region you are. Symptoms of a black widow spider bite are paralysis and rigid abdomen. Black widow bites are extremely painful and any pet, if suspected of being bitten, must be taken to an emergency veterinary hospital. Smaller animals particularly cats, are more susceptible to black widow venom. Whichever region you live in or may travel to, be aware of the harmful insects, animals, and snakes most prevalent to that area.



Snakebites



The best way to keep pets safe is to avoid areas in your region, which would make likely homes for snakes. Most North American snakes are not poisonous. North America's venomous snakes fall into two groups; Coral snakes and pit vipers (which include rattlesnakes, cottonmouth, and copperhead). Despite their smaller size, baby snakes pose a greater threat to any pet. Being underdeveloped, they lack the inhibition to use their venom. According to Red Rock Biologics, the organization that developed the rattlesnake vaccine in Sacramento, California approximately 300,000 dogs and cats are bitten annually in the United States by venomous snakes.



Additionally, dogs are 500 times more likely to be bitten by a poisonous snake than to get rabies. Venomous snakebites are known to cause serious muscle, liver, and neurological damage. Statistically, about 1/3 of bites of venomous snake bites are dry, so while no venom is secreted, you are still dealing with severe puncture wounds. In general, because of their curious nature, dogs are bitten more often than cats and tend to be on the head, neck, front legs, and paws. Bites, like stings to the head and neck can threaten the pet's airway. According to research, some veterinarian facilities specific to region, do have vaccines for a particular kind of venomous snake.

Recognizing the signs & snake

In recognizing that a pet has been bitten by a snake, one of the best first measures you can take is to identify, be able to describe, or snap a photo of the snake. Being able to find puncture wounds and notice any pain, swelling, or discolored skin, which would indicate envenomation is critical. If a venomous bite is left untreated, severe conditions including shock, organ failure, and neurological complications can result. If the snake is known to be non-venomous, follow the puncture wound protocol. If you are uncertain of the species of snake, or it is confirmed to be venomous, get the pet to a veterinary facility immediately.



Treating snakebites

- Keep the animal calm
- Identify type of snake
- Restrain & muzzle
- Determine if dry or venomous bite
- If venomous call the emergency vet and then go!

Just as with any injected toxin, such as venom, it is best to keep the pet calm so the heartrate does not increase, which would circulate the venom and/or infection more quickly. If bitten near the neck or head, which results in swelling, remember to remove the collar to prevent asphyxiation. Being able to identify the snake will help in determining the course of action for treatment. You should know within minutes if the pet has been envenomated based on their symptoms. To aid a pet and slow the flow of venom through the body, give a dose of

diphenhydramine. Icing the area will help manage pain, as well as slow down the toxin absorption. If the bite was venomous, call the veterinary facility to inform them that you are on your way. This will save the vet's time in preparing for your visit, as rapid response is key to treating the pet.

Preventing Heat Injuries



Pets overheat when they lack proper ventilation, adequate access to fresh, cool water, over-exert themselves, or become stressed. By avoiding these scenarios, you will help prevent a pet from suffering hyperthermia. Panting is the only way for dogs & cats to truly cool themselves. They do dissipate heat through the ears and pads of their paws, but it is inefficient. When you are responsible for a pet, it is your job to avoid putting them in a situation where their ability to regulate their temperature could be at risk. Cars are particularly dangerous because as they heat up, resulting in hot temperatures, lack of ventilation, and lack of water; they cause pets to panic, which further complicates the situation. Keep in mind that pets can overheat on what seems like a normal day, due to stressful situations. It does not have to be hot for your dog to suffer heat stroke. Just as we prevent poisoning, properly storing electrical cords and chemicals that could cause burns, will prevent

many potentially dangerous situations. It is very important to watch puppies and cats around electrical cords as they tend to play with them, which can cause extreme pain from electrocution and burns around the mouth.

