

INFORMATION & ARTICLES

DANGERS & EMERGENCIES

excerpts from the Puppy Pak



compiled by
OUR RESOURCE CENTER ~the library

DANGERS, PLANTS & FOODS

Source: The Pet Health Care Library, ASPCA Poison Control Center

Address (URL): <http://www.VeterinaryPartner.com/Content.plx?P=A&S=0&C=0&A=3551>

PEOPLE FOODS TO AVOID FEEDING YOUR PETS

Chocolate, Macadamia nuts, avocados...these foods may sound delicious to you, but they're actually quite dangerous for our animal companions. Our nutrition experts have put together a handy list of the top toxic people foods to avoid feeding your pet. As always, if you suspect your pet has eaten any of the following foods, please note the amount ingested and contact your veterinarian or

ASPCA ANIMAL POISON CONTROL CENTER - (888) 426-4435

CHOCOLATE, COFFEE, CAFFEINE

These products all contain substances called methylxanthines, which are found in cacao seeds, the fruit of the plant used to make coffee and in the nuts of an extract used in some sodas. When ingested by pets, methylxanthines can cause vomiting and diarrhea, panting, excessive thirst and urination, hyperactivity, abnormal heart rhythm, tremors, seizures and even death. Note that darker chocolate is more dangerous than milk chocolate. White chocolate has the lowest level of methylxanthines, while baking chocolate contains the highest.

ALCOHOL

Alcoholic beverages and food products containing alcohol can cause vomiting, diarrhea, decreased coordination, central nervous system depression, difficulty breathing, tremors, abnormal blood acidity, coma and even death.

AVOCADO

The leaves, fruit, seeds and bark of avocados contain Persin, which can cause vomiting and diarrhea in dogs. Birds and rodents are especially sensitive to avocado poisoning, and can develop congestion, difficulty breathing and fluid accumulation around the heart. Some ingestions may even be fatal.

MACADAMIA NUTS

Macadamia nuts are commonly used in many cookies and candies. However, they can cause problems for your canine companion. These nuts have caused weakness, depression, vomiting, tremors and hyperthermia in dogs. Signs usually appear within 12 hours of ingestion and last approximately 12 to 48 hours.

GRAPES & RAISINS

Although the toxic substance within grapes and raisins is unknown, these fruits can cause kidney failure. In pets who already have certain health problems, signs may be more dramatic.

YEAST DOUGH

Yeast dough can rise and cause gas to accumulate in your pet's digestive system. This can be painful and can cause the stomach or intestines to rupture. Because the risk diminishes after the dough is cooked and the yeast has fully risen, pets can have small bits of bread as treats. However, these treats should not constitute more than 5 percent to 10 percent of your pet's daily caloric intake.

RAW/UNDERCOOKED MEAT, EGGS AND BONES

Raw meat and raw eggs can contain bacteria such as Salmonella and E. coli that can be harmful to pets. In addition, raw eggs contain an enzyme called avidin that decreases the absorption of biotin (a B vitamin), which can lead to skin and coat problems. Feeding your pet raw bones may seem like a natural and healthy option that might occur if your pet lived in the wild. However, this can be very dangerous for a domestic pet, who might choke on bones, or sustain a grave injury should the bone splinter and become lodged in or puncture your pet's digestive tract.

XYLITOL

Xylitol is used as a sweetener in many products, including gum, candy, baked goods and toothpaste. It can cause insulin release in most species, which can lead to liver failure. The increase in insulin leads to hypoglycemia (lowered sugar levels). Initial signs of toxicosis include vomiting, lethargy and loss of coordination. Signs can progress to recumbancy and seizures. Elevated liver enzymes and liver failure can be seen within a few days.

ONIONS, GARLIC, CHIVES

These vegetables and herbs can cause gastrointestinal irritation and could lead to red blood cell damage. Although cats are more susceptible, dogs are also at risk if a large enough amount is consumed. Toxicity is normally diagnosed through history, clinical signs and microscopic confirmation of Heinz bodies. An occasional low dose, such as what might be found in pet foods or treats, likely will not cause a problem, but we recommend that you do NOT give your pets large quantities of these foods.

MILK

Because pets do not possess significant amounts of lactase (the enzyme that breaks down lactose in milk), milk and other milk-based products cause them diarrhea or other digestive upset.

SALT

Large amounts of salt can produce excessive thirst and urination, or even sodium ion poisoning in pets. Signs that your pet may have eaten too many salty foods include vomiting, diarrhea, depression, tremors, elevated body temperature, seizures and even death. In other words, keep those salty chips to yourself!

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POISONOUS PLANTS FOR DOGS AND CATS

LILIES

Members of the *Lilium* spp. are considered to be highly toxic to cats. While the poisonous component has not yet been identified, it is clear that with even ingestions of very small amounts of the plant, severe kidney damage could result.

MARIJUANA

Ingestion of *Cannabis sativa* by companion animals can result in depression of the central nervous system and incoordination, as well as vomiting, diarrhea, drooling, increased heart rate, and even seizures and coma.

SAGO PALM

All parts of *Cycas Revoluta* are poisonous, but the seeds or "nuts" contain the largest amount of toxin. The ingestion of just one or two seeds can result in very serious effects, which include vomiting, diarrhea, depression, seizures and liver failure.

