

DOGWatch



Expert information on medicine, behavior, and health in collaboration with a world leader in veterinary medicine

© THIS JUST IN

Vitamin D in Dogs

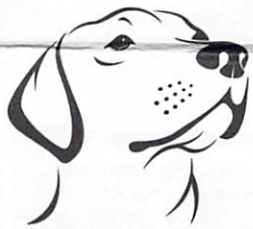
There is a link to immunity

John Loftus, DVM, PhD, DACVIM, Assistant Professor, Section of Small Animal Medicine at the Cornell College of Veterinary Medicine, has studied the role of vitamin D in immunity in dogs in the Loftus Lab at Cornell. And there is something to a link between vitamin D and immune status.

“Immune cells express enzymes that convert the intermediate forms of vitamin D to the active form, calcitriol, and express the receptor for vitamin D. My lab has found that dogs with certain immune-mediated diseases have lower levels of vitamin D than healthy dogs and that those with lower vitamin D levels overall had a poorer prognosis,” said Dr. Loftus, speaking in a recent online veterinary webinar.

Dogs need to get vitamin D precursors in their diet (sunlight exposure doesn't work for dogs). The liver, kidney, and immune cells take these nutrients and convert them to calcitriol (vitamin D3). So if you're feeding a complete and balanced dog food, you shouldn't need to supplement vitamin D.

Before adding any supplement to your dog's food, discuss it with your veterinarians. Usually, you can save your money. ■



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Choosing a Dog Food

It doesn't have to be a complicated decision

Kurt Venator DVM, PhD, who graduated from the Cornell School of Veterinary Medicine in 2003, offered five considerations for choosing dog food during a recent veterinary webinar:



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Your dog should like his food! If he doesn't, you should find the problem and change the food.

- 1 The food must be complete and balanced.** The best way to ensure this is to look for the AAFCO (see sidebar) statement that says the food is formulated to meet AAFCO nutritional standards.
- 2 The food you choose must be appropriate for your dog's life stage.** That AAFCO statement will also tell you if the food is appropriate for the life stage of your dog. AAFCO categories are: growth, adult maintenance, pregnancy and lactation, and all life stages. There is no senior stage, which may seem odd, but many older dogs require a special diet, which is often filled by prescription foods.
- 3 The food should fit your dog's lifestyle.** A hunting dog's nutrient needs are different from a dog of the same breed and age who does walks around the block twice a day. The hunting dog is working harder so has increased calorie and nutrient needs. These are often marketed as “sport” foods.
- 4 Special dietary needs should be addressed by the food you select.** Senior dogs, especially, often have special dietary needs, such as for kidney failure. Some dogs have food allergies, which means owners must look for a food with a novel protein source, such as quail or bison, that doesn't cause an allergic reaction.
- 5 The dog should want to eat it.** This sounds like a no-brainer, but some people just insist their dog eat X brand of food. The better choice is, if your dog is a picky eater, find out why. If he has an illness, that needs to be addressed. You can rotate different brands to provide variety, but a true non-eater may need a prescription drug to increase appetite. ■

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What Is AAFCO?

AAFCO is the acronym for the American Association of Feed Control Officials. Despite the name, AAFCO does not regulate, test, approve, or certify pet foods. AAFCO establishes the nutritional standards for complete and balanced pet foods, and the pet food company formulates their products to meet those nutritional standards. The state feed control officials regulate pet food to ensure that the laws and rules established for the protection of companion animals are complied with so that only unadulterated, correctly and uniformly labeled pet food products are distributed in the marketplace and a structure for orderly commerce.

AAFCO Statement Example

Toy Breed Adult Food for Dogs is formulated to meet the nutritional levels established by the AAFCO Dog Food Nutrient Profiles for adult maintenance.

Toxic Aflatoxin-Producing Mold

It grows on grains, which can end up in pet food

Aflatoxins are produced by the mold *Aspergillus flavus*, which can grow on corn, peanuts, and other grains. Those infected grains can end up in your pet's food, despite even good manufacturer screening processes.

At high levels, aflatoxins can cause illness, liver damage, and death. You will rarely see evidence of aflatoxins on your pet's food, but it can accumulate, especially in a pet eating the same food for a long time. If they're present in large amounts, your pet can become acutely ill.

Initial signs of aflatoxin poisoning include lethargy, loss of appetite, vomiting, jaundice, unexplained bruising or bleeding, and/or diarrhea. In some cases, aflatoxins can affect blood clotting and cause long-term liver problems and/or death.