Recognizing Hyperthermia

A pet can become hyperthermic by a myriad of situations. The term hyperthermia includes conditions that range in severity such as; heat cramps, heat exhaustion, and heat stroke. Signs that a pet is suffering from a hyperthermic condition are what you see listed to the right. For those of you that have experienced heat exhaustion yourself, you may be familiar with extreme exhaustion or lethargy, dizziness (similar to ataxia), and you may have felt nauseous, gotten the chills and/or had diarrhea. When checking gums on a pet affected by heat, they will be bright red as opposed to the normal pink. Despite being full of blood, the capillary refill will be slow. Any pet with a temperature exceeding 105 degrees F, can be considered to be in a hyperthermic state. They can suffer loss of consciousness, seizures, and ultimately death.

- Uncontrollable panting
- High heart rate
- Vomiting
- Diarrhea
- Lethargy
- Ataxia or uncoordinated movements
- Gums are bright red, capillary refill is slow
- When a pet's temperature exceeds 105° F
- Loss of consciousness
- Seizures

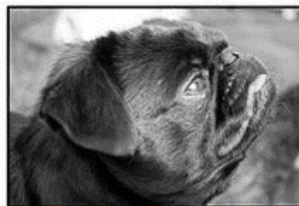
Size Does Matter



Mesocephalic



Dolichocephalic



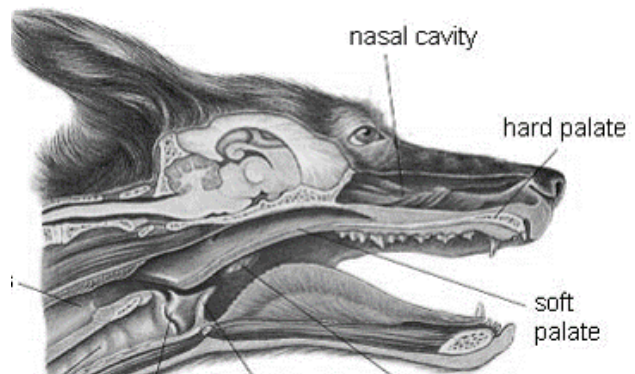
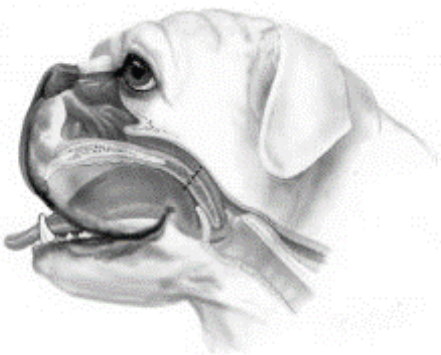
Brachycephalic

The length of an animal's muzzle, their weight, and their age can adversely affect their ability to tolerate heat. The pictures provided illustrate how just muzzle lengths alone can effect a pet's ability to handle hot conditions. The dolichocephalic Borzoi, has a longer distance for the incoming air to go through before it passes by the brain cavity and to the lungs. This means that the air the dog breathes in has more time to acclimate to the dog's body temperature. The brachycephalic pug pictured allows for almost no air-to-body temperature acclimation. Hot air goes into the nostrils, directly past the brain, and into the lungs, putting dogs with these muzzle structures at greater risk for a hyperthermic condition. The mesocephalic lab and similar breeds can dissipate heat better than the Pug, but not as well as the Borzoi. Overweight animals, the young, and

senior pets are at greater risk, no matter their muzzle size as they are naturally less efficient to handle stresses, such as heat.

Muzzle Structure

These pictures show a cross-section of a couple different muzzle structures and how the air enters both dogs' and cats' bodies, particularly illustrating the nasal cavity in relation to the brain. When pets overheat, organs such as the brain fail to process oxygen. Enzyme activity breaks down which eventually leads to organ failure.