TULIP/NARCISSUS BULBS

The bulb portions of *Tulipa/Narcissus* spp. contain toxins that can cause intense gastrointestinal irritation, drooling, loss of appetite, depression of the central nervous system, convulsions and cardiac abnormalities.

AZALEA/RHODODENDRON

Members of the *Rhododendron* spp. contain substances known as grayantoxins, which can produce vomiting, drooling, diarrhea, weakness and depression of the central nervous system in animals. Severe azalea poisoning could ultimately lead to coma and death from cardiovascular collapse.

OLEANDER

All parts of *Nerium oleander* are considered to be toxic, as they contain cardiac glycosides that have the potential to cause serious effects—including gastrointestinal tract irritation, abnormal heart function, hypothermia and even death.

CASTOR BEAN

The poisonous principle in *Ricinus communis* is ricin, a highly toxic protein that can produce severe abdominal pain, drooling, vomiting, diarrhea, excessive thirst, weakness and loss of appetite. Severe cases of poisoning can result in dehydration, muscle twitching, tremors, seizures, coma and death.

CYCLAMEN

Cyclamen species contain cyclamine, but the highest concentration of this toxic component is typically located in the root portion of the plant. If consumed, Cyclamen can produce significant gastrointestinal irritation, including intense vomiting. Fatalities have also been reported in some cases.

KALANCHOE

This plant contains components that can produce gastrointestinal irritation, as well as those that are toxic to the heart, and can seriously affect cardiac rhythm and rate.

YEW

Taxus spp. contains a toxic component known as taxine, which causes central nervous system effects such as trembling, incoordination, and difficulty breathing. It can also cause significant gastrointestinal irritation and cardiac failure, which can result in death.

AMARYLLIS

Common garden plants popular around Easter, *Amaryllis* species contain toxins that can cause vomiting, depression, diarrhea, abdominal pain, hypersalivation, anorexia and tremors.

AUTUMN CROCUS

Ingestion of *Colchicum autumnale* by pets can result in oral irritation, bloody vomiting, diarrhea, shock, multi-organ damage and bone marrow suppression.

CHRYSANTHEMUM

These popular blooms are part of the Compositae family, which contain pyrethrins that may produce gastrointestinal upset, including drooling, vomiting and diarrhea, if eaten. In certain cases depression and loss of coordination may also develop if enough of any part of the plant is consumed.

ENGLISH IVY

Also called branching ivy, glacier ivy, needlepoint ivy, sweetheart ivy and California ivy, *Hedera helix* contains triterpenoid saponins that, should pets ingest, can result in vomiting, abdominal pain, hypersalivation and diarrhea.

PEACE LILY (AKA MAUNA LOA PEACE LILY)

Spathiphyllum contains calcium oxalate crystals that can cause oral irritation, excessive drooling, vomiting, difficulty in swallowing and intense burning and irritation of the mouth, lips and tongue in pets who ingest.

POTHOS

Pothos (both *Scindapsus* and *Epipremnum*) belongs to the Araceae family. If chewed or ingested, this popular household plant can cause significant mechanical irritation and swelling of the oral tissues and other parts of the gastrointestinal tract.

SCHEFFLERA

Schefflera and *Brassaia actinophylla* contain calcium oxalate crystals that can cause oral irritation, excessive drooling, vomiting, difficulty in swallowing and intense burning and irritation of the mouth, lips and tongue in pets who ingest.

ASPCA Animal Poison Control Center

1-888-4-ANI-HELP

<http://www.napcc.aspca.org>

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PET POISON SAFETY TIPS

ASPCA ANIMAL POISON CONTROL CENTER 888-4ANI-HELP (888-426-4435)

A \$65 CONSULTATION FEE MAY BE APPLIED TO YOUR CREDIT CARD

IF YOUR PET HAS COME IN CONTACT WITH A POTENTIAL TOXIN

GET OFF THE COMPUTER AND CALL YOUR VETERINARIAN IMMEDIATELY!

Keep a list handy of emergency phone numbers for medical care for your pets... and for yourself and family. Be sure to list alternate numbers and “after hours” numbers, too!

Direct and timely contact with your local veterinarian or animal emergency clinic is your first line of assistance with you suspect a poisoning has occurred.

PLEASE FOLLOW THESE GUIDELINES TO PROTECT YOUR PET FROM BEING EXPOSED!

- **Be aware of the plants** you have in your home and yard. The ingestion of azalea, oleander, sago palm, or yew plant material by an animal can be fatal. Easter lily, day lily, tiger lily, and some other lily species can cause kidney failure in cats.
- **Never allow your pets to have access** to the areas in which cleaning agents are being used or stored. Cleaning agents have a variety of properties; some may only cause mild stomach upset, but others can cause severe burns of the tongue, mouth and stomach.
- **When using rat, mouse, snail or slug baits, or ant or roach traps**, place the products in areas that are inaccessible to your companion animals. Some bait contains sweet smelling inert ingredients, such as jelly, peanut butter or sugar that can attract your pets.
- **Never give your pet medication unless** you are directed to do so by a veterinarian. Many medications that are safe for humans can be deadly for animals.
- **Keep all prescription and over-the-counter drugs** out of your pet's reach, preferably in closed cabinets. Pain killers, cold medicines, anti-cancer drugs, antidepressants, vitamins and diet pills are all examples of human medications that can be lethal to animals, even in small doses.
- **Many common household items** can be hazardous to pets. Mothballs, potpourri oils, coffee grounds, homemade play dough, fabric softener sheets, dishwashing detergent, batteries, cigarettes, alcoholic drinks, pennies, and hand and foot warmers could be dangerous for your pet.