If your veterinarian suspects aflatoxin poisoning, he or she will ask you to bring in a sample of your pet's food, which will be sent for testing, and symptomatic treatment for your pet will start right away. You should be able to supply your veterinarian with a complete history and listing of all foods and treats your pet has eaten. Often only certain lots will be affected (this is one of the reasons it is important to keep the lot number from food).

There is no antidote for aflatoxin poisoning, but your veterinarian will start your dog on liver-support medications. Extremely severe or rapid-onset cases of aflatoxin poisoning may progress so quickly that the pet dies before receiving any treatment. Pets exposed to non-lethal doses of aflatoxin over time may survive, but can have long-term health problems, such as liver injury. ■

Large Recall: Aflatoxins

In late December 2020, Midwestern Pet Foods issued a recall for nine lots of pet foods containing potentially fatal levels of aflatoxins. Since then, the recall list has expanded to over 1,000 lots.

The affected products have the identifier "05" in the date or lot code and an expiration date on or before July 9, 2022. This is an international recall. It is estimated that over 110 pets have died and over 210 have become ill. Brands include Sportmix, Pro Pac, Nunn, and Splash Fat.

This is an evolving story. If you notice any of the symptoms associated with aflatoxin poisoning (see story), contact your veterinarian immediately.

New Drug Approvals from the FDA

Treatments for seizures, hypothyroidism, and lymphoma

The Food and Drug Administration gave full approval to ThyroKare and conditional approvals to Laverdia-CA1 and KBroVet-CA1. A conditional approval means the drug has met the FDA's safety standards and has a reasonable level of effectiveness. Conditional drugs are generally released because the FDA sees an immediate need for the medication. The new drugs are for:

Seizures: KBroVet-CA1 (potassium bromide chewable tablets), which stabilizes neurons in the central nervous system to reduce the likelihood of a seizure. Potassium bromide has long been used off label for seizure control in epileptic dogs—both alone and in conjunction with other medications such as phenobarbital.

Hypothyroidism: ThyroKare (levothyroxine sodium tablet) is a thyroid hormone medication that helps maintain normal metabolism and many bodily functions.

Lymphoma: Laverdia-CA1 (verdineor tablets) works on tumor suppressor proteins and growth regulatory proteins, holding them in the nucleus of the cancer cells. That allows normal protein control of cell growth and proliferation. This drug is selectively cytotoxic for cells with genomic damage (i.e., for tumor cells). ■



DOGWatch

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Why Is My Dog Growling?

Growls are a normal canine form of communication

The very word “growl” makes many dog owners cringe, but it is a useful communication tool for dogs. The exact sound and the context can help you recognize what your dog is trying to say.

But you must listen to him. “We tell owners not to discourage growling because the dog may then bite, not warn,” says Katherine A. Houpt, VMD, PhD, DACVB James Law Professor Emerita, Section of Behavior Medicine at Cornell.

If you stop the growling, things may worsen. A growl is a warning. While he may substitute a whine, he could go directly to a bite without warning. A growl may be telling you he is afraid, anxious, or unsure. He is not comfortable with what is going on, and he hopes his vocalization will resolve the situation.

Stop It!

If your dog has a hurt foot and you touch the painful area, you may hear a soft growl. Your dog is telling you that what you are doing hurts, and he is asking you to leave that area alone. If you hear this growl and must examine the area, consider putting a muzzle on the dog. Your dog has told you it hurts, and his next step might be to grab your hand.

Dogs do a similar growl if they don't like what is happening. For example, your dog may growl quietly—think of it as

muttering under his breath—when you trim his nails or groom along his flanks. He may do this type of growl when you try to pick up his favorite ball. He should let you take it, but he wants you to know he is not happy about it.

Trouble's Brewing

An aggressive growl is generally deep, long, and low. The lips are pulled back and the teeth are clearly visible. You can feel the threat behind it. This is the growl of a dog hearing someone outside the house at night or a mother dog when a stranger approaches her puppies.

The growl might be accompanied by your dog standing very tall and stiff and with hackles raised. The intent is to drive someone or something off and may well be followed up with aggressive action such as an attack and bites.

Happy Growls

Some breeds do a quiet, sort of rumbling growl when they are playing or happy. Your dog's body language clearly says he is not upset, and the lips are not pulled back, displaying teeth.