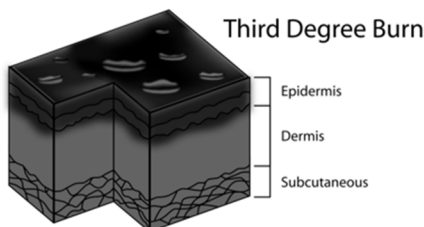
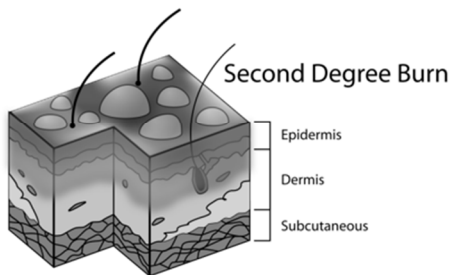
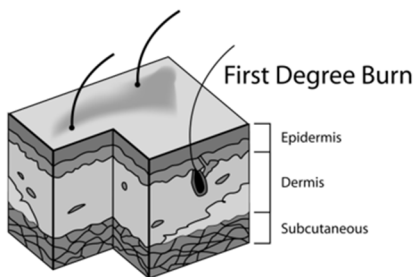


Treating Hyperthermia

Ultimately, the goal of treating hyperthermia is to lower the pet's body temperature. Making certain that the pet is on a cool surface (grass instead of hot pavement, blanket instead of hot deck, tile instead of rug), which can aid in dissipating heat. Always be prepared for a pet to enter a state of shock. Increase ventilation and decrease the surrounding temperature as best you can. Bathing with cool water and wrapping in damp cool towels will help bring the temperature down safely. Hose water is at an ideal temperature, as long as the hose has not been baking in the sun. ALWAYS check the temperature of the water coming out of the hose before pouring over the pet. Cool water is the best way to lower the core temperature of an animal, but ice is not ideal as it can shock the pet's over-heated system, making matters worse. Check the pet's temperature so that you have a gauge and go to your vet if the temperature is 105 degrees F or above OR if any neurological problems are present. The signs of neurological issues would be uncoordinated movements, seizures, and/or loss of consciousness.

- Make certain the pet is on a cool surface
- Watch for signs of shock, treat as they present
- Immediately increase ventilation, surrounding temperature as best you can
- Bathe with cool water and/or wrap in a damp towel
- Check temperature
- Go to the vet especially if neurological signs are present

Recognizing Burns



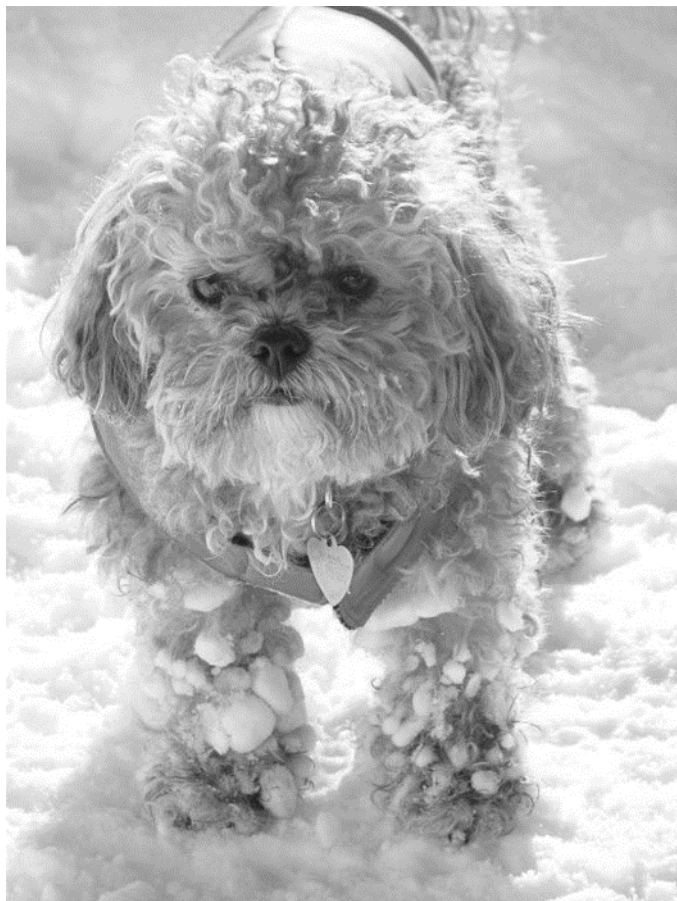
There are 3 types of burns from which a pet can suffer. The type determines the depth of the burn as well as treatment. **1st degree** burns can often be hidden by fur and include just the top layer of skin. There will be redness and soreness. **2nd degree** burns will present with blisters and plasma discharge as they affect a larger portion of the thickness of the skin. A burn described as 2nd degree or higher will be at risk of infection. **3rd degree** burns permeate the full thickness of the skin. They are the most painful and most susceptible to infection. Remember, burns don't just happen outside the pet's body. They may breathe or ingest chemicals or vapors that burn the animal internally.