- **Automotive products** such as gasoline, oil and antifreeze should be stored in areas that are inaccessible to your pets. As little as one teaspoon of antifreeze can be deadly to a cat weighing seven pounds.
- **Before buying a flea product** for use on your pet, ask your veterinarian for a recommendation.
- **Read all of the information on the label** before using a product on your pet or in your home. Always follow the directions.

ASPCA ANIMAL POISON CONTROL CENTER (APCC)

24 HOURS A DAY, 365 DAYS A YEARS

ASPCA ANIMAL POISON CONTROL CENTER

888-4ANI-HELP (888-426-4435)

A \$65 CONSULTATION FEE MAY BE APPLIED TO YOUR CREDIT CARD

Poison Control experts provide valuable information to help pet parents recognize and protect their pets from poisonous substances including plants, human foods, human medications and more.

APCC WEBSITE PROVIDES THE LATEST REFERENCES ON THE FOLLOWING

<http://www.aspc.org/pet-care/animal-poison-control>

- **Toxic and non-Toxic Plants.** A guide containing images and information about plants that are known to be poisonous to pets.
- **People Foods to Avoid Feeding Your Pet.** Read our handy list of the top toxic people foods to avoid feeding your pet.
- **Poisonous Household Products.** Poison Control experts set the record straight on the safety risks of a variety of household substances.
- **APCC Mobile App.** Our free mobile app provides a wealth of poison control knowledge in the palm of your hand.

DISASTER READY?

Source: The Pet Health Care Library

Address (URL): <http://www.VeterinaryPartner.com/Content.plx?P=A&A=2590&S=1&SourceID=28>

Disaster preparedness is so easy to let slide. We get all worked up after something like the 9/11 attacks, Hurricane Katrina or even a false alarm like the turn of the century's perceived threat to our computer systems.

We read up, we stock up, we move on. And then, we forget. In a pinch, we take the can opener out of the emergency kit and don't replace it. We rotate the food and water into our kitchen cupboards, but we don't buy anything new to rotate into the supplies in the garage.

It's human nature, of course, to react to immediate threats and to put off preparing for something that might never happen.

If you're one of those people who figured your pets into your disaster planning after 9/11 or Hurricane Katrina, good for you. Now it's time to review those plans. If you've never done any disaster planning, for you or your pets, this is a good time to start.

Hurricane and tornado season are at hand in many parts of the country. But no matter where you live, there could be a crisis heading your way, and your pets are counting on you.

GET PREPARED

PET IDS

Start your preparations with something you've probably already taken care of, by making sure your pets have ID.

Most animals will survive a disaster, but many never see their families again because there's no way to determine which pet belongs to which family if the animals go missing, a common occurrence even under normal circumstances. That's why dogs and cats should always wear a collar and identification tags. Add a microchip, too.

GET A STORAGE BIN

Once your pet has up-to-date ID, it's time to collect some equipment to help you cope in case of an emergency. A big storage bin with a lid and handles is an ideal place to keep everything you need together and on hand.

Keep several days' worth of drinking water and pet food as well as any necessary medicines, rotating the stock regularly. For canned goods, don't forget to pack a can opener and a spoon. Lay in a supply of empty plastic bags, along with paper towels, both for cleaning up messes and for sealing them away until they can be safely tossed. For cats, pack a bag of litter and some disposable litter trays.

LEASHES

Even normally docile pets can behave in uncharacteristic ways when stressed by an emergency, which makes restraints essential for the safety of pets and people alike. For dogs, leashes should always be available.

CRATES & RESTRAINTS

Shipping crates are probably the least-thought-of pieces of emergency equipment for pets but are among the most important. Sturdy crates keep pets of all kinds safe while increasing their housing options. Crated pets may be allowed in hotel rooms that are normally off-limits to pets, or can be left in a pinch with veterinarians or shelters that are already full, since the animals come with rooms of their own.

The final item of restraint for dogs and cats: a soft muzzle, because frightened or injured pets are more likely to bite. And don't forget to put first-aid supplies in your disaster kit, along with a book on how to treat pet injuries.

You may never have to pull out your disaster kit, but it's always good to be prepared.

THE BROCHURE

Free brochure on disaster planning. The U.S. Department of Homeland Security (in cooperation with the American Kennel Club, the American Society for the Prevention of Cruelty to Animals, the American Veterinary Medical Association and the Humane Society of the United States) has put together a free emergency preparedness brochure for pet lovers.

The brochure can be downloaded and printed out on your home computer or ordered by phone. Visit www.ready.gov or call 1-800-BE-READY for more information. -- G.S.