When playing, the growl may be louder, but if you watch, your dog is obviously having fun, tugging with another dog or chasing without serious intent. This is not an aggressive growl,

but you should always decide when to end tug games, not him. Reinforce that it was a fun game but there are rules and you are in control.

Fear

Dogs may growl in fearful situations. The dog may sound tough, but often his tail is tucked, his ears are down and back, and his body language is screaming, “I am afraid.” He is hoping his show of toughness will convince you to leave him alone. If pushed, he might bite, but he would prefer to flee.

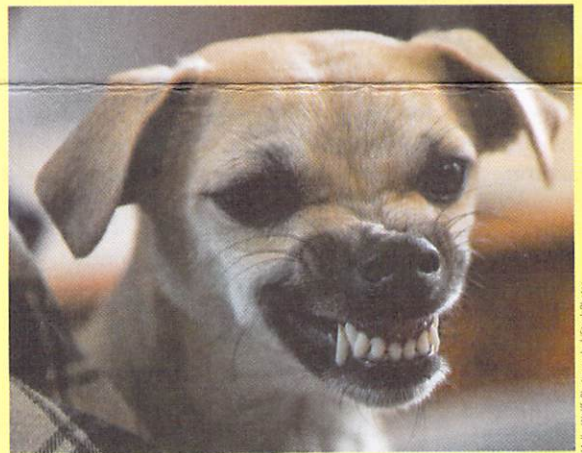
If your dog growls when you approach his food, he is warning you off. You have two options: One is to make sure your dog has peace while he eats (put him in a crate or in a separate room). This is especially wise with an older dog or a dog with unknown background who may have had to defend his food before (never try to take food he is eating away from him—unless it could harm him, of course—there is nothing to be gained by this, and you may inadvertently trigger resource guarding).

The other option, a wiser one, is to convey to your dog that you are providing the food and you will not take it away. You can do this by hand feeding him his meals for a while until he associates your nearness with food and good things.

Many dogs go through life without ever growling around their owners. If your dog does growl, however, it is essential to figure out why. That growling dog is trying to tell you something. ■

What You Should Do

- ▶ **Don't suppress growling.** This could cause your dog to become more aggressive (lunging and snapping) without a warning growl. If your dog growls, move him away from the cause of his distress, if you know what it is. If another pet is involved, move that pet away. Don't reward your dog, but don't punish him either.
- ▶ **Talk to your veterinarian.** If the amount of growling is increasing, get him in for a physical exam. While it might be as simple as a sore ear, it may be a vision or hearing problem, so he's easily startled. An arthritic senior dog may react when the new puppy comes bounding at him for fear of a collision and pain.
- ▶ **Figure out what caused the growl.** Once physical causes are ruled out, record the situations that led up to the growl. A complete history is important. Was he growling because you picked up his favorite toy or because your other dog walked over? Does it only happen when other dogs approach his person?
- ▶ **Don't ignore this change.** This may be a cry for help that could escalate to worse behaviors. A veterinary behaviorist may be the best approach, which may initially include medications. Consult the American College of Veterinary Behaviorists at dacvb.org to find a veterinarian who specializes in animal behavior.



Not all growls are the same. This little guy is saying, “Stay away!” Why isn't clear from the photo.

Adele Wolf, Photography | iStock Photos

Osteosarcoma Amputation

The surgery extends your quality time together

Osteosarcoma is bone cancer, and it's painful. Some affected dogs show lameness, a swollen area, or an unexpected fracture from normal activity. The dog's forelimbs are affected twice as often as the hind limbs, with the distal radius and proximal humerus being the most frequently affected sites.

Bone cancer often destroys normal bone but encourages the proliferation of diseased bony structures, which is why there may be a thickened area of bony proliferation. Underneath that, there may be a lytic area where the bone has been destroyed, which can be seen on an x-ray.

A characteristic of bone cancer is a sunburst pattern on the radiograph with a "corona effect" due to the tumor moving healthy bone out of the way as it grows from inside out. Interestingly, osteosarcoma does not cross joint spaces.

Osteosarcoma commonly spreads to the lungs, and less commonly spreads to other bones and organs. Up to 90% of dogs have metastasis at the time of diagnosis, but few will have radiographic evidence of its spread to the lungs until the cancer has progressed. That means subclinical micro spreads arise early in the course of disease, particularly appendicular osteosarcoma. Metastatic disease can also be found in other bone locations as well as in internal organs.

Causes

The causes of osteosarcoma vary. Genetics may be a factor, and a gene that marks increased risk of osteosarcoma has been identified in Scottish Deerhounds.