Treating Burns

In order to properly treat a burn, you must determine the cause to make certain the damage is stopped. If an electrical burn, make sure the power source is cut. If a noxious vapor, remove the pet from the area. With chemical burns, in order to prevent further damage, rinse with plenty of water. Be certain to rinse away from the pet and you; the chemical may continue to burn the pet even while being rinsed away. The next thing to do is determine the type of burn. If **1st degree**, it may not need treatment other than monitoring but burn cream can be applied to help with any discomfort. **2nd degree** burns should be cleaned with sterile saline, iodine, or betadine. Apply burn cream, cover, and get the animal to a vet within 24 hours to verify that the wound is healing properly and to make certain an infection has not set in. **3rd degree** burns should be covered and the pet should be safely and comfortably transported to the vet ASAP. Depending on the

severity and percentage of the pet's body that is burned, always be prepared for a severely burned pet to go into

shock. Because burns are extremely painful, restraining and even muzzling may be necessary. Because of the painful and long recovery time associated with severe burns of a pet, covering the majority of their bodies, many vets will recommend euthanasia.



Preventing Hypothermia & Frostbite

Preventing hypothermia and frostbite is as simple as not leaving pets exposed to freezing or below freezing temperatures.

Recognizing Hypothermia & Frostbite

Recognizing hypothermia will be easiest when you know the baseline vital signs of the pet, such as breathing rate, heartrate, and temperature. A pet will become hypothermic when they are in a freezing or below freezing temperature environment for too long. Pay attention to shivering, lethargy, ataxia, the color of mouth tissues, and the color of exposed skin. Frostbite is a condition where the water in the body tissues begins to freeze. It will present as red, hard, and swollen and will be painful to the touch. Pets will experience frostbite on the most exposed areas, such as ears, tails, scrotum (even if neutered), and paws. The nose is less susceptible because of its salinity as salt has a lower freezing point.

Treating Hypothermia & Frostbite

Just like a pet that has overheated, the pet's body temperature should be normalized gradually, avoiding shock to the system. This can be achieved by submerging them in a bath of tepid water or wrapping in warm towels. Be careful using heating pads or heated blankets. Pets can

burn as their body may be in shock, and therefore unable to regulate temperature. Check the pet's temperature to see how far below normal it is and check for frostbitten areas. Be sure not to massage potentially frostbitten areas as the frozen skin contains ice, which behaves like glass and could damage underlying tissue. A vet must treat frostbite and/or symptoms of hypothermia. Once stable, take your pet to a veterinary hospital for re-warming.

Seizures

Seizures occur when a pet's brain signals misfire. There are many reasons why this may occur, such as ingested poison, liver or kidney disease, blood chemistry issues, anemia, head injuries, encephalitis, strokes, or brain tissue damage. All of these conditions directly or indirectly cause the brain to dysfunction.