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1. Get a Kit of pet emergency supplies.

Just as you do with your family's emergency supply kit, think first about the basics for survival, particularly food and water.

- ✓ **Food:** Keep at least three days of food in an airtight, waterproof container.
- ✓ **Water:** Store at least three days of water specifically for your pets, in addition to water you need for yourself and your family.
- ✓ **Medicines and medical records:** Keep an extra supply of medicines your pet takes on a regular basis in a waterproof container.
- ✓ **First aid kit:** Talk to your veterinarian about what is most appropriate for your pet's emergency medical needs. Most kits should include cotton bandage rolls, bandage tape and scissors; antibiotic ointment; flea and tick prevention; latex gloves, isopropyl alcohol and saline solution. Include a pet first aid reference book.
- ✓ **Collar with ID tag, harness or leash:** Your pet should wear a collar with its rabies tag and identification at all times. Include a backup leash, collar and ID tag in your pet's emergency supply kit.
- ✓ **Important documents:** Place copies of your pet's registration information, adoption papers, vaccination documents and medical records in a clean plastic bag or waterproof container and also add them to your kit.
- ✓ **Crate or other pet carrier:** If you need to evacuate in an emergency situation take your pets and animals with you, provided that it is practical to do so.
- ✓ **Sanitation:** Include pet litter and litter box if appropriate, newspapers, paper towels, plastic trash bags and household chlorine bleach to provide for your pet's sanitation needs. You can use bleach as a disinfectant (dilute nine parts water to one part bleach), or in an emergency you can also use it to purify water. Use 8 drops of regular household liquid bleach per gallon of water, stir well and let it stand for 30 minutes before use. Do not use scented or color safe bleaches or those with added cleaners.
- ✓ **A picture of you and your pet together:** If you become separated from your pet during an emergency, a picture of you and your pet together will help you document ownership and allow others to assist you in identifying your pet. Include detailed information about species, breed, age, sex, color and distinguishing characteristics.
- ✓ **Familiar items:** Put favorite toys, treats or bedding in your kit. Familiar items can help reduce stress for your pet.

Consider two kits. In one, put everything your pets will need to stay where you are and make it on your own. The other should be a lightweight, smaller version you can take with you if you and your pets have to get away.

2. Make a Plan for what you will do in an emergency.

Plan in advance what you will do in an emergency. Be prepared to assess the situation. Use common sense and whatever you have on hand to take care of yourself and ensure your pet's safety during an emergency.



Preparing Your Pets for Emergencies Makes Sense. Get Ready Now.

Evacuate. Plan how you will assemble your pets and anticipate where you will go. If you must evacuate, take your pets with you, if practical. If you go to a public shelter, keep in mind your pets may not be allowed inside. Secure appropriate lodging in advance depending on the number and type of animals in your care. Consider family or friends outside your immediate area who would be willing to take in you and your pets in an emergency. Other options may include: a hotel or motel that takes pets or some sort of boarding facility, such as a kennel or veterinary hospital that is near an evacuation facility or your family's meeting place. Find out before an emergency happens if any of these facilities in your area might be viable options for you and your pets.

Develop a buddy system. Plan with neighbors, friends or relatives to make sure that someone is available to care for or evacuate your pets if you are unable to do so. Talk with your pet care buddy about your evacuation plans and show them where you keep your pet's emergency supply kit. Also designate specific locations, one in your immediate neighborhood and other farther away, where you will meet in an emergency.

Talk to your pet's veterinarian about emergency planning. Discuss the types of things you should include in your pet's emergency first aid kit. Get the names of vets or veterinary hospitals in other cities where you might need to seek temporary shelter. Also talk with your veterinarian about microchipping. If you and your pet are separated, this permanent implant for your pet and corresponding enrollment in a recovery database can help a veterinarian or shelter identify your animal. If your pet is microchipped, keeping your emergency contact information up to date and listed with a reliable recovery database is essential to you and your pet being reunited.

Gather contact information for emergency animal treatment. Make a list of contact information and addresses of area animal control agencies including the Humane Society or ASPCA and emergency veterinary hospitals. Keep one copy of these phone numbers with you, and one in your pet's emergency supply kit. Obtain "Pets Inside" stickers and place them on your doors or windows, including information on the number and types of pets in your home to alert firefighters and rescue workers. Consider putting a phone number on the sticker where you could be reached in an emergency. And, if time permits, remember to write the words "Evacuated with Pets" across the stickers, should you evacuate your home with your pets.

3. Be Prepared for what might happen.

Some of the things you can do to prepare for the unexpected, such as assembling an emergency supply kit for yourself, your family and your pets, is the same regardless of the type of emergency. However, it's important to say informed about what might happen and know what types of emergencies are likely to affect your region.

Be prepared to adapt this information to your personal circumstances and make every effort to follow instructions received from authorities on the scene. With these simple preparations, you can be ready for the unexpected. Those who take the time to prepare themselves and their pets will likely encounter less difficulty, stress and worry. Take the time now to get yourself and your pet ready.

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For more information, visit ready.gov or call 1-800-BE-READY

EMERGENCIES HAPPEN – DO YOU HAVE AN EMERGENCY KIT?

