

Emergency Care

by Robin M. Smith, DVM

In a serious emergency first aid cannot take the place of a veterinarian's professional services. Knowing how to provide assistance in an emergency, however, will influence the outcome of the case and will, in many instances, save an animal's life.

There is a time to assist your animals yourself, a time to telephone your veterinarian, and a time to seek professional assistance immediately. The purpose of this article is to help you select the proper action and hopefully, to give you assistance in those infrequent situations when you are unable to get your pet to the veterinarian. There will be occasions when no first aid treatment is appropriate and only veterinary services can be helpful. It is my hope that in this and following articles, it will enable you to better distinguish between the two.

Before I begin, I want to stress the importance of a good relationship with your veterinarian. This relationship should be comfortable enough that you feel that you can call and ask anything of your veterinarian. The veterinarian should provide you with advice, care and helping you understand conditions involving your pet and should be willing to see them in emergencies or refer to someone who can take care of them, i.e. an emergency hospital. These days with the ever growing pet population and the growing demands on veterinarians, a lot of veterinarians are using emergency hospitals to refer emergencies to. This is not because they do not value your business, but by providing a referral veterinarian who does only emergencies, as I do, your veterinarian is giving you the best care. A veterinarian who is up all night cannot function well the next day to see their regular clients. Also, most veterinarians do not have 24 hour care that some of the animals in emergency crisis need. So keep this in mind when your veterinarian sends you to an emergency clinic, it is the best thing in most situations.

The first thing you should have on hand in emergency situations, and actually you should do this now, is an updated record on all of your pets that includes their shot records and past medical history. In case you are referred to an emergency clinic, this helps the veterinarian who has never seen your pet.

Accident and Injuries

1.) Abdominal Distention

There are several reasons for an acutely distended abdomen and the degree of importance varies with its severity. Simple overeating is common in puppies and is normally not serious. However, gastric dilation and volvulus (twisting) is the utmost emergency. Abdominal distention's which need emergency treatment include severe overeating, overdrinking, air swallowing, and gastric dilation and volvulus.

Overeating: All breeds of any age are susceptible to overeating and overdrinking but it occurs more commonly in puppies or in animals that have not eaten regular meals.

Causes: Consumption of large quantities of food, Eating garbage, Excessive consumption of water after eating dry food, excessive water consumption following exercise or the unavailability of water for abnormally long periods of time.

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Signs: Swollen abdomen, possible vomiting or retching groaning.

Treatment: Prevent further access to food or water and keep quiet and provide plenty of fresh air.
ANIMALS WITH SEVERE ABDOMINAL DISTENTIONS AND RESPIRATORY DISTRESS MUST RECEIVE VETERINARY ATTENTION.

Gastric Dilation/Volvulus

Definition: This is seen most often in large and giant breed dogs and deep chested dogs. That accumulation of gas in the stomach causes distention and a concurrent twisting of the stomach on its axis (volvulus). Its exact cause is unknown, but there is interference with blood circulation and shock, coma and death can occur in 2-3 hours. It is believed that the distention occurs before the twisting and may or may not follow ingestion of a large meal.

Signs: Enlarged abdomen, abdomen painful, especially when touched, and may sound tympanic if thumped with the forefinger. Excess salivation with unsuccessful attempts to vomit. Difficult breathing, evidence of shock (will cover later) and reluctance to move and often refusal to lie down or they lie down and will not move.

Treatment: **MUST GET VETERINARY ATTENTION - EVEN WHEN YOU ARE NOT SURE, IT IS BEST TO CALL YOUR VETERINARIAN.**

2.) Bleeding

Management of external bleeding: Use proper restraint and avoid excitement. First try to control bleeding by direct pressure or a pressure bandage. Apply a tourniquet **AS A LAST RESORT** - only if blood loss becomes critical and **SEEK** immediate help.

Severe bleeding must receive immediate attention regardless of what other injuries are present. Bleeding from minor cuts and wounds generally stop within a few minutes. Profuse external bleeding resulting from blood vessel damage can usually be controlled by applying firm, direct pressure over the wound with a sterile or clean gauze or cloth such as a handkerchief or T-shirt.

Arterial blood will flow irregularly in time with the heartbeat and will be bright red; whereas blood from a vein will flow evenly and be dark red. Apply additional pressure between the heart and the wound from an artery and below the wound for a vein.

Application of a pressure bandage is normally the safest and best way to stop bleeding. Apply a sterile or clean cloth or sanitary napkin directly over the wound and bandage the area firmly with a 2-3" gauze roll. Torn strips of cloth approximately 3" across by 4' long made from bedding sheet or soft material can serve very well. Secure the gauze in place with adhesive, electrical or masking tape, or by tying the cloth together. Avoid frequent removal of the bandage to check the wound because bleeding may start again.