Seizures can be a sign of:

- Ingesting poison
- Liver disease
- Low or high blood sugar
- Kidney disease
- Electrolyte problems
- Anemia
- Head injury
- Encephalitis-inflammation or infection of the brain
- Strokes
- Brain cancer/tumor

Preventing Seizures

To prevent seizures your goal is to prevent any of the previous conditions listed of occurring. Safely store hazardous chemicals. Prevent access to toxic foods. Make sure the pet is adequately hydrated. Keep the pet's safe from extremely hot or cold conditions. Keeping pets on leashes or safely contained in a yard to prevent car accidents will help prevent seizures. Pets should be taken to the vet regularly to monitor organ function so that any problem can be caught before leading to a seizure or worse.

Recognizing Seizures

Some people will confuse pets' dreaming for pets seizing. While a few of the symptoms, such as paddling motion of the legs, eye, lip and body convulsions can be similar, the difference between a seizure and a pet dreaming is that a seizing animal will not be able to respond to attempts to waking them up. A seizure may result in a loss of bladder and bowel control and typically lasts between 1-3 minutes. There are several types of seizures, such as clonic-tonic (formally known as grand mal), partial, cluster, and more.

Treating Seizures

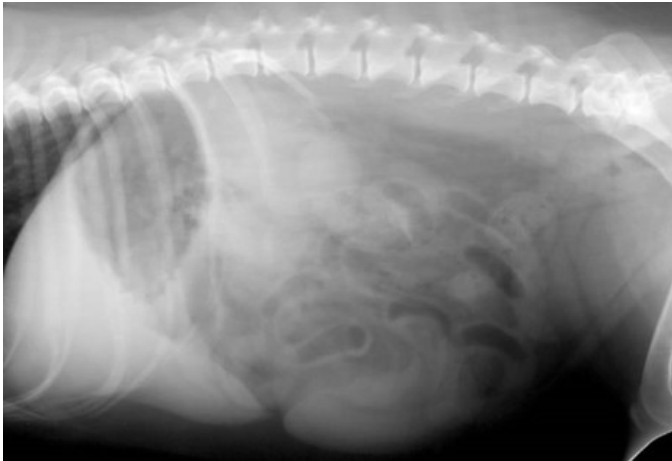
Since seizures often are the brain firing on all cylinders, all systems are go in the pet, meaning they are exerting all kinds of force all over their body. You never want to restrain a seizing pet. Make certain there is nothing around them on which they could harm themselves. Reduce the stimuli such as lights, radio, and tv to prevent the brain from having to process anything else. Remain calm to help the pet stay calm (if only on a subconscious level), and for yourself to be ready for when they need you. Particularly if this is the pet's first seizure, being able to record video evidence will help in the process of diagnosis. Other information to gather should be knowing what the pet was doing before the seizure (activities done during the day, what they ate, what they were exposed to, and general demeanor prior to the episode). If this is the 1st seizure for the pet, after they finish, it is wise to go the veterinarian (emergency vet if necessary). If a 2nd seizure occurs within a short period of time, go to the emergency vet immediately. Some pets have a condition known as epilepsy, which results in seizures. This can be hereditary and is common in Cavalier King Charles spaniels due to their skull shape. Examples of breeds where manageable epilepsy is common are, all types of retrievers (Labs, Golden Retrievers, Flat Coats, Chesapeake), Beagles, Cocker Spaniels, Huskies, German Shepherds, Keeshonds, St. Bernard's, Border Collies, Belgian Tervureans, and Dachshunds. If the pet has a seizure and is known to be epileptic, there is no need to rush to the vet unless the seizure is unusual, will not end, or the animal is injured. Pets that have epilepsy are best treated by taking notes and videos, noting the time, what happened before, and what happened when the pet experienced a seizure. Again, if this is the pet's 1st seizure, go straight to the emergency vet after the pet has stopped seizing to rule out poisoning, trauma, tumors, or any other condition that could cause a seizure. Cats can have seizures, but it is far less common than in dogs.