Source: RevivalAnimal.com

Address (URL): <http://www.revivalanimal.com/articles/emergencies-happen.html>

At a time when English bulldogs were plagued with issues, Tuffy was a male with great disposition and great looks, and he could breathe easily without snorting or choking. He was a beautiful dog. After two litters, it was clear Tuffy had the right genetics for producing quality puppies.



One Saturday afternoon in May, Tuffy was let out in the yard. A bee was bugging him, so he snapped it. Within minutes he started breathing funny and soon he was down.

The breeders had nothing in their medications to treat an allergic reaction. Before the veterinarian was able to get across town to treat him, he died.

It's a fact of life: dogs can get into trouble, and many negative reactions can be life-threatening. However, if you're prepared, the solution to most problems is only a few steps away. An emergency kit is important when a crisis occurs.

HERE ARE A FEW ESSENTIALS TO INCLUDE IN AN EMERGENCY KIT:

ANTIHISTAMINES

Antihistamines can be used for a variety of problems, including vaccine reactions, treating the "lethargic" post-vaccine feeling and bee sting reactions. Antihistamines are good for solving reaction problems quickly and effectively. The minimum you need is Benadryl (diphenhydramine) liquid at 1 mg/lb - it's a high dose that you can repeat in 30 minutes if needed. Injectable antihistamines of any type are faster and more effective. With the injection, you can be assured that the drug is in the dog, it begins working almost immediately. Epinephrine is the drug of choice in life threatening reactions and must be given by a veterinarian.

ANTIBIOTICS

Antibiotics are ideal for diarrhea and respiratory issues. It never fails – you come home from a Friday night game or Saturday evening dinner, and a litter has a problem. With the right antibiotics, kennels can usually have the issue resolved before the veterinary clinic opens the next day.

- Sulfamethoxazole-trimethoprim helps with coccidia and is good for diarrhea and other gastrointestinal bugs. It can also be used for respiratory issues. Sulfa-Trimeth only needs to be

given once a day, which makes medicating easier. The dose is 25 mg/pound. Give twice the first day to load the antibiotic, then you can give daily until it's resolved.

- Doxycycline (5 mg/lb) is also helpful for respiratory problems
- If puppies are still nursing, use Amoxicillin/Clavamox until they are over 4 weeks old, as the kidneys and liver are not developed enough to get rid of drugs.

ELECTROLYTES

Electrolytes in water treat a number of dog needs. In litters with diarrhea, the puppies need electrolytes to keep them from dehydrating. Puppies probably won't die from the virus or bacteria, but they can die from the resulting dehydration. Electrolytes also have enough sugar to keep from becoming hypoglycemic. They are also helpful for "slow to wean" puppies, helping with the stress of weaning. Most electrolytes will work, and they're inexpensive and easy to use. Electramine powder or Rebound OES are both good choices.

LONG-ACTING PENICILLIN

Long-acting Penicillin is helpful for treating minor cuts. If adult dogs have minor cuts or punctures from a fight or injury, they usually don't need a daily antibiotic. Injectable penicillin is helpful, lasting from 3-5 days per injection. Be sure it is long-acting, as other penicillins have to be given twice a day. It's also helpful to use long-lasting penicillin with Oxytocin after whelping to clean up the bitch and get her back on food.

VETERICYN

Vetericyn is excellent for cleaning wounds and as topical treatments. It can also be used to disinfect umbilical cords on newborns since iodine can be difficult to find.

WRAPS & BANDAGES

Wraps & Bandages are essential for bleeding cuts. Use the wraps that stick only to themselves and not to the dog's skin, like Co-flex bandages. Don't apply too tightly. You should be able to fit a finger under easily. You will also need gauze to put on the wound – 2 x 2" pads for smaller breeds and 4x4" pads for larger breeds. To keep bandages clean and accessible, keep them in Ziploc bags.

TISSUE ADHESIVES

Tissue Adhesives like VetBond are helpful for cut ears, dewclaws, tail docks and any place you need to hold a wound together. Apply a tourniquet with a hemostat and rubber band to stop bleeding, dry the tissue with gauze and apply the tissue glue in small amounts. Give it a few seconds and remove the tourniquet.

SUTURE/NEEDLE COMBOS

Suture/Needle Combos are great for tying off arteries and umbilicals, or stitching a gaping wound. Talk to your veterinarian to check your skill level and learn how to use them.

Instruments can be endless, but the minimum you should have on hand includes two hemostats and a bandage scissors. Hemostats can be used to clamp a bleeding artery or remove dewclaws, while the bandage scissors safely fits under wraps and other materials without cutting the skin.

TERRAMYCIN OR VETERICYN

Terramycin or Vetericyn eye solutions are helpful for treating eye injuries. First flush the eye with saline, then apply either one. Terramycin is good for minor infections and also for preventing irritation during baths.

ESSENTIAL GENERAL ITEMS:

- Exam Gloves should be used to protect your hands during cleaning, repro exams or delivery.
- Clotisol is used to stop bleeding in minor cuts or nail trim bleeding.
- Syringes/Needles: are a must in an emergency situation. Smaller (20 or 22) gauge needles are great for giving penicillin or injectable antibiotics, while larger syringes are helpful for dosing fluids, electrolytes or oral medications.