Previous trauma to the site where cancer develops is another association. A fracture, especially if it required surgery and possibly implants, increases risk at that location.

Radiation therapy (not diagnostic radiographs) can increase the risk of later osteosarcoma growth. Prognosis is worse if there is already visible metastasis to the lungs and if the blood chemistry value of alkaline phosphatase is elevated. This blood enzyme value can be due to bone activity, including the resorption of normal bone and development of cancerous bone seen with osteosarcoma.

Diagnosis

Not surprisingly, radiographs are an

important part of diagnosis. Bone cancer needs to be distinguished from a bacterial or fungal infection (bone osteomyelitis). Osteosarcoma does not cross joint spaces, making that an obvious clue.

A biopsy or needle aspirate can confirm osteosarcoma and help to rule out similar lesions in bone: chondrosarcoma, squamous cell carcinoma, synovial cell sarcoma, or fungal/bacterial infection. While you may have noticed that this list includes other cancers, they require different treatments and each have a different prognosis.

Treatment

Sadly, most treatments start with the amputation of the affected limb. A huge plus to amputation is that the pain from the cancer stops immediately. Remember that dogs truly live "in the moment." While a person with a limb amputation will suffer from worry ahead of time and feelings of lost activities post surgery, dogs simply wake up from anesthesia with a new reality and adjust. Dogs who are overweight, have extensive osteoarthritis in other legs, or have neurologic problems that influence mobility may not be candidates for amputation due to the added stress on the remaining legs.

Dogs must learn to handle the loss

of a limb, but many will run and play post-surgery recuperation. Owners may need to add ramps beside stairways and provide a ramp for the dog to get in and out of a vehicle. The front legs normally bear 60% of body weight and contribute more to the braking phase of the gait whereas the hind limbs normally bear 40% of body weight and contribute more to the propulsion phase of the gait, says the Veterinary Society of Surgical Oncology, so loss of a front limb can be more difficult than a hind limb. The transition may last up to a few weeks.

When surgery is combined with chemotherapy, survival times increase by four to six months. Chemotherapy with drugs such as cisplatin, carboplatin, and doxorubicin have increased median survival times up to a year. While these drugs can have serious side effects on the liver, kidneys, or heart, with careful monitoring, many dogs handle them well.

Radiation therapy reduces inflammation, decreases pain, slows the progression of metastatic lesions, and improves the quality of life in dogs with osteosarcoma. Approximately 75% of dogs achieve some comfort with palliative radiation, which is done to alleviate symptoms and improve quality of life, such as when a leg cannot be amputated. Palliative radiation may be combined with a bisphosphonate, a class of drugs that help decrease bone pain and minimize bone lysis. These medications require a two-hour intravenous treatment every three to four weeks.



Look again! This three-legged dog is happily running and playing!



Note the thickened, oddly shaped growth around the epiphysis of a bone in this dog's right foreleg. This mass is osteosarcoma.

dortmunda | iStock Photo

These medications inhibit bone destruction, which in turn helps control the pain and bone damage caused by the bone tumor. The most common bisphosphonate for dogs is pamidronate, but zoledronate is also used.

A Colorado State study found that dogs who received pamidronate with palliative radiation therapy and nonsteroidal anti-inflammatory drugs (NSAIDs) for pain could bear more weight on the affected leg for a greater amount of time compared to dogs treated with just palliative radiation therapy and NSAIDs. That meant greater quality of life, better mobility, and decreased pain. Survival time was not increased, however.

A note about pain control: NSAIDs are the baseline with carprofen and meloxicam heading the list. Gabapentin, which works on neurologic pain, is often added for more complete pain coverage. Acupuncture, laser therapy, and massage help some dogs with pain and

discomfort. Nerve growth factor therapy can help relieve pain for many dogs (see "Osteoarthritis Pain," March 2021).

Vaccine Immunotherapy

The latest treatment on the horizon for osteosarcoma is a vaccine used for immunotherapy. The vaccine uses an attenuated bacteria (*Listeria monocytogenes*) that has been genetically modified. It expresses a tumor protein called HER-2/neu that is produced by osteosarcoma cells.

The hope is that this vaccine will stimulate the dog's immune system to produce antibodies against that tumor protein and the antibodies will locate primary and metastatic osteosarcoma cells and destroy them. Elias Animal Health is conducting a clinical trial to evaluate the vaccine on dogs who have not had an amputation. In one study, overall survival rates for dogs who had received the vaccine were 77.8% (one-year) and 67% (two-year) survival rates versus 35.4% and 10% for amputation and carboplatin chemotherapy.