Application of a tourniquet should be reserved for bleeding that cannot be controlled by direct pressure, such as a severely mangled or crushed leg or tail. A tourniquet made of a 2" wide gauze

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bandage or cloth or necktie should be applied directly ABOVE the wound and should be released every 10 minutes. When properly adjusted there should be oozing from the wound and you should be able to place a finger under the bandage when it is in place. Do not apply a tourniquet unless absolutely necessary.

Bleeding from the ear, footpad or penis can result in fatal hemorrhaging and the potential seriousness of these types of cuts cannot be overemphasized. Normal clotting of blood in an ear injury is prevented by the whip-like action of the ear during head shaking. To prevent this, bind the head with a roll of gauze or tape or use a nylon or knee sock with the bottom cut out. A bleeding footpad should have a pressure bandage applied.

Hemorrhaging from the penis can frequently be slowed or controlled by applying cold compresses to the area. A female in season will excite the male causing uncontrollable hemorrhage. Remove the male from the area to avoid this complication.

Toenail Bleeding: One of the most frequent calls I get at the emergency hospital is from the client who cuts a nail too short and cannot stop the bleeding. Sometimes these nails bleed, at least to the layman, a lot. I first recommend using a bar of wet soap and having the person put the dogs' nail into the cake of soap to cover it. I also recommend flour or baking soda made into a mush and putting this on the nail. It is best to have the dog lying on its side when all these are attempted because this relieves a lot of pressure on the foot. If it still continues to bleed profusely, you can wrap the foot in a bandage, BUT not too tightly.

3.) Management of Internal Bleeding

Seek veterinary help ASAP. Treat for shock (covered later) and do not give the animal anything to eat or drink. IMPORTANT - Internal hemorrhaging should be considered a possibility following any sharp blow or injury to the abdomen or chest. This is especially true if hit by an automobile.

Severe bleeding will cause the animal to show signs of shock and should be treated accordingly. Coughing up bright red, foamy blood indicates injury to the mouth, trachea and lungs. Vomit or excrement that is a bright red to dark reddish-brown may indicate injury to the stomach or intestines.

Signs of Internal Bleeding: Pale mucus membranes (the gum color above the teeth, it should be pink). (Of course one has to take into consideration the black pigment). When you put pressure on the gums and release, the gums should immediately be white and within a couple seconds should be pink again. Panting.

4.) Choking

A true obstruction of the throat is rare in small animals, but dangerous when it does occur. It occurs more commonly in puppies or in some of the shorter nosed breeds. The presence of foreign bodies or wounds in the mouth or throat that do not obstruct air passage are much more common.

Obstruction of the Throat

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Causes: Objects such as rubber balls or pieces of meat lodge in the back of the pharynx or esophagus, throat swelling caused by insect stings or infection, allergic reactions that can cause throat swelling or the ingestion or inhalation of something irritating.

Signs: Sudden difficult breathing cyanosis (blue tongue) and collapse.

Treatment: Pull the tongue forward and inspect the throat (be very careful not to get bitten by the anxious animal). Hold the mouth open and carefully remove the object. Strike the side of the rib cage with the palm of your hand 3 - 4 times while the animal is lying on its side. Stand behind a large dog and lift up its forelegs while giving 3 - 4 forceful compressions on both sides of the chest.

Foreign Bodies in the Mouth or Esophagus

Signs: Apprehension, choking or gagging, salivation or spitting up white or blood-tinged phlegm, pawing at mouth and rubbing the side of the head on the ground.

Treatment: Press the thumb and forefinger of one hand into the upper cheeks, forcing the mouth to open wide. Gently remove the object with your fingers or a pair of long-nosed pliers. If wounds exist or the foreign body cannot be removed easily, please see a veterinarian.

5.) Convulsions/Seizures

Convulsions or seizures can be violent, and are involuntary contractions of the voluntary muscles. They are either acquired (secondary to some other cause) or congenital (those suspected to be of an inherited nature). There are many causes. The primary concern is not to determine its cause but to administer appropriate care for the animal. Minor seizures may last from a few minutes to a minute or to, with or without loss of consciousness. Major seizures last from a few minutes to several minutes and are characterized by the apparent loss of consciousness.

Signs: Restlessness with frightened or dazed appearance, hiding or wandering, head shaking, salivation, licking of the lips and snapping the jaw, dilated pupils, violent muscle contractions and sometimes rapid leg movements, greatly increased respiratory rate and loss of urine and bowel control. Immediately following a seizure there is a period of confusion, disorientation, pacing, salivation, weakness, and temporary visual impairment.