All these items will fit into a small tool box or tote. With the right preparation, you can be ready to solve the next emergency before it becomes life-threatening!

The materials, information and answers provided through this website are not intended to replace the medical advice or services of a qualified veterinarian or other pet health care professional. Consult your own veterinarian for answers to specific medical questions, including diagnosis, treatment, therapy or medical attention.

BLOAT - THE MOTHER OF ALL EMERGENCIES

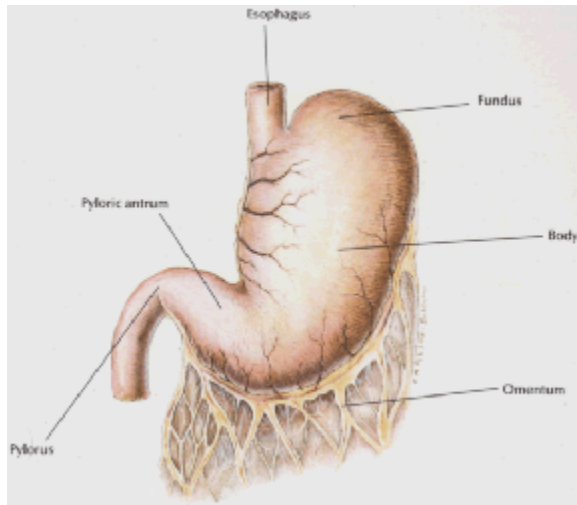
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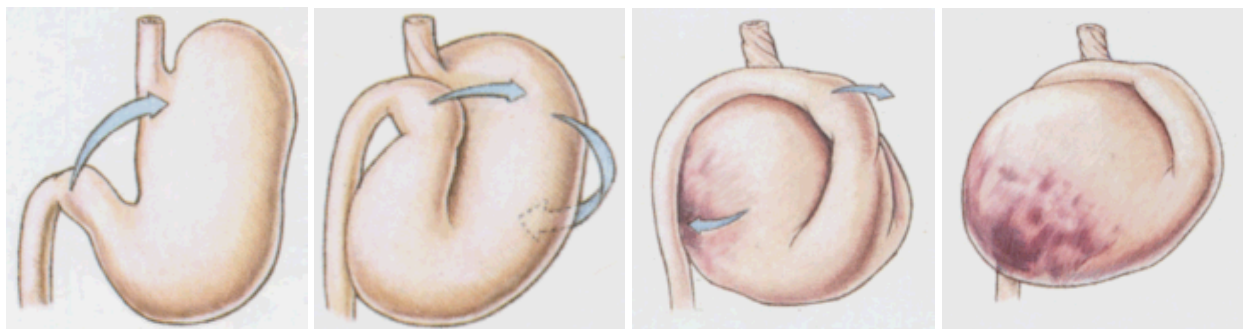
There are many injuries and physical disorders that represent life-threatening emergencies. There is only one condition so drastic that it overshadows them all in terms of rapidity of consequences and effort in emergency treatment. This is the gastric dilatation and volvulus - the bloat.

WHAT IS IT AND WHY IS IT SO SERIOUS?

The normal stomach...



The normal stomach sits high in the abdomen and contains a small amount of gas, some mucus, and any food being digested. It undergoes a normal rhythm of contraction, receiving food from the esophagus above, grinding the food, and meting the ground food out to the small intestine at its other end. Normally this proceeds uneventfully except for the occasional burp.



In the bloated stomach, gas and/or food stretches the stomach many times its normal size, causing tremendous abdominal pain. For reasons we do not fully understand, this grossly distended stomach tends to rotate, thus twisting off not only its own blood supply but the only exit routes for the gas inside. Not only is this condition extremely painful but it is also rapidly life-threatening. A dog with a bloated,

twisted stomach (more scientifically called gastric dilatation and volvulus) will die in pain in a matter of hours unless drastic steps are taken.

WHAT ARE THE RISK FACTORS FOR DEVELOPING BLOAT?

Classically, this condition affects dog breeds that are said to be deep chested, meaning the length of their chest from backbone to sternum is relatively long while the chest width from right to left is narrow. Examples of deep chested breeds would be the Great Dane, Greyhound, and the setter breeds. Still, any dog can bloat, even dachshunds and Chihuahuas.

DOGS WEIGHING MORE THAN 99 POUNDS HAVE AN APPROXIMATE 20% RISK OF BLOAT.

Classically, before bloating the dog had eaten a large meal and exercised heavily shortly thereafter. Still, we usually do not know why a given dog bloats on an individual basis. No specific diet or dietary ingredient has been proven to be associated with bloat. Some factors found to increase and decrease the risk of bloat are listed below.