Side effects to the vaccine have been minor (a few dogs developed *Listeria* abscesses). Whether this was from the vaccine or a natural infection is unknown. Because *Listeria* is a zoonotic disease, this might be of concern if there are any immunocompromised people or pets in the family.

The University of Missouri has been working with Elias to treat dogs with osteosarcoma in a study with a slightly different immunotherapy approach. The vaccine is injected into a patient to stimulate antitumor lymphocytes, which are then collected and expanded

Did You Know?

- ▶ 10,000 dogs are diagnosed with osteosarcoma annually
- ▶ Large and giant breed dogs are more susceptible than smaller ones
- ▶ Slightly more males than females are affected
- ▶ Neutered dogs are at increased risk
- ▶ The limbs account for 70 to 85% of osteosarcoma cases
- ▶ Osteosarcoma is most often found in dogs 18 to 24 months old and 7 to 9 years old
- ▶ Younger dogs tend to have a more aggressive form of osteosarcoma

outside the body to create a transfusion of the patient's immune cells. This gives the dog being treated a big "dose" of the antitumor cells.

"Essentially, the lymphocytes are exposed to chemicals that make them very angry and ready to attack the targeted cells," says Jeffrey Bryan, DVM, PhD, who has been working on the study. "Then, we transfuse them back into the patient's blood like we would a blood transfusion." Ruby, a Greyhound who was one of the first patients, is celebrating three years post diagnosis.

Along with bacteria, viruses can be used as vectors to deliver tumor-destroying agents. One example is an adenovirus-based treatment that brings a tumor necrosis factor to the cancer cells. Another dog was treated with a vesicular stomatitis virus therapy that was non-tumor specific and had six months disease free.

Canine and human osteosarcomas share factors regarding metastasis and aggression. For that reason, many studies are looking at new immunotherapy strategies. Research done with dogs will hopefully be applicable to human cases.

Dogs have a better survival time with surgery than with simply providing pain relief with analgesic drugs or radiation therapy. However, depending on your dog, you might choose palliative care over surgery, and that's understandable. The age of your dog, his overall health, your living situation, and other problems that could influence mobility should be factored into your decision. ■

Alternative Technique: Limb Sparing Surgery

An alternative to full amputation is limb-sparing surgery, a new technique being done at universities and specialty centers. For this treatment, only the cancerous bone is removed. The defect left behind is filled in with a bone graft or bone transport osteogenesis (regenerating bony tissue) is done to stimulate new bone growth. Production of a custom implant via 3D printing shows promise.

For successful limb-sparing surgery, less than 50% of the bone should be cancerous. It works best for cancers located in the distal radius and with chemotherapy follow-up.

A long period of recuperation is required for the new bone to stabilize. Complications can include infection, failure of the implant, return of the cancer, and fractures around the surgery site due to weakness of the remaining bone. The chemotherapy drug cisplatin may be incorporated into the surgery site to decrease metastasis. The 12-month survival rate is estimated at 35% and a 24-month survival rate at 19%.

Close Encounters of the Wild Kind

When hiking with your dog, always respect wildlife

Hiking with your dog can be a wonderful experience for both of you. But, before you go, you need to consider your safety, your dog's safety, the safety of people and animals around you, and respect for the wild spaces.

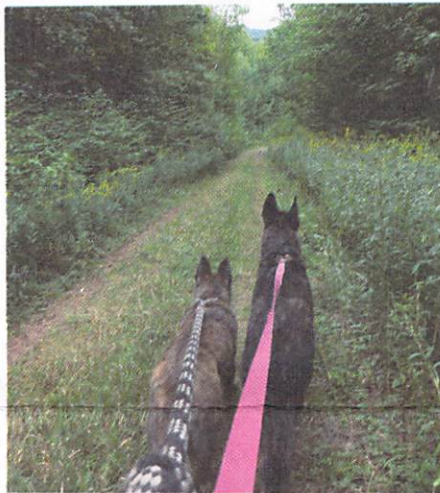
"Hiking is dangerous to dogs and humans and there are risks, but that's life," says Heather Rolland, an avid hiker, a N.Y. State Department of Environmental Conservation volunteer, and former president of the Catskill 3500 Club. "There are also benefits. To stack the deck in your favor, the simplest things you can do are use a leash and be prepared," says Rolland.