Bloat

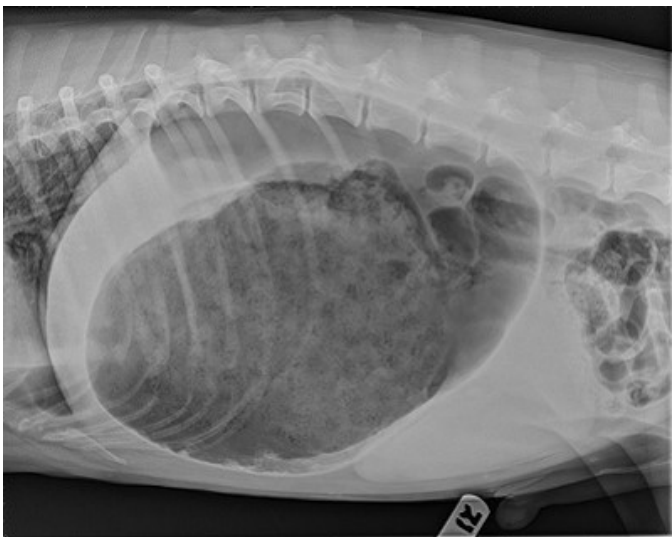
The technical name for bloat is "Gastric Dilatation" if the stomach twists its then called "Gastric Dilation-Volvulus" ("GDV"). The stomach can swell abnormally or bloat if abnormal amounts of air, foam, food, water or gas build up without proper escape. When the stomach bloats or swells it can rotate and twist at one or both ends of its opening; esophagus and duodenum; the beginning of the small intestines. The flipped stomach causes the matter in the stomach including stomach acid, enzymes, bacteria and gas to be trapped as well as cuts off blood supply to the stomach. If left untreated the stomach will burst causing sepsis (blood infection) and the pet will certainly die.

Bloat is often a genetically predisposed condition of which several breeds are prone. Cats can be affected by bloat, but it is less common.

The dog breeds commonly affected by bloat include; Afghan Hound, Airedale Terrier, Akita, Alaskan Malamute, Basset Hound, Bernese Mountain Dog, Blood Hound, Borzoi, Bouvier des Flandres, Boxer, Bullmastiff, Chesapeake Bay Retriever, Collie, Dachshund, Doberman Pinscher, English Springer Spaniel, Golden Retriever, Gordon Setter, Great Dane, German Shepherd, German Shorthaired Pointer, Great Pyrenees, Irish Setter, Irish Wolfhound, Labrador Retriever, Miniature Poodle, Newfoundland, Old English Sheepdog, Pekinese, Rottweiler, Samoyed, St. Bernard, Standard Poodle, Weimaraner, Wolfhound

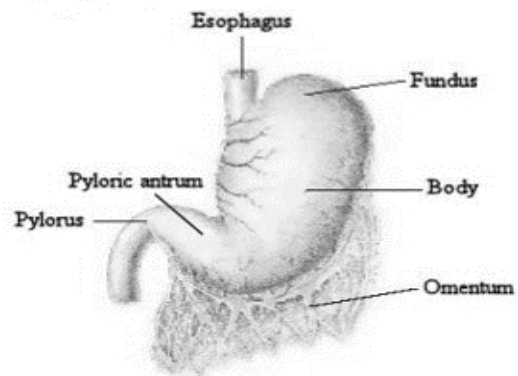


Normal stomach x-ray



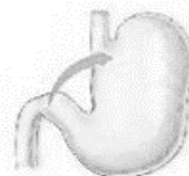
Bloated stomach x-ray

Hill's Atlas of Veterinary Clinical Anatomy The Stomach



Sequence of Gastric Dilatation and Volvulus

Clockwise rotation as viewed from a ventral position.



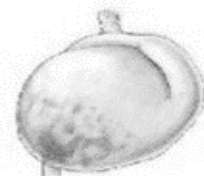
The pyloric antrum is displaced downward.



The pylorus crosses the midline, passes underneath the distended proximal part of the stomach, and moves upward along the left abdominal wall.



The gastric fundus moves ventrally and becomes located in the ventral abdomen.