FACTORS INCREASING THE RISK OF BLOAT

- Feeding only one meal a day
- Having closely related family members with a history of bloat
- Eating rapidly
- Being thin or underweight
- Moistening dry foods (particularly if citric acid is listed as a preservative)
- Feeding from an elevated bowl
- Restricting water before and after meals
- Feeding a dry diet with animal fat listed in the first four ingredients
- Fearful or anxious temperament
- History of aggression towards people or other dogs
- Male dogs are more likely to bloat than females
- Older dogs (7 - 12 years) were the highest risk group

FACTORS DECREASING THE RISK OF BLOAT

- Inclusion of canned dog food in the diet
- Inclusion of table scraps in the diet
- Happy or easy-going temperament

- Feeding a dry food containing a calcium-rich meat meal (such as meat/lamb meal, fish meal, chicken by-product meal, meat meal, or bone meal) listed in the first four ingredients of the ingredient list.
- Eating two or more meals per day

Contrary to popular belief, cereal ingredients such as soy, wheat or corn in the first four ingredients of the ingredient list does not increase the risk of bloat.

In a study done by the Purdue University Research Group, headed by Dr. Lawrence T. Glickman, the Great Dane was the number one breed at risk for bloat, the St. Bernard was the #2 breed at risk, and the Weimaraner was the #3 breed at risk.

A study by Ward, Patonek, and Glickman reviewed the benefit of prophylactic surgery for bloat. Prophylactic surgery amounts to performing the gastropexy surgery (see below) in a healthy dog, usually in conjunction with spay or neuter. The lifetime risk of death from bloat was calculated, along with estimated treatment for bloat, versus cost of prophylactic gastropexy. Prophylactic gastropexy was found to make sense for at-risk breeds, especially the Great Dane, which is at highest risk for bloat.

HOW TO TELL IF YOUR DOG HAS BLOATED

Radiograph showing typical gas distension of the stomach in a case of bloat

The dog may have an obviously distended stomach especially near the ribs but this is not always evident depending on the dog's body configuration.

The biggest clue is the vomiting: the pet appears highly nauseated and is retching but little is coming up.

IF YOU SEE THIS, RUSH YOUR DOG TO THE VETERINARIAN IMMEDIATELY.

WHAT HAS TO BE DONE

There are several steps to saving a bloated dog's life. Part of the problem is that all steps should be done at the same time and as quickly as possible.

FIRST: THE STOMACH MUST BE DECOMPRESSED

The huge stomach is by now pressing on the major blood vessels carrying blood back to the heart. This stops normal circulation and sends the dog into shock. Making matters worse, the stomach tissue is dying because it is stretched too tightly to allow blood circulation through it. There can be no recovery

until the stomach is untwisted and the gas released. A stomach tube and stomach pump are generally used for this but sometime surgery is needed to achieve stomach decompression.

ALSO FIRST: RAPID IV FLUIDS MUST BE GIVEN TO REVERSE THE SHOCK

Intravenous catheters are placed and life-giving fluid solutions are rushed in to replace the blood that cannot get past the bloated stomach to return to the heart. The intense pain associated with this disease causes the heart rate to race at such a high rate that heart failure will result. Medication to resolve the pain is needed if the patient's heart rate is to slow down. Medication for shock, antibiotics and electrolytes are all vital in stabilizing the patient.

ALSO FIRST: THE HEART RHYTHM IS ASSESSED AND STABILIZED

There is a very dangerous rhythm problem called a premature ventricular contraction or PVC associated with bloat and it must be ruled out. If the dog has this rhythm, intravenous medications are needed to stabilize it. Since this rhythm problem may not be evident until even the next day, continual EKG monitoring may be necessary. Disturbed heart rhythm already present at the beginning of treatment is associated with a 38% mortality rate.

Getting the bloated dog's stomach decompressed and reversing the shock is an adventure in itself but the work is not yet half finished.

SURGERY

All bloated dogs, once stable, should have surgery. Without surgery, the damage done inside cannot be assessed or repaired, plus bloat may recur at any point - even within the next few hours - and the above adventure must be repeated. The surgery, called gastropexy, allows the stomach to be tacked into normal position so that it may never again twist. Without gastropexy, the recurrence rate of bloat may be as high as 75%.

Assessment of the internal damage is also important to recovery. If there is some dying tissue on the stomach wall, this must be discovered and removed or the dog will die despite the heroics described above. Also, the spleen, which is located adjacent to the stomach, may twist with the stomach. The spleen may need to be removed too.

If the tissue damage is so bad that part of the stomach must be removed, the mortality rate jumps to 28 - 38%.

If the tissue damage is so bad that the spleen must be removed, the mortality rate is 32 - 38%.

After the expense and effort of the stomach decompression, it is tempting to forgo the further expense of surgery. However, consider that the next time your dog bloats, you may not be there to catch it in time and, according to the study described below, without surgery there is a 24% mortality rate and a 76% chance of re-bloating at some point. The best choice is to finish the treatment that has been started and have the abdomen explored. If the stomach can be surgically tacked into place, recurrence rate drops to 6%.

RESULTS OF A STATISTICAL STUDY

In 1993, a statistical study involving 134 dogs with gastric dilatation and volvulus was conducted by the School of Veterinary Medicine in Hanover, Germany.