To Leash or Not to Leash

"I strongly advocate using a leash on public hiking trails," says Rolland. "People don't leave their homes to go for a hike in the woods, only to interact with your pet dog. Lots of people seek solitude and a sense of getting away from people and the trappings of civilization by hiking. A pet dog bounding up—even if they maintain all manner of canine etiquette (no jumping or barking)—is just not what most people want to experience when hiking.

"Keeping my dogs away from people is so much less stressful and easier if they are leashed and my dogs walk beautifully on a leash so why not? It makes it a better experience for everyone."

A leash is a critical tool to keep your dog safe. The woods holds lots of



A leash is essential for safety, but it can be a long leash to allow a little freedom

dangers, including large predators like bears, porcupines, poisonous plants, traps and snares left by hunters (legal or not), poison, and even other people's dogs. The leash provides your dog with room to roam and explore but keeps him close enough to you that you can keep an eye on what he is doing and physically prevent him from getting into a dangerous situation. "Leashed hiking can mean tons of sniffing and fantastic biological fulfillment with safety for all," says Rolland.

Rolland always keeps her dogs on a leash when hiking public trails, but her dogs also get free running time in the undeveloped woodland near her home that gets little traffic and has no trails. "My comfort and familiarity in the woods is a critical factor in choosing to allow the dogs off leash," she says. "I'm comfortable facing a bear or porcupine or coyote, for example. I'm confident I can chase a dog that has blown off a recall and not get lost, no matter how far I stray from the 'trail.' I am well versed in Leave No Trace ethics (see sidebar) and can maintain ethical practices while having my dogs loose. And I'm not squeamish. Off-leash dogs will find amazing things!"

Training

Preparing your dog for an outing in the woods takes time and practice. Rolland advises, "A wicked strong 'leave it' (or drop it or whatever you want to call it) is critical. A hiker friend lost his beloved

Labrador Retriever because the dog ate poisoned bait."

Earning off-leash privileges is a process. Rolland starts her new dogs out by practicing recalls at home and taking them on lots of leashed outings. A long line is useful for giving the dog more freedom while still keeping him under your control to reel him in if he fails a recall test. If your dog can't resist a tempting smell or moving animal to come when called while on a long line, he is not ready to be allowed to run loose.

"Leave it" becomes even more important for off-leash dogs, as you may not be close enough to physically stop your dog from eating something dangerous. Set up controlled opportunities to practice in your own yard, and work toward teaching your dog to only eat what you give him.

Teach your dog a halt command that makes him stop moving. This might be a sit or a down, or simply to stop and stand. Whatever position you would like your dog to be in, practice getting him to stop reliably at a distance, even when there are distractions around. You can use this behavior as a back-up if your dog's recall isn't working in a dangerous situation.

Dogs and Wildlife

"Prevention is the way to go," says Rolland. "Leash! Learn to love your leash and believe that both you and your dog can have a satisfying and biologically fulfilling hike on a leash. Avoid and prevent. The goal should always be no contact. That includes chipmunks and squirrels." Dogs of any size can potentially harm wildlife, and small dogs are at risk of becoming prey themselves. It is safer for everyone involved if dogs and wild animals do not interact.



An encounter with a porcupine can end up very painful for your dog.

Leave No Trace

The Leave No Trace Seven Principles from the National Park Service:

- ▶ Plan ahead and prepare
- ▶ Travel and camp on durable surfaces
- ▶ Dispose of waste properly
- ▶ Leave what you find
- ▶ Minimize campfire impacts
- ▶ Respect wildlife
- ▶ Be considerate of other visitors

Using a leash lowers the risk of most wildlife encounters. If you are allowing your dog to run off leash, be prepared to intervene if your dog spots a critter. Rolland advises, "If an interaction looks imminent, and recall isn't working, consider feigning a bloodcurdling scream and dropping to the ground. Seriously. Do something dramatic to get your dog to return to you. You don't want to approach most wild animals. Stay back and get the dog to come to you."

Most wild animals, regardless of size, do not want to tangle with your dog and will run away when given the chance. Trouble is more likely during breeding season, if young are nearby, or if the animal has contracted rabies or distemper. "Ending the interaction as quickly as possible is step one," says Rolland. "The longer it continues, the more likely increasingly serious injuries will occur. Get the dog away from the animal and out of the area as fast as you can, using a recall, leash, food treat (your lunch) if you have it . . . whatever will work to lure your dog away. I've never seen any species of wildlife pursue any of my dogs during an interaction. The split second they have room to run, they do. Even bears." The second step is to calm down and control your breathing, which will help to calm your dog as well. Third, check your dog for damage.