Treatment: An animal with convulsions can be frightening and upsetting. Remain as calm as possible and intervene only as indicated. Treatment is limited to preventing injury to the animal and to you. During the seizure an animal has no conscious control over its actions. A completely effective treatment for a seizure at the time it happens is not practical since it involves an intravenous injection of an anticonvulsant drug. Do not physically restrain, keep children away, never place fingers between teeth and make the animal comfortable. Keep the pet on the floor and prevent it from falling. Use a blanket or coat for padding and protection. Keep the area quiet.

IMPORTANT: Continuous seizures require immediate medical attention. Poisons are a common cause of convulsions and should be treated accordingly.

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6.) Ear Injuries

Causes: Bite wounds, foreign bodies inside the ear canal such as grass lawns and seeds, insect bites and infections.

Signs: Violent head shaking, scratching at the ears and neck, dragging ear along on floor, tilting the head to one side, tenderness when ear is handled, unusual odor, discharge from the ear and swelling of the ear.

Treatment: Control bleeding by applying direct pressure to the wound. Apply a head bandage to maintain pressure and prevent head shaking. You can clip the wound area and apply an antiseptic cream to it. If there is a foreign body and it is visible, try to remove it. Temporary relief of pain can be provided by pouring a bland oil, such as mineral, baby or olive oil, directly into the ear canal.

Complications: Hematomas are accumulations of blood between the cartilage and skin of the ear and may develop secondary to excessive head shaking and scratching. Surgical treatment is usually required.

7.) Eye Injuries

Proper initial emergency care not only relieves pain but may also prevent permanent loss of vision. At our emergency hospital, anyone who calls in with a pet that has an eye injury, no matter how small, are strongly encouraged to bring the pet into the hospital.

Causes: Foreign bodies such as grass lawns, sawdust, and dirt are all potential sources. Lacerations and contusions result from fights, car accidents, blows and cat scratches. Chemical irritants such as acids or alkalis are also some causes.

Signs: Rubbing and pawing at the face/eyes, eye tightly shut, eyelids swollen, watering of the eyes, sensitive to light.

Treatment: Since the eyes are very delicate organs almost all injuries should be examined promptly by a veterinarian. If the foreign body is easily assessable, remove it. No attempt should be made to remove an object closely adherent to the surface of the eye. Irrigate the eye with eyewash and avoid touching or wiping the eyeball. Hemorrhage in the white of the eye (sclera) usually clears in a couple of weeks. However, it suggests the possibility of a more serious injury inside the eye with a dye to ascertain if there is a corneal injury or not. This is important as some medications, especially those with steroids, can make a corneal injury worse. That is why it is important to not put any medications in the eye without first checking with a veterinarian.

8.) Electrical Shock

Causes: Biting through live wires such as electrical cords, blankets or lighting.

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Signs: Violent muscle contractions with the inability to release an electrically charged object, collapse and unconsciousness, no evidence of a heartbeat or pulse, no breathing, cyanosis (blue) signs of shock and burns.

Treatment: The first step is to separate the animal from the electrical source. It is very important not to touch the animal directly or use an object that conducts electricity or is wet. Shut off the current as a circuit breaker or fuse box. Disconnect an electrical cord from its connection. Push away with a dry pole or board while standing on something dry. **GET TO A VETERINARIAN!**

9.) Allergic Reactions

A potentially fatal, acute, generalized reaction caused by hypersensitivity in the body to certain materials or drugs. NOTE: Animals may go into shock within 1 to 15 minutes after contacting the offending substance. Death can occur rapidly, but fortunately anaphylactic shock is not common in small animals.

Signs: Restlessness, local swelling, vomiting, diarrhea, shock, and collapse.

Treatment: An injection of epinephrine should be given immediately by a veterinarian. Establish an airway; treat for shock if necessary. The veterinarian may keep the dog overnight to observe and may treat with antihistamines and/or steroids as needed.

Hives/Muzzle Swelling

Causes: Insect bites contact with chemicals.

Signs: Swellings develop within 10-30 minutes from an insect bite or from an ingested drug, within several hours, swelling of the face, head, lips, ears, or any surface of the body. The eyelids swell and the dog may rub its mouth and eyes along the ground.

Treatment: Wash the animal free of any chemical residues, cold pack the insect bites. Treat for shock.

In cases of allergic reactions that are mild, sometimes the use of an antihistamine is necessary. I use Benadryl and give it as a dose of 25 mg. For dogs under 50 lbs. (never use in dogs under 20 lbs.) and in dogs larger than that, I use 50 mg. and never use more unless instructed by a veterinarian. Antihistamines can increase pressure so make sure you keep an eye on your dog after administering. They will also make the dog sleepy.