Out of 134 dogs that came into the hospital with this condition:

- 10% died or were euthanized prior to surgery (factors involved included expense of treatment, severity/advancement of disease etc.)
- 33 dogs were treated with decompression and no surgery. Of these dogs, 8 (24%) died or were euthanized within the next 48 hours due to poor response to treatment. (Six of these 8 had re-bloated)
- Of the dogs that did not have surgical treatment but did survive to go home, 76% eventually had another episode of gastric dilatation and volvulus.
- 88 dogs were treated with both decompression and surgery. Of these dogs, 10% (9 dogs) died in surgery, 18% (16 dogs) died in the week after surgery, and 71.5% (63 dogs) went home in good condition. Of the dogs that went home in good condition, 6% (4 dogs) had a second episode of bloat later in life.
- In this study 66.4% of the bloated dogs were male and 33.6% were female. Most dogs were between ages 7 and 12 years old. The German Shepherd dog and the Boxer appeared to have a greater risk for bloating than did other breeds.

(Meyer-Lindenberg A., Harder A., Fehr M., Luerssen D., Brunberg L. Treatment of gastric dilatation-volvulus and a rapid method for prevention of relapse in dogs: 134 cases (1988-1991) Journal of the AVMA, Vol 23, No 9, Nov 1 1993, 1301-1307.)

Another study published December of 2006 looked at 166 dogs that received surgery for gastric dilatation and volvulus. The goal of the study was to identify factors that led to poor prognosis.

- A 16.2% mortality rate was observed. The mortality rate for dogs over age 10 years was 21%.
- Of the 166 going to surgery, 4.8% were euthanized during surgery, and the other 11.4% died during hospitalization (two of dogs died during surgery). All dogs that survived to go home were still alive at the time of suture removal.
- 34 out of 166 dogs had gastric necrosis (dead stomach tissue that had to be removed). Of these dogs 26% died or were euthanized.

- Post-operative complications of some sort occurred in 75.9% of patients. Approximately 50% of these dogs developed a cardiac arrhythmia.
- Risk factors significantly associated with death prior to suture removal included clinical signs of bloating for greater than 6 hours before seeing the vet, partial stomach removal combined with spleen removal, need for blood transfusion, low blood pressure at any time during hospitalization, sepsis (blood infection), and peritonitis (infection of the abdominal membranes).

(Beck, J.J., Staatz, A.J., Pelsue, D.H., Kudnig, S.T., MacPhail, C.M., Seim H.B, and Monnet, E. Risk factors associated with short-term outcome and development of perioperative complications in dogs undergoing surgery because of gastric dilatation-volvulus: 166 cases (1992-2003). Journal of the AVMA, Vol 229, No 12, December 15, 2006, p 1934-1939.)

It is crucially important that owners of big dogs be aware of this condition and are prepared for it. Know where to take your dog during overnight or Sunday hours for emergency care. Avoid exercising your dog after a large meal. Know what to watch for. Enjoy the special friendship a large dog provides but at the same time be aware of the large dog's special needs and concerns.

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Quick Reference Guide For GDV

BLOAT

Vet's Emergency Telephone Number...

	What Is Happening	What The Dog Does	What You Should Do	Treatment
Stress ▶▶▶ Excitement ▶▶▶ Vigorous Exercise ▶▶▶ Large Meals ▶▶▶ Long Drink ▶▶▶ Swallowed Air ▶▶▶ Familial Tendency ▶▶▶	Stomach function is normal. Gas accumulates in the stomach but the stomach does not empty as it should.	Dog behaves as usual. Seems slightly uncomfortable.	Keep the dog quiet; Do not leave the dog alone; Give Antacid if your vet agrees. Be aware of Phase I symptoms.	During this period the dog may recover without going on to develop Gastric Volvulus.
PHASE I GDV	Stomach starts to dilate. (Gastric Dilatation) Stomach twists. (Gastric Volvulus)	Anxious, restless, pacing; Trying to vomit-may bring up stiff white foam but no food; Salivating; Abdomen may be swollen.	Call your vet, tell him what you suspect and why. Take the dog to the vet without further delay.	During this period the dog may recover if your vet releases the pressure with a stomach tube.
PHASE II GDV	Blood supply to part of stomach is cut off. Stomach tissue is damaged. Portal vein, vena cava and splenic vein become compressed and twisted. Spleen becomes engorged. Shock begins to develop	Very restless; whining & panting; Salivating copiously; Tries to vomit every 2-3 min; Stands with legs apart & head hanging down; Abdomen swollen & sounds hollow if tapped; Gums dark red; Heart rate 80-100 beats/min; Temperature raised (104°F)	Get someone to tell your vet you are on your way and why. Take the dog to the vet as quickly as possible.	During this period the vet will need to relieve the stomach pressure, start an intravenous drip and perform surgery to untwist the stomach.
PHASE III GDV	Spleen and stomach tissue become Necrotic. Shock now very severe. Heart failure develops. Shock now irreversible. Death	Unable to stand or stands shakily with legs apart; Abdomen very swollen; Breathing shallow; Gums white or blue; Heart rate over 100 beats/minute; Pulse very weak; Temperature drops (98°F)	Death is imminent. Get someone to tell your vet you are your way and why. Take the dog to the vet as quickly as possible.	As well as doing everything above, the vet will need to remove part of the stomach and the spleen. He will also need to use powerful drugs to counteract shock. It is no longer possible to save the dog's life.