In Case of Emergency

If your dog has interacted with or been injured in any way by a wild animal, Rolland strongly recommends seeking veterinary care promptly. "Be calm, leash the dog up, and proceed to your car as directly as possible," says Rolland. "Your hike is over, and your next step is deciding whether or not you need an emergency vet."

Large wounds, broken bones, porcupine quills, or excessive bleeding all constitute an emergency. Puncture wounds may also require urgent attention. Smaller cuts or encounters that don't appear to have resulted in any injuries don't require an emergency visit, but you should still schedule an appointment with your veterinarian as soon as possible. Some wounds can be overlooked at first, and your veterinarian may say your dog needs to have his rabies vaccination boosted.

Hiking is a wonderful activity for both you and your dog, but even if you are 110% sure your dog is trustworthy off leash, bring a leash. ■

Road Trip? Get Packing!

Everything to bring along for a trip with your dog

Whether your trip will be a single day or a two-week adventure, you also need to pack necessities for your dog. Canine packing essentials range from basic care items such as food and poop bags to first aid items in case of emergency. You want to plan ahead to be sure your dog remains comfortable, healthy, and safe.

Elizabeth Dole, DVM, Cornell class of '86, has traveled all over the United States with her dogs, often for agility competitions. Dr. Dole has lots of tips for your dog's packing checklist:

Safe Transport: "I always advise for dogs to be in crates for travel," says Dr. Dole. "For those dogs who may only be in the car on occasion, wire or plastic crates would be fine. For those who travel a lot with their dogs, there are some sturdier crash-tested crates, some of which can even be custom-built to fit your vehicle. If a crate is absolutely not possible, then either a seat-belt attachment or rear seat wire barrier would be possible alternatives."

For extra security, anchor your dog's crate in its spot using ratchet straps or tie-downs (not bungee cords, which aren't secure in a forceful impact). You can find some crash-tested crates and other containment options at The Center for Pet Safety (centerforpetsafety.org).

Water: "If your dog has a sensitive stomach, you can bring along either bottled tap water from your home or bottled water as some dogs may get digestive upset from any change in the water that is different," says Dr. Dole. Collapsible bowls are handy to bring along so you can provide food and water at any time, even when out on a hike.

At Your Destination: These items help to ensure that your dog is comfortable and is also a good guest:

- ▶ Crate or exercise pen for safe confinement (or to separate from other dogs if visiting friends/family)
- ▶ Bed or blanket to rest on
- ▶ Spare bed sheet to cover furniture.

Spare bed sheet? "I always bring a bed sheet to throw over a hotel bed or any furniture that my dog may jump up or sleep on," says Dr. Dole. Not everyone loves dog hair on their stuff! Some extra cash to leave a tip for hotel housekeeping also goes a long way toward maintaining



There's hardly a dog in the world who isn't ready to go on a journey.

goodwill and encouraging hotels to continue to welcome canine guests.

If your dog is in her golden years, she may require some extra stuff to ensure her comfort. Dr. Dole says, "Many hotels that accept dogs don't have carpeting in the rooms, which can make it difficult for older or arthritic dogs to walk around—you can throw a small runner carpet or yoga mats in your car to roll out for them to get better traction." A portable ramp can be helpful for getting in and out of the car. With these items, you and your dog are ready to enjoy your trip! ■

Suggested Packing List

- ▶ Food, extra in case you are delayed
- ▶ Water (some dogs are fussy)
- ▶ Medications, dietary supplements
- ▶ Extra collar and leash
- ▶ Treats, toys, and chews
- ▶ Bowl(s)
- ▶ Vaccination history and any important medical information
- ▶ Photo of your dog (for if he is lost)
- ▶ Dog's microchip information
- ▶ Copy of rabies certificate
- ▶ Basic first-aid kit with bandaging materials and thermometer
- ▶ Muzzle (for an emergency)

A Tale of Two Lucky Lost Dogs

Real-life scenarios offer important lessons in finding dogs

Two dramatic lost-dog stories illustrate the need for a coordinated plan shared among as many helpers as possible. Nancy Kerns, editor of *Whole Dog Journal*, a sister publication, shares this story:

Recently, I was riveted by posts about two lost dogs and the extraordinary lengths that people went to find them. These happy-ending stories provide useful instruction for finding a lost dog.