The continuing gastric dilatation displaces the greater curvature ventrally.

A bloating stomach is obvious and easy to diagnose, both physically and in x-rays. The diagram provided above illustrates the sequence of GD and GDV.

Preventing Bloat

- Do not feed dogs before or after exercise
- Gulping too much air when eating
- Prevent eating too fast
- Prevent drinking too much water too rapidly
- Feeding a good diet
- Probiotics to help reduce gas and help digestion
- Reduce stress
- Genetics-many breeds are prone to the condition
- Familial- find out if any relatives of the dog have bloated
- Some veterinarians will surgically tack the stomach to prevent Volvulus (twisting)
- Consider a prophylactic gastropexy surgery (which fixes the stomach in place, as described above) if you have a high-risk breed

Not feeding dogs especially before exercise, but also afterwards, will help prevent bloat. An empty stomach will deal better with the undulations of exercise more easily. When a pet eats too fast, it tends to swallow air as well. The same is true with water. This causes the volume in the stomach to increase too quickly, making the pet more susceptible to bloat. An interesting study was conducted by Purdue University of Veterinary Medicine that showed raised or elevated food & water bowls do not aid in the prevention of bloat. Feeding from ground level is better.

Foods that tends to swell or create air gaps in the stomach, like large kibble should be avoided, especially for at-risk breeds. Species specific probiotics are a great supplement and help reduce gas and facilitate digestion. Just like humans can get knots in their stomachs; stress can lead to gastric upset which can lead to bloat. As listed previously, there are many breeds that are genetically prone to GDV. If you have an at risk breed, it's always helpful to find out if any bloating has occurred with its direct relatives. A vet may recommend a prophylactic surgery that tacks the

stomach to the abdominal wall to prevent volvulus. For high-risk breeds, such as Great Danes, this will typically happen at spay or neuter.

Recognizing Bloat

A bloating pet's symptoms may not be obvious at first, but when several symptoms of bloat are observed together, the signs will become clear. One of the reasons bloating may not seem obvious at first is that they may continue to drink water and sometimes eat grass which can be normal for many pets. The difference between retching and normal vomiting is an important distinction to note. Retching is a hack, originating from the throat, while vomiting is a result of the full force of the stomach muscles pushing the contents up and out. Bloating animals cannot vomit. Their abdomen will be swollen and hard to the touch. Depending on the breed of the animal, when looking down onto the animal from above, the rib cage may stick out more on one side. The pain of which may leave them in a hunched or roached position. In general, signs of bloat will present with discomfort resulting in pacing, drooling, licking at the air, and the pet may tend to hide from you. Check the gums, as pale gums, in conjunction with these other symptoms will be a clear sign of bloat.

Treating Bloat

If you suspect a pet is bloating transport to an emergency veterinary hospitable immediately. This is a life threatening condition that cannot be treated at home.

Conclusion

Preventing harm is the best way to be a pet's hero. Even if done well, you may still have to treat serious injuries because accidents happen. One of the most valuable things you can do is to know the baseline of any pet in your care. Check them daily and use a pet assessment sheet to track lumps, bumps, etc. Knowing what is normal for an animal will make recognizing their afflictions much easier.

Practice your treatments and treatment plans regularly. Despite your best efforts to prevent and recognize issues, sometimes simply knowing when to take a pet to the vet can be heroic. The purpose of this program is to work in conjunction with veterinary care. It is not a replacement for professional veterinary medicine. Even if there are no symptoms exhibited by a pet, bring them to a vet if they have suffered blunt-force trauma or loss of consciousness.

For the Rescuer:

The majority of this course is designed to help make pets' lives better, but don't forget to take care of yourself. Experiencing any kind of trauma with a pet can be physically and psychologically taxing. Please take the time to speak with someone following an emergency event. The person can be a friend, a family member, a loved one, or even a veterinarian. Experiencing a pet emergency is not only traumatic for the pet, but for the rescuer as well.