Frostbite/Cold Exposure

Freezing of tissue usually occurs in the peripheral parts of the body which are sparsely covered with hair and where circulation of blood is poor. In dogs the most common sites affected are the scrotum, ears, feet, teats, and tail.

Signs: Flushed and reddened tissues, white or grayish tissues, evidence of shock, scaliness of the skin and possible sloughing of the surface tissue.

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IMPORTANT: DO NOT RUB OR MASSAGE FROZEN TISSUES. NEVER APPLY SNOW OR ICE. Tissue damage is greatly increased if thawing is followed by refreezing.

Treatment: Prevent further contact or exposure and prevent self-mutilation of the area. Warm the affected area rapidly by immersing in warm water (102-105 degree F), or use warm moist towels that are changed frequently. Discontinue warming as soon as the affected tissues become flushed. Gently dry the affected tissues, lightly wrap in a clean, dry bandage, and protect from further injury. **SEEK VETERINARY ASSISTANCE!**

10.) Shock

Since I have referred to treating shock several times I will try to explain what it is. Shock is the failure of the cardiovascular system to provide the body tissues with adequate oxygen.

Causes: Severe injury, blood loss, fluid loss (vomiting/diarrhea), poisoning, infection, heart failure, obstructions to breathing, electrical burns, and drowning.

Signs: Gums/lips are pale in color and dry. The pulse is weak and rapid. Breathing is irregular, shallow and rapid. The pupils are dilated and there is a cool feeling to the skin and legs. There may be weakness, collapse or unconsciousness.

Treatment: Keep the animal quiet. Clear the air passages and maintain them free of mucus, blood and vomit. Control any bleeding. Keep warm by wrapping in blankets or place in heated car. Transport to a veterinary hospital immediately. Fluids may be carefully given by mouth if medical treatment is not available within 2 to 3 hours. **DO NOT** give fluids to unconscious, vomiting, or convulsing animals. Use a warm water solution of ½ teaspoon bicarbonate of soda for each quart of water. Administer 1 ounce for each 30 lbs. Of body weight every 20-30 minutes for a total of 4-5 doses.

11.) How to Take an Animals Vital Signs

Capillary Refill Time: This is a measurement of blood flow through the body. Roll the animal's lip back and press down on a non-pigmented area of the gums with one finger. This area should turn from pink to almost white in color. Once the pressure is removed, the pink color should return within 1 to 2 seconds. If it takes longer, impaired capillary return is present which is a sign of shock.

Respiration's: Watch or feel the animals chest rise and fall. Count the rise and fall of the chest for 15 seconds than multiply by 4 to get the respiration's/minute. Normal respiratory rate should be 10-30 respiration's per minute.

Pulse: Place a hand over the chest to feel the heartbeat or place your first two fingers on the inside part of the thigh and count the heartbeats for 15 seconds then multiply by 4 for beats/minute. Note whether it is strong or if you can barely feel it. Normal pulse should be 60-120 beats/minute.

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Temperature: Use a rectal thermometer only (one that has a rounded end bulb). Insert the thermometer into the rectum of the animal for 1 minute. Normal temperature should be 101-102 degrees F.

Assessing Hydration: Many times I ask the client to check if their dog is physically dehydrated, especially when vomiting or having diarrhea. The best way to check is to pick up the skin on the scruff of the neck and let it go. If it returns right back into place, the dog is not dehydrated. If it is slow in returning into place, the animal is dehydrated. Sometimes you can assess dehydration in puppies by looking at their urine. The urine should be as clear as water or light yellow, never dark yellow as this is a sign of dehydration.

12.) Hit By a Car

This is probably the most common cause of an animal being presented to an emergency hospital. First, calm the animal. If it is walking, have it lie down and note whether it was limping. Look at the gums and capillary refill time. Notice any bleeding. Notice whether the eyes are small, pinpoint, or dilated.

If the animal cannot get up: **DO NOT TRY TO GET THEM UP.** Get a heavy-duty board to help transport the animals. **BUT FIRST**, get some kind of gauze (a tie will do in a pinch) and tie it securely around the closed mouth as a muzzle. Even the best-tempered dogs can bite when in pain. After the muzzle is in place, get help and place the animal on a large board. You may want to use duct tape to keep the animal down. Treat only severe bleeding at this time by applying direct pressure or a tourniquet as previously mentioned. **THEN GET TO A VETERINARY HOSPITAL.** Do not worry about broken bones at this time. Make sure you mention to the veterinarian if you saw the dog limping, or if the dog was aware of its surroundings or anything that may help. Don't forget to tell the veterinarian about any drugs the dog is on. The hardest thing with our mastiffs is size. I have found that getting a large blanket and using this to transport the animal is easier than trying to pick the animal up.

Always Be Aware That a Painful Dog Will Bite.

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