Lexi

The first case was an 11-year-old Lab-mix named Lexi, owned by Brandi Solomon of Fairfield, Conn. While walking on a friend's farm, Lexi accidentally touched an electric fence, causing her to bolt. She disappeared into the woods, didn't return, and couldn't be found. Solomon posted lost-dog notices on every social media site possible. Many people spotted Lexi, but every time she was approached, she would run and disappear again.

The CT Dog Gone Recovery Volunteer Network offered help, telling Solomon that, while it was great that she had so much community engagement, the helpers were making critical mistakes. The social-media posts and fliers were changed to advise helpers to not approach or call out to Lexi. Instead, they should take photos (so Solomon could determine if the dog was Lexi) and

try to keep the dog within sight while contacting Solomon.

They advised if someone saw Lexi in a yard or near a house that person could put out pungent food like tuna. If Lexi realized that a particular location was a safe place to eat, she would return.

On Jan. 16, Jorge Velazquez picked up one of the new, instructive fliers about Lexi at the supermarket and, much to his surprise, there was Lexi in his backyard when he arrived home.

He did what the flier told him to do: He backed away slowly and discreetly took photos. After confirming that the dog was Lexi, Solomon and the volunteer group set a trap in Velazquez's yard, with trail cameras monitoring the trap.

On Jan. 18, after 42 days on the run, Lexi entered the trap in Velazquez's yard. Thanks to the trail cameras, Solomon learned of Lexi's capture as quickly as Velazquez and arrived quickly. Lexi recognized her within seconds.

Lucy

Around the same time, I learned of Lucy, a white German Shepherd Dog who had been found burned in September's Bear Fire (California). Her owners were located, but they couldn't take her yet because their home had burned completely. So, once healed, Lucy had to spend a few weeks at an animal shelter.

Lucy responded poorly to the shelter, so Chelsea Bornheim volunteered to foster her. Only three days later, though, as Bornheim walked Lucy down her driveway to get the mail, two stray dogs



Robert/istock Photo

attacked. As Bornheim fought off the dogs (getting bitten herself), she dropped the leash and Lucy ran off. Animal-control officers seized the attacking dogs were seized, but Lucy was still missing.

Bornheim spread the word on social media. Many people jumped in to help, searching the forested, lake-side area from the land, water, and air (with drones and even a helicopter!). Lucy was spotted a number of times, but she ran when anyone called or approached.

Shockingly, after eight days of wandering in the woods, Lucy appeared at Bornheim's door. Bornheim says it's a miracle because the dog had been there for only three days before the attack.

These stories show that a frightened, lost dog is not likely to trust strangers. When trying to help a lost dog, use social media and signs to enlist as much help as possible, but give them these instructions:

- ▶ Give the dog room, to avoid alarming him into running.
- ▶ Take pictures; zoom in if you can.
- ▶ Try to keep an eye on the dog and call the owner immediately.

If these tips are followed, then the owner can leave pungent food for the dog in a safe spot close to where he was seen, and set a monitored trap in that area. ■

Do You Have a Behavior Concern?

Send your behavior questions to Cornell's renowned behavior expert Katherine Houpt, VMD, Ph.D., shown here with Yuki, her West Highland White Terrier. Email to dogwatcheditor@cornell.edu or send by regular mail to DogWatch, 535 Connecticut Ave., Norwalk, CT 06854-1713.



Coming Up ...

- ▶ Paw Problem: Interdigital Cystic Lesions
- ▶ Prostate Problems from Cancer to Hernias
- ▶ Limb Amputations
- ▶ Socialize That Puppy Now

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Canine Jealousy

It's a shared experience

Q My 5-year-old Husky seems to have grown more jealous of his older brother, a 9-year-old rat terrier. Whenever it's time for pets, my Husky comes barreling through as I try to give my terrier a few belly rubs. It's worsened over the past six months. I've tried to ignore my Husky, but he just gets brattier. What can I do?

Chayapal Tummakorn | iStock Photo



A Your Husky may have just realized that he is many times bigger than your rat terrier and can easily barrel over him.

Some dogs compete for toys, some for food, but yours are competing for your attention. The best solution is to make both of them earn your attention.

Ask the Husky to sit before you give him any attention. Attention can be belly rubs, going out the door, or a treat. It won't hurt to ask the rat terrier to do the same. You can practice by calling the dogs to you, asking them both to sit and then you decide who gets petted first. ■